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British Columbia's Crown Forest Tenure System in a Changing World: Challenges & Opportunities

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British Columbia's Crown Forest Tenure System in a Changing World: Challenges and Opportunities

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Executive Summary

- There is increasing agreement in BC that the provincial forest tenure system no longer provides the economic and social benefits it was designed to deliver and is a root cause of the forest industry's failure to maintain its competitive position in the global economy.
- The need for reform is clear. Without a strong, economically sustainable forest industrial sector it is unlikely that the other public forest policy goals – social stability and ecological sustainability – will be achieved.
- BC's forest tenure system is an anachronism. With its origins in the mid-20th century, it is a legacy of another era and, notwithstanding the government's recent changes to provincial tenure arrangements, is ill-equipped to deal with the realities of the 21st century including the changing character of the timber resource, changing public attitudes towards and demands on Crown forests, rising energy costs, and increasing global competitive in forest products' markets.
- Temporary financial measures, as proposed recently by some provincial governments, are not likely to return the industry to a healthy position. Instead, alternative models for administering and managing BC's public forestlands need to be explored that will allow the industry to adjust to market forces, encourage innovation, and give birth to a renewed spirit of entrepreneurialism.
- A tenure system designed to promote industrial competitiveness, social stability and environmental sustainability should have the following attributes:
 - social legitimacy;
 - flexibility;
 - transparency;
 - security;
 - diversity;
 - minimum regulatory compliance costs; and
 - an efficient and equitable timber pricing system.
- Three approaches to tenure reform that demand major institutional restructuring of the current system present themselves: corporatization; privatization; and decentralization.

All recognize the need to ensure that timber resources are managed in the most efficient manner although they differ in where the direct management responsibility lies. These alternatives are neither exhaustive nor exclusive. A restructured tenure system may well draw on elements of all these and other approaches.
- Corporatization, that has been pursued in Germany and Australia, has some serious problems as it does not entirely remove political influence from forest management decisions.
- Privatization of public forestland or timber, of which there have been several examples in the world including Sweden and New Zealand, would be politically difficult in BC at the present time although certain approaches to limited privatization should not be ruled out and could well play an important role in a restructured tenure system.
- Decentralization of management authority is a useful concept that requires further study. It addresses the need to create more competitive timber markets; places emphasis on the diversification of the tenure system; helps promote economic efficiency, not just in timber production but in forestland management; and may result in delineating more clearly the management responsibilities of public and private sectors. Furthermore, it provides both a management role and a share in economic benefits to communities, including First Nations, and regional authorities.
- We acknowledge that major institutional changes are not easy given the many vested interests in the *status quo*. The systemic changes described also create uncertainty and will require the development of administrative capacity to implement and manage them. Nevertheless, we believe that the consequences of inaction could be so grave that productive dialogues on these critical questions of public policy are essential at this time.

Introduction

On March 30, 2005, in recognition of the many competitive pressures facing British Columbia's (BC's) industrial sector in a rapidly changing global economy, Premier Gordon Campbell announced the formation of a *BC Competition Council* to "review the province's competitive position and to recommend workable private sector and public sector actions to improve British Columbia's competitiveness" (British Columbia Office of the Premier 2005). Important components of the Council are the Pulp and Paper Industry and Wood Products Advisory Committees. The former brought down its Final Report on January 25, 2006 (BC Competition Council 20006a) and the latter on March 31, 2006 (BC Competition Council 20006b).

The reports paint a picture of a BC forest industrial sector that is generally in decline and, unless appropriate actions are taken, faces a gloomy future to the detriment of all British Columbians. The pulp and paper sector is described as an industry "in a state of decline" and the coastal pulp industry, in particular, as "an industry in near term crisis". The Coast lumber industry, which is said to be fighting for survival, is characterized by unacceptable rates of return on capital employed (ROCE); some of the highest production costs in the world; a product mix that is largely obsolete; mills that are undersized and outdated; and, not surprisingly, a chronic shortage of new capital investment. In contrast to the Coast, the BC Interior lumber industry is flourishing. In recent years the sector has gone through a period of consolidation, rationalization and major investment in advanced technology and new, state-of-the-art mills. However, this success is unsustainable over the medium to long-term. To a large extent, the success of the Interior lumber industry is attributable to an increasing supply of inexpensive wood as a result of the mountain pine beetle epidemic, but it is recognized that as the epidemic runs its course it will leave in its wake a massive fall-down in available wood supplies resulting in increasing raw material prices, excess manufacturing capacity and serious social problems.

The Competition Council's reports attribute the competitive plight of BC's forest industrial sector to a number of factors, some external and largely beyond the control of either public or private sectors, others the result of the socioeconomic and institutional context within which the BC industry operates. Among the former are the declining quality and accessibility of available timber supplies; a Canadian dollar that has risen rapidly in value relative to most other currencies and, particularly, the US dollar; increasing global wood supplies from both traditional and emergent producing regions; significant realignments of international supply/consumption relationships and an increasingly competitive global market place. Among those factors that may be controlled through policy initiatives, the Council emphasizes uncertainty resulting from protracted land use conflicts and unresolved First Nation's land claims; excessive regulation of the industry; over-dependence on publicly owned timber combined with public administrators who place low priority on the commercial use of Crown forestland; and a Crown forest tenure system that fails to provide secure access to timber, does not encourage efficient entrepreneurial management of public lands and is encumbered with an increasing plethora of regulations that erode licensees' contractual rights.

The Competition Council leaves little doubt that BC's Crown forest tenure arrangements place significant constraints on forest sector investment and are a major underlying factor in the erosion of the industry's ability to compete effectively in global markets. However, while some broad recommendations for tenure reform are made, the Council's forest sector reports fail to comprehensively address tenure issues and make no proposals on strategies that might be followed to create a new tenure framework that addresses the many problems they raise and provides an institutional environment in which the industry can successfully adjust to the new realities of the evolving global economy. The objective of this paper is to stimulate further discussion of these critical issues.

Following a discussion of the nature of forest tenure arrangements and their importance as instruments of public forest policy, we briefly describe the evolution of Crown forest tenures in Canada and draw comparisons with some other countries. While each province's forest tenure system has unique characteristics, they share many common features and the problems they raise

for the nation's forest industries are very similar. We broadly examine the salient common features of Crown forest tenure systems across the country and go on to describe the special features of the BC system, many of which have been introduced over the last three to four years as part of the provincial government's strategy to revitalize the province's forest industries.

We then propose what we believe are the desirable attributes of a forest tenure system designed to improve industrial efficiency, stimulate forest sector global competitiveness and result in economic sustainability. Current tenure arrangements in BC are examined in the context of these ideals and alternative approaches to tenure reform are examined.

We recognize that disquietude relating to the impact of forest tenure arrangements on industrial performance is not confined to Canada. Many industrialized countries with sizable forest sectors face similar problems and are embarking on, or in some cases have accomplished, significant reforms to their tenure arrangements. Given differing institutional, political and cultural environments, caution must be exercised in drawing conclusions from inter-jurisdictional comparisons; nevertheless, much may be learned from examining the experiences of others. Consequently, our examination of alternative approaches to tenure reform includes some discussion of the strategies followed and experience gained in a limited number of other jurisdictions including New Zealand, Australia, Sweden and Germany.

In concluding, we refrain from making any definitive recommendations on tenure reform. Rather, we hope that by systematically analyzing current tenure arrangements and the challenges they present, and critically examining alternative reform strategies, we will stimulate productive dialogue on these critical questions of public policy that will lead towards changes designed to ensure that British Columbians continue to enjoy the economic, social and environmental benefits they derive from the province's rich forest heritage.

Forest Tenures as Instruments of Public Policy

The institutional arrangements under which any industry operates have major implications for its performance. Possibly the most important institutions determining the behaviour of firms in the forest sector are the tenure, or property rights, arrangements under which forestlands are held. To a large extent, forest tenures determine how firms conduct their business. From an economic perspective, tenure arrangements help determine the technology firms adopt; their choices of inputs and outputs; and how much and where they invest in manufacturing facilities, forestland and research and development. In short, tenure arrangements have impacts on economic efficiency and, thus, the ability of firms to compete in domestic and international markets. From a social perspective, the terms under which firms occupy forestland have an impact on the extent to which their operations meet societal objectives such as employment, equity and environmental quality.

Since forest tenure arrangements have such a major impact on the performance of private firms in the forest sector, they are powerful instruments of public forest policy. By legally establishing the rights granted through forest tenures and the conditions that must be met in order to exercise these rights, governments can guide the behaviour of tenure holders towards desirable social goals. In fact, the history of forest policy in the Canadian provinces has largely been a story of Crown forest tenures evolving to accommodate changing public attitudes towards forest resources and to meet increasing demands placed upon them.

Canada's Crown Forest Tenure System

Public ownership of forestland is firmly entrenched as a Canadian institution and, constitutionally, the responsibility for most public forests comes under the jurisdiction of the provinces. Today, 77 percent of Canada's productive forestland is provincially owned, 16 percent comes under federal jurisdiction, mainly in the Yukon and Northwest Territories, and 7 percent is private (Natural Resources Canada 2006). Table 1 shows the distribution of forestland ownership in Canada by province. Only the Maritime Provinces, which were colonized at an early stage in Canada's history, have 50 percent or more of their forestland in private ownership although there are substantial areas of private forestland in southern Ontario and Quebec.

Although a majority of forestland in Canada is publicly owned, the capital necessary to harvest and process timber resources is almost entirely in private hands. Given this dichotomy, since the earliest days of forest management in Canada the most important questions facing public forest policy makers have been: how to transfer rights to utilize forest resources from the public to the private sector?; how to make sure that an equitable return is collected from the private sector for the use of public resources?; and

Table1: Ownership of Forestland in Canada

Province	Provincial %	Federal %	Private %
British Columbia	95	1	4
Alberta	89	8	3
Saskatchewan	90	4	6
Manitoba	95	2	3
Ontario	91	1	8
Quebec	89	0	11
New Brunswick	49	2	50
Nova Scotia	29	3	68
Prince Edward Island	8	1	91
Newfoundland and Labrador	99	0	1
Yukon	0	100	0
Northwest Territories	0	100	0
Canada	77	16	7

(Source: Natural Resources Canada 2006)

how to ensure that the private use of public resources protects public interests and achieves public goals? How a government answers these questions largely determines the characteristics of the forest tenure system within its jurisdiction.

The proportion of publicly owned forestland in Canada far exceeds that of any other developed nation that has a substantial forest estate supporting wood processing industries (see Table 2.). Most developed countries have a public agency or public corporation whose responsibility it is to manage publicly owned forests (see Table 2). This may take the form of a government department, for example the United States Forest Service (USFS) or the French National Forest Office (ONF), a quasi-autonomous commission such as the British Forestry Commission, or a public corporation that

is either totally owned by the public, such as such the Government Trading Enterprises (GTEs) in Australia or the Landersbetriebe in certain German States, or in which the public has a controlling interest such as Assi Doman in Sweden. Such organizations are responsible for most aspects of public forestland management including, in the majority of cases, the production of commercial timber. However, in some countries – for example the Chile and New Zealand - commercial timber production is largely confined to privately owned lands, the public lands, for the most part, being managed for environmental protection and the provision of recreational services and other non-timber forest products. Public timber is normally sold competitively (see Table 2) in the form of logs, either at the mill or at the roadside – a common practice in European countries – or, as in the United States, on the stump.

Table 2: Forestland Ownership and Administration in Selected Developed Countries

Country	Forestland as Proportion of Total Land Area	Publicly Owned Forestland	Number of Forestland Owners	Average Size of Forestland Holding	Arrangements for Public Forestland Management			Competitive Public Timber Sales?
	%	%	000	hectares	Licensing System	Public Corp.	Public Agency	
Australia	24.2	72.0	NA			X	X	Mixed
Brazil	57.2	77.0	NA					NA
Chile	20.6	24.2*	749	21.5			X	Few public sales
Finland	73.9	32.1	900	44.0			X	Yes
France	28.3	26.0	3,500	3.3			X	Yes
Germany	31.7	52.8	450	8.0		X	X	Yes
Japan	68.2	41.8	2900				X	Yes
New Zealand	31	63.4*	NA				X	Few Public Sales
Portugal	41.3	7.3	400	7.7			X	NA
Sweden	66.9	19.7	365	45.0		X	X	Yes
United Kingdom	11.8	34.2	NA				X	Yes
United States	33.1	33.1	11,000				X	Yes
Canada	43.6	93.4			X			Mixed (Mostly no)
(British Columbia)	63.2	96.0	20		X			Mixed (c. 20% competitive)

* In New Zealand and Chile the public forestland is almost entirely protection and amenity forests. Land producing commercial timber is almost all privately owned.

An alternative approach to the direct management of public land by a government department or public corporation is to delegate responsibility for the management of public forests to the private sector by means of long-term leasing or licensing agreements. Under such arrangements, government agencies are not directly involved in forest management activities but are largely relegated to the roles of regulators and enforcers. This approach, which is common in a number of

less developed countries and has also been adopted in Russia, is the cornerstone of public forest policy in all the Canadian provinces.

Prior to Confederation, governments in Canada devised long-term licensing agreements that transferred public timber harvesting rights to the private sector in return for payments in the form of Royalties, land rents and licence fees; the land itself remaining in the public domain. Following confederation, legislative initiatives were taken by the Canadian provinces, and by the federal government in the territories under its jurisdiction, to affirm the principle of public forestland ownership. Subsequently, all provinces put in place licensing arrangements that delegated responsibility for managing public forestland to the private sector. Under these arrangements, in return for exclusive, usufructory timber harvesting rights, licence holders contribute to Crown revenues through the payment of royalties, stumpage and other levies and assume varying degrees of responsibility for forest management. These arrangements have become known as “Crown forest tenures” and, today, account for most of the timber harvested in Canada on Crown land.

The basic structures of most contemporary provincial tenure systems in Canada had their origins in the mid-20th century when sustained yield timber management was introduced as a policy imperative. The objectives of these arrangements were threefold:

- to stimulate economic development by attracting capital investment to harvest old-growth timber in an orderly manner, establish regional manufacturing plants, and delegate responsibility for the sustained yield management of forestlands;
- to provide regional jobs and sustain regional economies in perpetuity while mitigating the social impacts of cyclical product markets through yield controls that required an equal volume of timber be harvested annually or periodically;
- ensure that forests, with all the benefits they can provide, will be available for future generations.

Between the mid-20th century and the new-millennium public demands on, and attitudes towards, forests changed radically. During the 1980s more emphasis was placed on the multiple-use of forests for a broad spectrum of non-timber products. Since 1992, provincial forest policies have focused on sustainable forest management (SFM) with its emphasis on environmental protection and the production of environmental services including an array of public goods, such as biodiversity, endangered species habitat and ecosystem integrity, terms that were not even in the lexicons of policy makers and forest managers just 20 years ago. However, throughout this period the tenure system has remained essentially intact continuing to place emphasis on sustained timber harvests and the notion that regional economic prosperity and stability can be achieved by directing log flows to designated manufacturing facilities.

While all provincial governments recognize the need for forest policies that encourage global competitiveness and create a favourable environment for capital investment; in most provinces these goals, that for the last decade and a half have been overshadowed by policies designed to achieve environmental objectives, are not receiving the attention they warrant given the increasingly competitive global economy in which Canada’s forest sector functions. In fact, declining forest industry competitiveness has been exacerbated by public policies that, rather than modifying tenures in ways that provide incentives for the private sector to work towards public goals, compel tenure holders to provide for non-timber forest products and environmental services. To these ends, complex forest practices’ regulations have been introduced that frequently involve high compliance and enforcement costs, increase uncertainty, and strain relationships between private and public sectors.

Characteristics of Canada's Crown Forest Tenures

Today, there are about 40 different forest tenure types in Canada's ten provinces. Most provinces have one or two long-term (20-25year) tenure types that represent a majority of the province's annual allowable cut (AAC) and are held by relatively large pulp and fully integrated forest products companies. In addition to these "major" licences, all provinces have one or more "minor", short-term (1-5 years) tenure types that comprise a small percentage of the AAC and are held by small manufacturing and logging companies, individuals and communities. Such tenures frequently provide access to specified timber types or special forest products such as Christmas trees, maple syrup, fuel wood etc. Finally, a smaller number of provinces have intermediate-sized, medium-term (10-15 year) tenures that provide access to Crown timber for medium-sized manufacturers – usually sawmills.

While each Canadian tenure type has its own unique set of characteristics that reflect its purpose, history and the changing priorities of the province in which it evolved, there are some important similarities.

- First, with only minor exceptions, Canadian Crown forest tenures only provide an exclusive right to harvest public timber; rights to other forest products, such as botanicals, recreation and wildlife, being retained by the Crown to dispose of as it sees fit; although licensees may be required, under the terms of their contracts, to manage for these products.
- Second, most tenures have terms that fall far short of timber rotation lengths, although most medium and long-term tenure agreements include provisions for renewal or replacement.
- Third, all Crown tenures are required to meet prescribed forest practices regulations of some kind and most, with the exception of some short term tenures, are required to reforest the land following harvesting operations.
- Fourth, all medium to long-term tenures provide for annual or periodic allowable timber harvests with penalties for non-compliance.
- Fifth, with the exception of BC, all Canadian Crown forest tenures can only be transferred following ministerial or cabinet approval.
- Sixth, all tenure agreements, with the exception of those in Saskatchewan and Manitoba, regulate the export of logs and other unmanufactured forest products. In some cases these controls extend to inter-provincial trade.
- Finally, in all provinces, for most tenures, a majority of the Crown timber harvested is sold at stumpage prices that are administered by provincial governments.

In many provinces, including BC, the tenure system is said to have established implicit "social contracts" among provincial governments, forest products' manufacturing companies, forest sector workers and the residents of forest based communities. Under these notional "contracts", in return for exclusive rights to public timber at administered prices, forest companies agree to assume certain responsibilities for forest management, mainly directed at the sustainability of timber supplies, and, by operating local manufacturing facilities, ensure the sustainability of community and regional jobs and incomes.

Crown Forest Tenures in British Columbia

The Crown forest tenure system in BC differs from arrangements in place in other parts of Canada in a number of important respects. Some of these differences reflect the evolution of the tenure system in the Province since the mid 19th century, but many stem from a flurry of tenure reforms that have taken place over the last three years, starting with a bundle of major changes introduced by the provincial government in the Spring of 2003 as part of their Forest Revitalization Program (BC Ministry of Forests 2003).

- First, the forest tenure system in BC is more complex than in most other provinces. Some provinces, for example Ontario, Quebec and New Brunswick, undertook major restructuring of their tenure systems during the 1980s and 90s. Former agreements were swept aside and replaced with new tenure systems designed to meet contemporary needs. As a result, these provinces have relatively simple forest tenure arrangements. The approach taken in BC has been to modify existing tenures and add new tenure types to meet specific requirements as needs have arisen. Consequently, today's tenure system is complex with 11 different tenure types, sometimes overlapping, and each designed to achieve specific purposes.
- Second, whereas in most provinces area based tenures predominate, that is licences provide for annual timber harvests and management activities to take place within the boundaries of a defined geographical area, in BC almost 60 percent of the timber harvested is cut from volume-based licences that simply provide rights to a certain volume of timber to be cut annually, or periodically, from within a broadly defined region.
- Third, BC is moving away from a tenure structure dominated by a small number of large licensees towards a more diverse system in which smaller tenure holders – individuals, small companies, communities and First Nations play a greater role.
- Fourth, since the spring of 2003, all major tenures in BC have been divisible and transferable without ministerial permission.
- Fifth, in all provinces, except BC, major tenure holders are required to operate or supply a specified mill or mills – a policy known as “mill appurtenancy. In BC, appurtenancy has not been required since the spring of 2003 and even prior to this date was not as rigorously enforced as in many other provinces.
- Finally, BC has introduced a stumpage system based upon market competition. Under these new provisions, which have been in place on the Coast since the spring of 2005 but still await implementation in the Interior, 20 to 25 percent of the provincial allowable cut will be sold to the highest bidder through competitive auctions. Timber prices received at auction will be used to determine stumpage rates for that portion of the AAC that remains in long-term tenures. Approximately half the volume sold competitively will be from the 20 percent of the allowable cut returned to the Crown, under the Forest Revitalization Program, by all tenure holders with AACs greater than 200,000 m³, and most of the balance will be supplied from the volume that was formerly sold to registered small businesses under the Small Business Forest Enterprise (SBFEP) program. The practice of allocating AAC to small businesses has been discontinued. The new system is administered by BC Timber Sales, an independent “profit centre” within the BC Ministry of Forests and Range (MOFR) created to develop Crown timber for auction, administer sales, establish market prices and manage the land base set aside for competitive timber auctions.

The Essential Features of a Crown Forest Tenure System Designed to Improve the Competitiveness and Sustainability of BC's Industrial Forest Sector

In tackling the problems faced by British Columbia's forest sector it will not enough to simply provide short-term injections of capital – as is currently being proposed in Ontario and Quebec – introduce corporate tax reforms or reduce regulatory costs. A long-term strategy requires institutional restructuring that will allow the industry to adjust to market forces, encourage innovation, and give birth to a renewed spirit of entrepreneurialism. An important component of such reforms must be changes to the provinces complex and anachronistic Crown forest tenure system.

A tenure system designed to improve forest sector competitiveness and ensure economic, economic and environmental sustainability should, in our view, have the following attributes:

- social legitimacy;
- flexibility;
- transparency;
- security;
- diversity;
- minimum regulatory compliance costs commensurate with overall social and environmental objectives; and
- a timber pricing system that promotes economic efficiency, provides incentives for socially responsible forest stewardship and is equitable.

We will now describe each of these attributes in more detail and discuss the extent to which the current BC tenure system measures up to these criteria.

Social legitimacy

The incorporation of social objectives into BC's forest policies are an inescapable tradition. The economic importance of forests to the population of the province's vast hinterland and increasing public demands for environmentally sensitive forest practices requires that governments assure that forest management is environmentally sustainable and consider community and regional economic development and social wellbeing. Unless public forest policies recognize First Nations' and community values they will not garner popular acceptance.

The tools traditionally adopted by BC governments to sustain and stabilize forest dependent communities – sustained timber yield and yield controls designed to equalize the volume of timber that must be cut annually or periodically – were based on a false premise. It was assumed that if timber volumes are made available in perpetuity and directed on a regular basis to designated regional manufacturing facilities, then sustainable jobs and regional prosperity would follow. Such a policy completely ignored the real determinants of sustained economic success – market competitiveness resulting from manufacturing efficiency and innovation; access to capital and skilled labour; entrepreneurial ability; skilful, imaginative and customer friendly marketing strategies; and market access.

During the 1950s, 60s and into the 1970's as global forest products' markets went through an extended period of post-war growth and BC faced little international competition for its high quality forest products, there was an illusion that public policies were working as intended since forest dependent communities grew and prospered and new communities, dedicated to exploiting a valuable old-growth timber resource, emerged. However, throughout the 1980s, 1990s and into the new millennium, forest dependent communities have gone through economic cycles of increasing magnitude while some have lost their local wood processing plants entirely as firms went out of

business or consolidated their operations. The closing of mills accompanied by declining regional economic activity; loss of jobs; and mounting social problems have resulted in increasingly vocal and well organized protests from members of forest-based communities. The "social contract", eroded during the 1980's and 90's, is now generally regarded as broken and forest dependent regions and communities are seeking new solutions to the serious situations in which many find themselves.

Flexibility

Public policies must, subject to social and environmental constraints, allow private firms the flexibility to make optimum decisions concerning their product mix, their input mix, their choice of technology, the allocation of their capital and the markets they choose to serve. Policies should also be sufficiently flexible to accommodate changing market circumstances and dynamic social preferences. Flexibility is particularly important in the forest sector where new products and technologies are emerging at an accelerating pace, product markets are subject to spectacular cyclical and secular changes in demands and prices and social attitudes towards forests are going through a period of major change.

Several features commonly found in Canadian Crown forest tenures reduce the ability of licensees to respond to changing market and business environments. The most important are mill appurtenancy, the control of log and chip exports, cut controls and constraints on the transferability of Crown tenures.

Mill appurtenancy places constraints on optimum log allocation; limits consolidation thus making it difficult for firms to rationalize their operations by taking advantage of changing transportation infrastructure and technology or concentrating production to achieve the economies of scale necessary to compete in global markets; inhibits innovation and the introduction of new technology; makes vertical integration a prerequisite for access to Crown timber and, thereby, hinders the creation of competitive, regional log markets.

Restrictions on the export of unmanufactured wood products from provincial Crown lands have serious efficiency and distributional implications. By restricting access to international, or even out-of-province log markets, log export controls limit log-producers' market options and may significantly reduce local log prices to the benefit of domestic forest products' manufacturers who, protected from international competition, have less incentive to conduct their operations efficiently. Lower log prices reduce the value of standing timber thereby reducing Crown revenues from the sale of public timber; lower the incomes of non-integrated licensees who are in the business of growing timber; and reducing the available volume of timber that can be harvested at a profit. Thus, in addition to reducing processing efficiency, log export restrictions discourage investments in timber growing by reducing prospective profits; reduce potential sustainable timber harvests; and, while possibly protecting some manufacturing jobs, decrease the number of workers involved in timber growing, harvesting and exporting.

Cut controls, by limiting marketing options, have serious efficiency implications. Forest products' markets and prices are notoriously cyclical. For a company producing forest products, competitiveness and profitability depend, to a large extent, on being able to take advantage of the market cycles for their products, putting more on the market when demand is strong and prices high and reducing output when demand is low and prices are falling. Cut controls can force companies to sell into poor markets and prevent them from taking advantage of higher prices. When prices are falling, companies may have a choice of either continuing to operate their mills and selling their products at declining, or even negative, margins or, alternatively, reducing production and, if they still have to harvest logs, accept a build up in expensive and deteriorating log inventories.

The transfer of property rights, in whole or in part, is essential to the efficient operation of economic systems. The control or prohibition of Crown forest tenure transfers through sales, corporate mergers or takeovers is an important impediment to industrial efficiency and

competitiveness. Such measures may prevent economies of scale being fully realized through consolidation as technology and markets change; discourage specialization; prevent the control of Crown forest resources by those who can use them to generate the greatest net value; and inhibit new innovative firms from finding a foothold in the sector.

Over the last three years the BC government has removed several of these constraints on flexibility. Mill appurtenancy has been eliminated, cut controls have been relaxed by removing minimum cut requirements, although upper limits on the rate of harvest remain, and most tenures are now divisible and transferable provided the Minister does not determine that their transfer would significantly reduce competition for wood. However, provincial log and chip export restrictions remain and, furthermore, BC is the only province in Canada where the federal government exercises its mandate to control unmanufactured timber exports from private lands; a policy that has serious consequences for the viability of private forestry and the level of investment in timber growing on private land.

Transparency

In the interests of reducing uncertainty and creating harmonious relationships between public and private sectors, Crown forest tenure arrangements should be as simple as possible commensurate with their overall goals. They should be free of ambiguity and readily understandable to all players, particularly with respect to assigning responsibilities for the various aspects of resource stewardship, the determination of compensation in the event that the Crown unilaterally cancels or amends existing contracts, and the pricing of public timber. Transparency reduces uncertainty.

Recent amendments to BC's forest policies have gone some way towards improving the transparency of BC tenures, nevertheless, the system remains complex and many ambiguities remain particularly with respect to the terms of compensation in the event that a tenure is cancelled or unilaterally modified and the complex procedures that are used to convert market-determined stumpage prices into prices that are applied to timber held under long-term tenures.

Security

It is important in the interests of competitiveness that industrial firms have confidence in the institutional system within which they operate. Lack of security is an important barrier to new capital investment in the forest sector and has a major negative impact on competitiveness by discouraging firms from investing in new innovative ventures, research and development and, in the worst cases, even the replacement of depreciated capital assets. From a forestry perspective, uncertainty discourages optimum investment in the renewal and management of the resource itself. As suggested above, confidence comes with rules that are transparent and are perceived to be well founded rather than arbitrary. Also, from governments which, on the basis of their records, can be trusted to play by the rules and not breach agreements and contracts.

Lack of confidence in the BC tenure system is a major problem and, undoubtedly, the foremost barrier to capital investment, particularly on the Coast. Not only are there uncertainties surrounding the tenure system itself, some of which are described above, but continuing access to a secure forestland base is a pervasive source of concern in the face of unresolved First Nations' land claims and continuing pressures from militant, environmental NGOs. Also, BC governments have a long record of unilaterally canceling tenure agreements, modifying tenure contracts and removing vast areas from the commercial forestland base. Until recently, industrial efficiency and competitiveness have been low-priority concerns when new forest policies have been introduced or existing policies amended. Even where contractual rights have not been subject to outright cancellation, the costs of complying with increasingly pervasive regulations have undermined the value of timber harvesting rights, sometimes to the point of *de facto* expropriation.

Diversity

A diverse tenure system consisting of licences of different sizes and purposes held by a spectrum of industrial and non-industrial holders provides many benefits. First, diversity leads to a more resilient system that increases security for both government and forest dependent communities since regional economies do not find themselves reliant on one, or a small number, of employers. Second, having a substantial proportion of smaller tenures devoted to growing trees helps create more viable log and stumpage markets. Third, manufacturing plants with greater access to competitive wood markets have less incentive to protect the majority of their wood supply through vertical integration. Indeed, throughout North America the trend is for forest products companies, in the interests of greater efficiency, to divest themselves of their forestland holdings in order to concentrate their resources and expertise on the processing of wood. Fourth, control of regional wood supplies by one or two companies that can exercise their market power to control prices of local inputs will be less likely to occur – a change that is to the benefit of regional economies. Finally, a diversity of tenures held by First Nations, communities, small and larger companies and individuals will each be managed to achieve different outcomes. A spectrum of forest management strategies will be applied and a flow of multiple products, produced on a voluntary basis, will be more likely to occur.

Recent government initiatives in BC have enhanced the diversity of the tenure system. These include expansions of the community forest and woodlot licence programs and an ambitious programme under which 8 percent of the allowable annual is being allocated to First Nations. However, while BC's tenure system may be considerably more varied than other provinces it is insufficiently diverse to provide the many benefits of diversity discussed above. Large scale, medium to long-term tenures held by integrated forest products companies dominate; currently, community forests only account for about 0.3 of the provincial allowable annual cut and woodlot licences less than two percent (BC Ministry of Forests and Range 2006a). Tenures being granted to First Nations as interim measures generally take the form of short to medium-term, non-renewable forest licences. In all regions, apart from southern Vancouver Island and to a lesser extent the West Kootenays, there are insignificant areas of private forestland in commercial timber production.

Minimum regulatory compliance costs commensurate with overall social and environmental objectives.

An important component of total production costs in the forest sector is the cost of complying with public regulations. These costs are as important in the production process as the costs of purchasing labour, capital and raw materials but they are costs which are generally beyond firms' control. In the interests of market competitiveness, governments should ensure that such costs are as low as possible commensurate with overall public objectives. Ideally, the costs of complying with public regulations should be no higher than those in competing regions.

Several approaches to reducing transactions costs are available. First, in areas where the production of public goods overshadows timber values, governments could avoid excessive compliance and enforcement costs by electing to manage public forest resources directly rather than delegating their management to the private sector.

Second, land use zoning that separates areas designated for industrial timber production from multiple use and conservation zones might be used mitigate costly regulations..

Third, tenure holders could be provided with incentives to voluntarily manage the resource in ways that will efficiently achieve public objectives thereby eliminating, to some extent, the need for costly regulations. For example, the rights granted under tenure arrangements could be broadened beyond timber to include such products as non-timber botanicals, recreation and wildlife. Such a strategy could have a significant impact on how tenure holders perceive and exercise their rights. A holder of more comprehensive rights to a forest will have an incentive to coordinate management in order to maximize the net value of the forest's many attributes. On the other hand, it can be argued that in some cases the benefits of specialization by separate rights' holders may exceed the

benefits to be gained from creating more inclusive property rights' arrangements. For example, having two firms, one specializing in timber management and the other in providing recreational services, might result in more effective multiple product management than providing either firm with more comprehensive rights.

Inevitably, there are many instances where market incentives are inconsistent with social goals. Private coordination of forest management to produce multiple products will only be efficient if all the products concerned can be freely exchanged in the market place. But many forest products are not, and in some cases cannot (i.e. public goods such as biodiversity and the visual quality of landscapes) be bought and sold through conventional market channels. Lacking the incentives of market signals, it is unlikely a private firm with rights to the products concerned will produce them in a socially optimal manner. In such cases, government regulation may be the only way to achieve desired social outcomes.

Where regulations are necessary, a "results" based, rather than a "process" oriented regulatory regime promises, in theory at least, to achieve desired outcomes more efficiently and at significantly lower compliance costs. While the former approach specifies an outcome to be achieved and allows each tenure holder to choose the most cost effective way to reach the required standard, the latter approach mandates not only standards but the specific practices that must be followed in order to achieve them.

Governments in BC, as in other Canadian provinces, have chosen to accommodate changing management objectives for public forests, particularly the production of non-timber forest products and environmental services, by means of regulations supported by enforcement regimes. Consequently, compliance costs have risen spectacularly over the last 10 to 15 years as regulations have proliferated. These rising costs have discouraged investment by increasing total operating costs and, thereby, undermining the value of forest tenures by decreasing significantly the values of the benefit streams that harvesting rights provide. Higher costs have reduced the global competitiveness of BC's forest industries relative to other jurisdictions. For example, when the BC Forest Practices Code was introduced in 1996, it was estimated that its compliance costs added as much as \$10 to \$12 per cubic metre to the delivered cost of industrial wood, an increase that contributed to the transition of the BC Coast from one of the world's lowest cost wood producers to one of the highest (Haley 1996).

The current government is attempting to mitigate high compliance costs by replacing the overly prescriptive BC Forest Practices Code with a results-based regulatory regime. However, the government has found it difficult to develop quantifiable results-based standards and, consequently, many of the former regulations and guidelines remain. Nevertheless, a degree of flexibility has been introduced by allowing licensees to propose alternatives to the "default" rules.

It is too early to say whether this approach will be successful in significantly lowering costs while maintaining standards. However, early indications suggest that costs will remain relatively high and, furthermore, the process is attracting a great deal of criticism from environmental groups.

A timber pricing system that promotes economic efficiency, provides incentives for socially responsible forest stewardship and is equitable.

Timber pricing is an important component of tenure agreements. For governments, stumpages are, by far, the most important source of direct revenue they collect for the use of public timber, while for licensees they are a major cost of log production. Stumpages, and how they are determined, have impacts on industrial efficiency, global competitiveness, the conservation of timber resources and the allocation of forestland. Stumpage determines the value of the benefit stream that tenure holders can realize from their harvesting rights and, consequently, the values of forest tenures. A stumpage system that sends the "wrong" pricing signals to the private sector – by not correctly reflecting market demands and resource scarcity for example – may lead to inefficiencies in both timber production and wood processing (Haley 2004).

Ideally, as is the case in most western industrialized nations, markets for logs and standing timber provide wood processors with a source of raw material at competitive prices. Such arrangements significantly reduce uncertainty, help eliminate the need for integration between timber processing and wood production, encourage efficiency and innovation and allow new firms to enter the industry.

On the face of it, the new market-based stumpage system in BC is a step in the right direction. However the methods by which market prices are translated into stumpage rates to be charged for timber under long-term tenures are complex and a magnet for criticism and discontent. In addition, there are concerns as to what extent local industrial concentration reduces the competitiveness of log markets. Also, the fact that the government has a near monopoly over the amount of timber entering the market place and is in a position to exercise its market power to control timber prices perpetuates market uncertainty.

Alternative Options for Tenure Reform

There is increasing agreement in BC that the provincial tenure system no longer provides the economic and social benefits it was designed to deliver and is a root cause of the forest industry's failure to maintain its competitive position in the global economy. The policy initiatives implemented by the provincial government over the past three years, that are designed to improve industrial competitiveness by introducing market-determined timber pricing and allowing firms more flexibility in their responses to market forces, are on the right track and are more progressive than changes initiated or planned in any other province. However, as emphasized in the recent reports of the BC Competition Council, the provincial forest tenure system, in spite of the changes, is regarded by the forest industry as a major impediment to efficiency and capital investment.

Although it is too soon to reach definitive conclusions concerning the impacts of the new policies, early trends suggest that firms are not undertaking major strategic shifts in direction and that the impacts on communities are negative. One might expect to see new investment or new innovative approaches emerging as firms adjust to a more flexible business environment. We see neither happening. Indeed, the available figures show overall investment in the province's forest sector has trended downwards over the last three years. Although there has been a recent spate of consolidation through corporate takeovers and merger activity both on the Coast and in the Interior, a new set of firms has not emerged. In terms of job creation, the downward trend in employment in the forest sector has continued as mills close and companies downsize (Nelson, Niquidet and Vertinsky 2006).

Given the serious problems facing BC's industrial forest sector, one might reasonably expect that maintaining the existing tenure system (albeit with some tweaking) will not offer long-run economic sustainability, social stability and acceptable standards of environmental stewardship. In the face of emerging changes in global forest product markets, capital flows and long-term commodity price forecasts combined with increasing domestic pressures on the forestland base and declining timber quality and accessibility, it could be argued that major structural changes in the province's Crown forest tenure system are necessary. But what form should these changes take? In this paper it is not our intention to make recommendations for tenure reform but rather to lay out some alternatives and their accompanying constraints. We will critically examine a selection of approaches to restructuring the Crown forest tenure system drawing, where appropriate, on experiences in other countries. It should be noted, however, that Canada's high proportion of publicly owned forestland and a tenure system designed to delegate most management responsibilities to private sector licensees, sets this country apart from all other industrialized nations with significant forest industries. While it is useful to look towards other jurisdictions for guidance in forest sector governance, one cannot assume that policies which have evolved in other countries can be successfully transferred to Canada with its very different history, culture and value system.

Three approaches to restructuring the forest tenure system in ways that may improve forest sector efficiency and competitiveness while better serving public objectives will be explored: corporatization; privatization; and decentralization augmented by devolution of authority. These approaches, of course, are not mutually exclusive nor do they necessarily rule out retention of elements of the existing tenure arrangements.

Corporatization

This approach involves retaining public ownership of forestland and resources but placing them under the authority of a public corporation, what we refer to in Canada as a Crown corporation. Such a corporation is given a mandate to maximize profits within the context of certain constraints devised to protect broader public interests – forest practices regulations for example. They are usually autonomous as far as business strategies are concerned including staffing, investment, production and marketing, and have the authority to raise funds in capital markets but not sell equity. Timber is sold competitively to the manufacturing sector in the form of logs and/or stumpage.

Public corporations of this type have been introduced in recent years in a number of countries including Germany, Australia, New Zealand and Sweden. While these arrangements have come under attack from several quarters they have, generally, met with some success in terms of increased efficiency reflected in profitability but, nevertheless, in the case of New Zealand and Sweden proved to be a short-term measure on the road to privatization.

In Germany, starting in 1999, 10 of the 13 States embarked on programs of tenure reform designed to place publicly owned forests on a sounder commercial basis. Privatization was considered as an option during the reform process but rejected in favour of corporatization. In fact, Bavaria, one of the leading forest states, passed legislation prohibiting the privatization of state forests. Two major types of public corporation have been introduced: the Landersbetrieb (state corporation), adopted by 6 states; and the Anstalt Offenlichen Rechts (public law legal entity) adopted by 3 states. Three states have retained direct management by a public agency (Regiebetrieb) and one a third type of arrangement known as a Sondervermogen (public law special fund). The state corporations (Landesbetriebe) are essentially profit centres run on a commercial basis but remaining under the supervisory control of state governments that also provide funding. In contrast, the public law legal entities (Anstalt Offenlichen Rechts) are run as autonomous businesses although the states exercise some control by defining their public responsibilities. This reform process is still in a transition stage since most states did not complete reorganizations until 2005-2006. Consequently, the impacts of the restructuring on the profitability of state forests and the direction that forest management will take under the new regimes are still unknown.

In Australia, governments have reorganized state forest agencies to operate on a more commercial basis. This move was precipitated, to some extent, by the Commonwealth Government's 1995 National Competition Policy (NCP) under which government agencies agreed to act on the basis of market principles and impose similar tax and regulatory costs upon themselves that an equivalent private sector organization would face; as well, state governments would undertake to corporatize public agencies where appropriate.

In New South Wales, South Australia, Western Australia and Tasmania state forest management agencies have been reconstituted as Government Trading Enterprises (GTEs) with a mandate to function as profit seeking enterprises. In Queensland, DPI Forestry became a commercial business unit within the Queensland Department of Primary Industries. All the newly constituted GTEs retained responsibility for both indigenous forests and exotic plantations; the only exception being Victoria, where responsibility for plantations was given to a separate corporation with the intention of privatization (see below). The new commercial operations are expected to act like private sector businesses with obligations to pay equivalent taxes and meet similar regulatory obligations.

The short time frame within which GTEs have been operational combined with difficulties encountered in making necessary changes to pricing and contracting arrangements make assessment of the full impact of corporatization impossible at this stage. However, preliminary results suggest a general improvement in productivity although performance, as measured by net earnings, has been inconsistent showing no pronounced positive trends.

Corporatization has been seriously discussed in BC. In 1991, the BC Forest Resources Commission (the Peel Commission) recommended that approximately one third of BC's forestland base most suitable for timber production be managed by a Crown Corporation, another third would be in long-term, area-based, industrial Crown forest tenures and one third in small tenures held by individuals, communities and First Nations (British Columbia Forest Resource Commission 1991). The reasons underlying these recommendations, that were ignored by an incoming NDP government, were the creation of market driven incentives for efficiency in timber production, diversification of the tenure system and the creation of viable markets for logs and stumpage that would provide the basis for a market driven stumpage system. Long-term tenures were retained because it was felt that with a virtual government monopoly on timber supplies, the forest industry needed the security of long-term agreements although dependence on tenured wood would have been

substantially reduced. It is interesting to speculate where BC's forest industry would be today if these recommendations had been adopted.

Would corporatization work in BC? It probably would if it was carefully planned, satisfactory arrangements were reached with First Nations and the political will was present to overcome the inevitable opposition from ENGOs, public employees and a significant component of the general public. However, such a policy change would have to be preceded by careful land use zoning. In New Zealand, and to a lesser extent Australia, there is a natural separation of forests used primarily for timber production, mainly exotic plantations, and forests, mainly indigenous, managed for multiple-use or, in the case of New Zealand, the production of recreation and environmental services. In both these jurisdictions it is mainly the commercial plantations that have been corporatized and/or privatized. In Canada, to our disadvantage, this natural separation of commercial and amenity forests does not exist. All productive forestlands, unless they are in protected areas, are treated as sources of multiple products and subject to similar regulations. Beyond protected areas and parks, zoning would identify areas where timber production is designated the dominant use and areas where non-timber values are of such importance that balanced multiple-use is the optimum management strategy from a social perspective. It is the timber dominant areas that would be managed commercially and be candidates for corporatization and/or privatization. Multiple, or integrated, use forests would continue to be managed by a public agency in the pursuit of social goals. Zoning is not a new idea in BC but has been mooted for many years and is well covered in the literature (Vincent and Binkley 1993; Sahajananthan, Haley and Nelson 1998).

Corporatization, however, does have some weaknesses in terms of creating incentives to pursue profit maximizing behaviour. First, there are no shareholders; therefore, the financial discipline imposed by equity markets is missing. Second, there is no threat of takeover, an eventuality that focuses the management skills of many private corporations. Third, management that is not responsible to shareholders has fewer incentives to be efficient in making hard decisions concerning the administration of the company – particularly decisions concerning corporate organization and personnel. Crown corporations in Canada are sometimes said to suffer from “corporate bloat” in that they are overstaffed and have high fixed costs. Finally, over all public corporations there is the ever present shadow of political intervention in ways that could undermine efficiency. Also, if a public forest corporation encountered financial difficulties, the government would come under tremendous pressure to save it by guaranteed loans and/or subsidies. Such a strategic entity could not, politically, be allowed to collapse. In the light of these drawbacks, an alternative is the privatization of a portion of the timber productive forestland base.

Privatization

Privatization of forestland and/or timber assets, which has been carried out in a number of jurisdictions, can be approached in many ways. The popular conception is that it involves selling forests and all their many attributes to the highest bidder and entirely relinquishing the safeguards of public control. This is not necessarily the case.

In Sweden, for example, in the early 1990s the government placed most of its public forests and state owned manufacturing plants under the control of a publicly traded corporation – Assi Doman – while maintaining state control over protection forests and forests with high conservation and amenity values. Shares in the corporation were issued and sold in equity markets. For a period of time, sales were limited to Swedish citizens but then opened up to international buyers. The Swedish government subsequently repurchased all the shares on the open market in 2002 and the company is now wholly owned by the state.

In Sweden, privatization has no impact on public access since there exists a common law right (allemanstratter) that permits any individual, including non-citizens or non-residents, rights of access to all forest land - public or private – to hike through the natural landscape, camp for one night and

gather berries, mushrooms and wild flowers provided there is no property damage resulting in economic loss and that the privacy of the landowner is respected.

In New Zealand, where privatization of the country's state-owned exotic plantations began in 1988 following a brief flirtation with corporatization, the government retained ownership of the land but sold harvesting rights to the existing timber plus rights to the productivity of the land. These packages of rights, known as Crown Forest Licences (CFLs), which vary in size from 51 to over 130,000 hectares, are renewable annually but entitle their holders to a minimum of 35 years notice if the licence is to be terminated thus allowing a full rotational cycle of radiata pine, the principal species, to be completed. In some cases, an initial term of 5 to 20 years was granted prior to the commencement of the 35 year notice period. The government retains a financial interest in the land through rents paid annually. The CFLs are freely transferable and divisible and are largely unencumbered by regulations, including reforestation requirements, although public access for recreational purposes must be guaranteed unless there are safety or protection concerns. Interestingly, from a Canadian perspective, most of the privatized resources occupy land that is under unresolved Maori land claims. Agreements were reached with Maoris that, in the event of a land claim being settled, the Maoris concerned would honour the existing licences and, in return, annual rents would be placed into a trust fund that would be turned over to the successful claimant.

Privatization in New Zealand was restricted to state-owned exotic plantations accounting for about half of the exotic forest estate of 1.2 million hectares (or 600,000 ha). Responsibility for publicly owned indigenous forests, amounting to 6.4 million hectares, was transferred to the Department of Conservation (DOC), while a new public agency – the Ministry of Forests, later to be combined with the Ministry of Agriculture – remained responsible for regulation and research. Indigenous timber, that prior to privatization was a significant component of the total timber supply, has been reduced to a mere trickle, mainly from private land.

The New Zealand experiment has had some, but limited, success. In the short-term, efficiency improved and profitability within the sector increased, however, investment in processing has fallen short of what was expected. The potential long-term commercial impacts are less clear. Institutionally, the transfer of indigenous forests to the DOC has reduced the resources available for their management and the DOC has difficulties in meeting its objectives in terms of conservation and the provision of non-timber values, particularly recreational infrastructure.

In 1993, in response to a fiscal crisis in the Australian State of Victoria, the government established the Victorian Plantation Corporation; carved out of the Department of Conservation and Natural Resources. This corporation functioned as a profit centre within the Department with the eventual goal of its sale to private interests. The government created a new license granting the right to grow trees in perpetuity but retained a fee simple interest in the land itself. The right would only be invalidated if there was a change in land use from forestry. The corporation was then offered for sale with existing supply contracts in place and was purchased by Hancock Victoria Plantations, a subsidiary of the American Hancock Timber Resources Group Ltd. The Victoria government's expectation was that the area under plantations would be trebled by 2020.

Evidence suggests that, for the most part, management of the resource has not changed significantly under new ownership. However, there has been an increased emphasis on efficiency. Harvest ages have been reduced and, consequently, the profile of timber reaching the market is of lower quality than processors had received under previous management. There is increased use of contracting-out and, it has been suggested, wages paid are lower relative to traditional norms. In terms of investment, Hancock has not invested in expanding the resource through new plantings as the government anticipated.

Hancock Victoria Plantations seems to be a commercial success but, as in New Zealand, there are concerns that the company's strategy is to maximize profits from log production, a high proportion of which are exported providing little incentive for investment in domestic manufacturing capacity.

Is privatization a viable option for BC? Many observers claim that it would be politically impossible, given the Canadian tradition of public land ownership, and would give rise to massive public resistance. Additionally, such a move would receive little support from either forest products' companies or provincial bureaucrats who both have strong vested interests in the status quo. We are not convinced, however, that limited privatization should be ruled out as an option given the right economic circumstances, retention of public land ownership, the regulation of forest practices on privately managed lands, licences of limited terms and guarantees of public access. However, as in the case of corporatization, any move towards limited privatization would have to be preceded by satisfactory arrangements with First Nations and careful land use zoning in which areas with relatively low conservation values but good timber growing potential were designated as suitable privatization zones.

Decentralization

This restructuring strategy, which is very different to those discussed above, is, perhaps, more in tune with Canadian values and traditions. It recognizes the need to further sever the link between timber production and forest products' manufacturing; establish more competitive regional markets for logs and standing timber; diversify control over public forestlands; reduce regulatory compliance costs for the private sector; and explicitly recognize regional economic development as a priority by designing strategies that acknowledge regional differences in resource endowments, infrastructure and comparative advantage.

The strategy would be founded on the decentralization of control over provincial forests to regional units. Each regional forest would be autonomous as far as goal setting; management strategies and marketing are concerned but would be subject to province-wide regulations concerning environmental protection and provisions for the production of designated public goods. Each forest would enjoy management responsibilities for timber production, non-timber botanicals, recreation and possibly wildlife.

Regional forests would be created by reducing the AAC currently under licence while providing existing licensees with modified, long-term, area-based licences accounting for possibly 40 to 50 percent of their current needs and driving them to the market place for the balance. Part of the take-back would be used to diversify the tenure system by providing for long-term tenures held by communities, First Nations, small non-integrated companies and individuals.

Each semi-autonomous regional forest would have its own permanent staff (similar to a US National Forest) but generally contracting out infrastructural development, inventories, silviculture and logging - possibly choosing to have hiring preferences for local workers and firms. Management strategies would be developed in cooperation with a team representing regional interests including First Nations.

Within the bounds of constraints set at a provincial level, managers would have the freedom to maximize net benefits from the total land base. In addition to producing and selling timber in the form of logs and/or standing trees, exclusive licenses might be issued for gathering mushrooms and other non-timber botanicals, recreational facilities developed, land leased for residential and commercial developments and licenses sold to trappers, guides and eco-tourism operators. In other words, managers would be free to use the resources at their disposal to benefit both the provincial and local economies. Managerial performance would be the subject of regular provincial, publicly accessible, independent audits. Net revenues would be shared according to predetermined formulae between the provincial government and local authorities.

Such a reorganization, which some might consider radical, could be viewed as a further shift along the forest policy trajectory pursued by the BC government in recent years. For example, through BC Timber Sales, a quasi-autonomous profit centre in the MOFR, the BC government is committed to direct public management of a substantial area of Crown forestland accounting for about 20 percent of the provincial AAC or over 14 million m³ per annum. Limited devolution of forest

management responsibilities is a feature of the provinces expanding community forest program and revenue sharing between the province and regional authorities is being explored for community forests and is an important component of the province's First Nations Forest Strategy (BC Ministry of Forests and Range 2006b). The provincial government is also firmly committed to diversification of the tenure system and the expansion of regional, competitive timber markets.

Conclusion

The need for change is clear. Forest tenure arrangements now in place in BC had their origins in the mid-20th century when they were designed to attract capital to harvest and manufacture old-growth timber, provide regional jobs and sustain regional economies in perpetuity and, by regulating the timber volume harvested annually or periodically, mitigate the social impacts of cyclical forest product markets. During the latter part of the 20th century as public demands on, and attitudes towards, forests changed and sustainable forest management replaced sustained timber yield as an overarching goal, the tenure system, notwithstanding some important changes over the last three years, has remained essentially intact. Governments in BC, as in other Canadian provinces, have chosen to accommodate the new realities of public forest management by introducing increasingly pervasive and costly regulations and administrative procedures with little regard for economic efficiency and the global competitiveness of the forest industry.

Changes in the character of the resource base, competing demands on forest lands and major shifts in global markets are now threatening the long-term viability of forest industries in BC, particularly on the Coast, and, indeed, across Canada. Temporary financial measures proposed recently by some provincial governments are not likely to return the industry to a healthy position; instead, there is a need to reform the fundamental institutions, particularly tenure arrangements, that underlie the many difficulties the sector faces. The incentives that forest tenures create should foster innovation and upgrading in the industry to maintain its long-term competitiveness. It is clear that any changes to existing systems will have to recognize the need for industrial restructuring that must take place as the industry adjusts to changing domestic and global environments.

We acknowledge that major institutional changes are not easy given the many vested interests in the status quo. Such systemic changes also create uncertainty and require the development of the administrative capacity to implement and manage them. Nevertheless, alternative models for administering and managing BC's public forestlands need to be addressed if the people of the province are to continue to enjoy the many economic, social and environmental benefits their rich forest heritage is capable of providing.

We offer several criteria that we feel are essential in a tenure system designed to improve forest sector competitiveness and economic sustainability. These include social legitimacy, flexibility, transparency, security, diversity, minimum regulatory compliance costs and an efficient and equitable timber pricing system. An examination of BC's current tenure arrangements reveals that they fall short of meeting these criteria in a number of important respects, although recent reforms carried out as part of the government's Forest Revitalization Plan are, in our opinion, moving the system in the right direction.

We believe that expanding the role of competitive timber sales and log markets are an essential component of any changes to the tenure system in that they will promote flexibility and equitable timber pricing. While the forest industry is preoccupied with security (or more accurately insecurity) of tenure rights, this insecurity becomes less of an issue if competitive, sufficiently large log markets are established that are not dominated by a public monopoly. Indeed, some large forest products firms in the U.S. and other jurisdictions are divesting themselves of their forest land holdings, relying on markets for their fibre almost entirely.

We examine three approaches to tenure reform that demand major restructuring of the system: corporatization; privatization; and decentralization. All recognize the need to ensure that timber resources are managed in the most efficient manner although they differ in where the direct management responsibility lies. We do not claim that these alternatives are either exhaustive or exclusive. A restructured tenure system may well draw on elements of all of these and other approaches.

While 'corporatization' and 'privatization' options need to be discussed, we recognize that those jurisdictions that have introduced such approaches, such as Germany, Sweden New Zealand and

Australia, have different institutional, political and cultural environments to BC and that, in most cases, there exists either a clear separation between timber producing plantations and natural forests or a consensus as to what lands are best suited for an emphasis on timber production and which should be managed for non-timber forest products and public goods. This clarity over land use and management objectives does not exist in BC and persuades us that definitive land use zoning should be a prerequisite to any major restructuring of the tenure system.

Corporatization has some serious problems as it does not entirely remove political influence from forest management decisions. Privatization of public forestland would be politically difficult in BC at the present time although certain approaches to limited privatization should not be ruled out. Decentralization of management authority is a useful concept that requires further analysis. It addresses the need to create more competitive timber markets; places emphasis on the diversification of the tenure system; helps promote economic efficiency, not just in timber production but in forestland management; and may result in delineating more clearly the management responsibilities of public and private sectors. Furthermore, it provides both a management role and a share in economic benefits to communities, including First Nations, and regional authorities. This feature will be especially important as the forest industry embarks on major restructuring which we believe is necessary to ensure its long-run economic viability.

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