

New Approaches for Private Woodlots

Reframing the Forest Policy Debate



PRIVATE FOREST TASK FORCE REPORT

New Approaches for Private Woodlots — Reframing the Forest Policy Debate

Private Forest Task Force Report by Donald W. Floyd, Robert Ritchie, and Tony Rotherham

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Introduction

New Brunswick's forest policy debate over the past two decades is best characterized as a four-way zero-sum game in which private woodlot owners, the Crown, the forest products industry, and the environmental community compete for relative advantage. The result has been policy gridlock punctuated by periodic incremental shifts based on reports by academics, task forces, legislators, consultants, and stakeholders.

Most of the focus has been on how Crown forests are allocated or reallocated to meet competing conservation and fibre production objectives. This approach is not productive. Additional environmental benefits and an increased wood supply can be achieved only by making the pie larger, not by continuing to squabble about who gets the biggest slice.

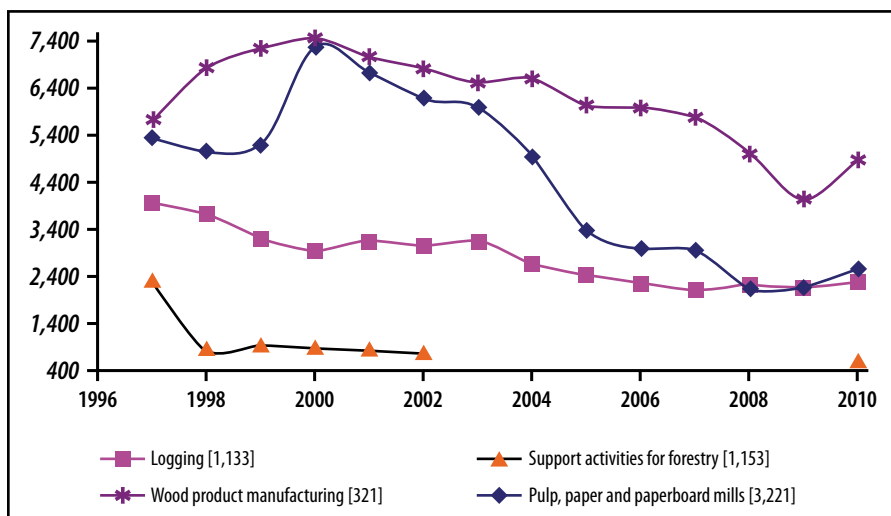
We believe that with appropriate policies and targeted investments in the private woodlot sector, the Government of New Brunswick can reframe the forestry debate and both increase the conservation values that citizens consistently demand and provide the wood fibre necessary for a sustainable forest industry. This requires careful stewardship of all of New Brunswick's forests—private and public—and consideration of the many benefits our forests provide across all ownership classes.

Having assessed the current state of the private forest resource, we recommend a suite of incentives that will provide additional wood supply for the industry as well as additional conservation benefits for society as a whole. We also suggest reorienting important institutions to better meet the public interest and the needs of a changing population of woodlot owners. In this report we summarize our analysis and recommendations, which are based on research and discussions with hundreds of individuals across the province.

Background on the issues

Forest industry's share of economic activity in New Brunswick is declining but still accounts for about 5 percent of provincial gross domestic product (GDP). It is particularly important in rural New Brunswick, where much of the economy remains dependent on renewable and nonrenewable natural resources. Based on percentage contribution to GDP, New Brunswick is the most forest-dependent province in Canada. New Brunswick's forest sector supported slightly more than 10,000 direct jobs in 2010.

Figure 1 Direct employment in New Brunswick forest sector, 1996–2010



Source: Statistics Canada

In a provincial economy that is facing challenges, the forest sector supports families, fuels the rural economy, and pays for social services. Each additional cubic metre (m³) of harvested and processed wood adds approximately \$220 to provincial GDP, and 13 direct and 12 indirect jobs are created for each additional 10,000 m³ processed (Campbell 2011).

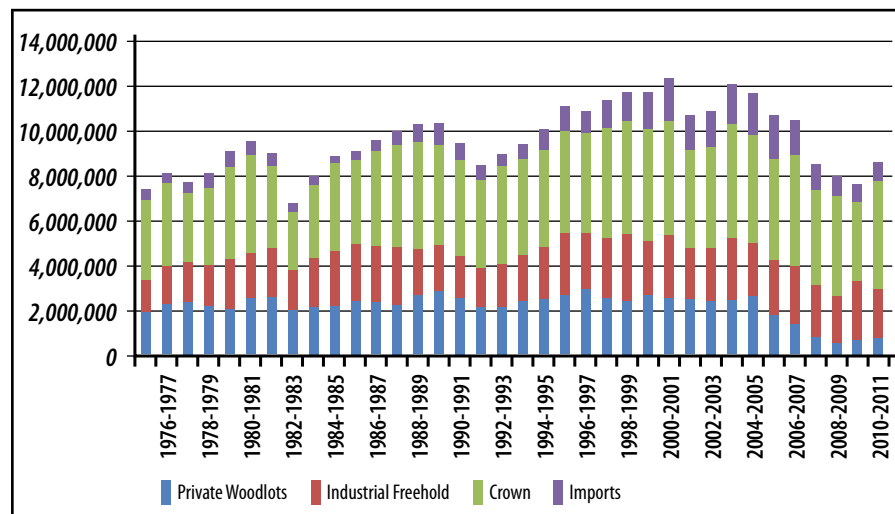
In addition to generating economic benefits through wood production, private forests provide wildlife habitat, sequester carbon, offer recreational and other non-timber values, and supply drinking water to thousands of New Brunswickers. Demands related to climate change mitigation and biodiversity conservation are recent challenges. Never have so many New Brunswickers asked so much of their forests.

The province's private woodlots are largely unregulated by the Crown, except for riparian buffers, water crossings, and lands within designated drinking water supply areas. As a result, many woodlots are clear-cut without subsequent concern for regeneration of the next forest. Many of these areas eventually regenerate as low-grade, shade-intolerant hardwood (e.g., poplar and grey birch) or mixed conifer and hardwood stands.

Over the past decade, forest policy innovation in New Brunswick has withered. Important provisions of the *Crown Lands and Forests Act* (1982) and the *Natural Products Act* (1999) have been neglected. “Proportional source of supply” provisions have not been effectively implemented, and despite its legislated authority, the New Brunswick Forest Products Commission does not “arrive at an equitable price for purchased primary forest products.” Conflicts among private woodlot owners, the government, and parts of the forest industry remain unresolved.

Between 2005 and 2007, four major pulp and paper mills in northern New Brunswick closed. The remaining mills faced plummeting prices as the U.S. housing market receded and the Canadian dollar strengthened. By 2006–07, harvests from industrial freeholds exceeded private woodlot harvests for the first time (Figure 2) as some large firms relied on Crown forests and industrial freehold. Operating costs were lower on these larger blocks, and scheduling wood for harvest was more certain. Many private forest landowners could not operate profitably at the prices being offered by the mills and chose to simply “leave it on the stump.”

Figure 2 Cubic metres of industrial roundwood harvested and consumed in New Brunswick, 1976/77 – 2010/11, by ownership type



Source: N.B. Timber Utilization Survey

In November 2010 the Government of New Brunswick held a forest industry summit in which it pledged to establish meaningful timber objectives for both Crown and private lands. It established the Private Forest Task Force in March 2011 with the following mandate:

1. collaboratively define and clarify the key elements and considerations associated with defining a timber objective for New Brunswick Private Woodlots, and
2. make recommendations to the Minister of Natural Resources for a specific timber objective on NB Private woodlots that takes into account owner objectives, the various

stakeholder view points, marketing considerations and assistance programs associated with the NB Private woodlots, by December 31, 2011.

To fulfill that mandate, the task force conducted a survey of woodlot owners (summarized in Section 2, below, and fully described in Appendix A), commissioned a study on the economics and cost-effectiveness of the Private Forest Silviculture Program (Section 3, Appendix B), and obtained an analysis of future wood supply from the Department of Natural Resources (Section 4, Appendix C). The task force also considered the quality of the private woodlot forest resource (Section 5), studied the issues of fair market value and equitable market share (Section 6), and examined the organizations and institutions associated with private woodlots (Section 7). Section 8 summarizes the findings, and Section 9 makes recommendations. Appendix D lists the consultations and listening sessions that helped inform this report.

Woodlot owners

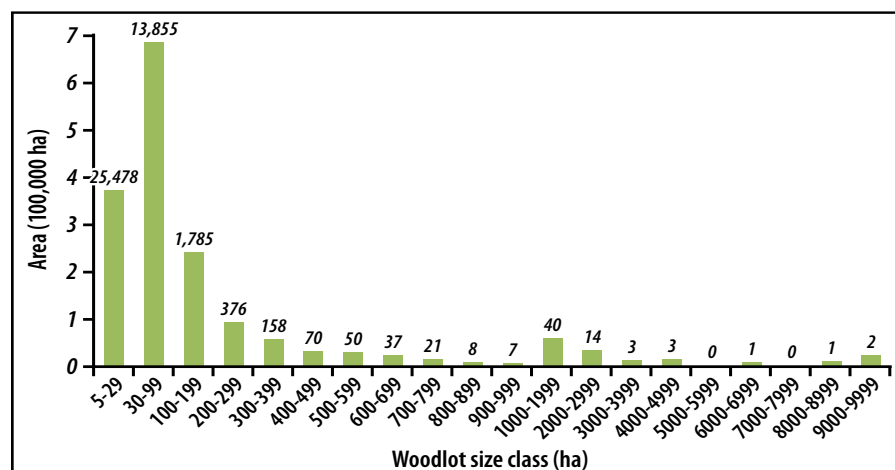
The last province-wide survey of New Brunswick's private woodlot owners was conducted in 1982. Until the task force's 2011 survey was completed, basic information—even the number of woodlot owners and total area they own—was uncertain.

In summer 2011 a mail survey was conducted to gather information on the motivations, values, behaviours, and attitudes of New Brunswick woodlot owners who owned at least one parcel of 5 hectares; 2,200 surveys were mailed to woodlot owners, and the response rate was 35 percent. The survey used a stratified random sampling method that divided the population into owners of small, medium and large parcels. The margin of error for each group is respectively plus or minus seven, six and six percent, 19 times out of 20. Below, we provide a brief synopsis. A complete report is included as Appendix A.

Characteristics of woodlot owners and their land

Of the estimated 41,900 woodlot owners in New Brunswick, 61 percent have woodlots of 5 to 29.9 hectares ("small woodlots"); 33 percent own 30 to 99.9 ha ("medium woodlots"), and the remaining 6 percent own more than 100 ha ("large woodlots") (Figure 3).

Figure 3 Woodlot area, by size class



The figures above the bars indicate the number of woodlot owners represented within each size class.

Source: SNB (2011).

Small woodlots make up 22 percent of the total area, medium woodlots account for 40 percent, and large woodlots, 38 percent (Table 1). In total, the private woodlot resource in New Brunswick accounts for almost 1.7 million ha of productive forestland.

Table 1 *Woodlot owners and woodlot area, by size class*

		Size of ownership		
		Small	Medium	Large
<i>Owners</i>	n	25,478	13,855	2,576
	%	61	33	6
<i>Woodlot area</i>	ha	370,059	685,659	643,801
	%	22	40	38

Woodlot owners are predominately 55 years of age or older (71 percent), and many are retired (44 percent). By 2042 those currently between the ages of 55 and 64 (33 percent) will likely have transferred their land to new owners. However, their land is unlikely to be acquired by younger owners. Middle-aged people are more likely than young adults both to have the means for purchasing land and to inherit real estate.

Only small proportions of owners generate income from their woodlots (18 percent), use a written forest management plan (13 percent), or conduct management activities for which they have received financial support from the provincial government or regional marketing board (13 percent). In each case, likelihood increases with woodlot size. For example, only 6 percent of owners of small woodlots received assistance for silviculture, versus 43 percent of large woodlots.

Most woodlot owners do not report financial return as a principal reason for owning forest land. Woodlot owners hold their land for different reasons. Overall, the reasons most frequently cited reflect family values (both heritage and legacy) and ecological values—enjoyment from owning green space (66 percent say this is important), for the sake of future generations (63 percent), to pass on as heritage (63 percent), and for wildlife enjoyment (58 percent). However, ownership motivation varies significantly with woodlot size. A higher proportion of large woodlot owners cite financial reasons, such as owning land as an investment or for timber harvesting. Nevertheless, even among the owners of large woodlots, nonfinancial motives are important for a relatively high proportion of owners.

Past harvesting behaviour

Owners of large parcels are more likely to have harvested in the past 10 years (Table 2). Major reasons to harvest were to improve the quality of the woodlot and capture some value from dead and dying trees. Owners of large woodlots were most likely to have harvested because they needed the money or because a marketing board or forest cooperative recommended it.

Table 2 Frequency of having removed or harvested trees, by size class

Frequency of harvesting	Size of ownership			Percentage of total
	Small	Medium	Large	
<i>At least once each year over the last 10 years</i>	27%	38%	44%	32%
<i>At least once over the last 5 years</i>	18	18	22	18
<i>Not in the last 5 years, but at least once over the last 10 years</i>	11	14	17	12
<i>Not in the last 10 years, but at least once before then</i>	22	20	12	21
<i>Never</i>	20	10	3	16
<i>Not stated</i>	2	1	2	2

Significant differences between size of ownership at $p \leq 0.05$ (chi-square test)

Owners of small and medium woodlots collected firewood more than owners of large woodlots. Harvesting methods tended to be of low intensity: about 50 percent of owners removed only dead and dying trees, and 30 percent removed less than half the trees in a given area. Owners of large woodlots were more likely to remove most or all trees in a harvest area, and the proportion of owners who salvaged only dead and dying trees decreased as ownership size increased.

In terms of the contribution woodlot owners make to the provincial wood supply, 28 percent of woodlot owners have sold saw material (logs or studs), pulpwood, veneer logs, or posts, poles, or pilings in the past 10 years (Table 3). The proportion of owners who sold one or more of these products increases with increasing size of ownership.

Table 3 Respondents who have sold timber products in past 10 years, by size class

Sold timber products	Size of ownership			Percentage of total
	Small	Medium	Large	
<i>Yes</i>	20%	37%	64%	28%
<i>No</i>	80	62	34	71
<i>Not stated</i>	1	1	2	1

Significant differences between size of ownership at $p \leq 0.05$ (chi-square test)

Future management intentions

Fifty-four percent of all owners indicated that they might harvest in the next 10 years (Table 4). Interest in future harvesting increases with ownership size, and owners of large woodlots are more likely to hire a logging crew or independent contractor.

Table 4 Owners' intention to harvest or remove trees in next 10 years, by size class

Intend to harvest	Size of ownership			Percentage of total
	Small	Medium	Large	
<i>Yes</i>	49%	61%	68%	54%
<i>No</i>	42	29	20	36
<i>Not stated</i>	9	11	12	10

Significant differences between size of ownership at $p \leq 0.05$ (chi-square test).

The majority of owners (56 percent) plan to engage in at least one forest management activity in the next decade. Leading the list of activities were thinning or spacing young stands, surveying or upgrading boundary lines, and building or maintaining roads and trails (Table 5). A larger proportion of owners of large woodlots also plan to conduct site preparation, planting, and pesticide or herbicide application.

Table 5 Owners' planned management activities over next 10 years, by size class

Planned activities	Size of ownership			Percentage of total
	Small	Medium	Large	
<i>Thin or space young stands</i>	33%	32%	42%	33%
<i>Survey or upgrade boundary lines*</i>	34	30	43	33
<i>Build or maintain roads and trails</i>	32	33	42	33
<i>Improve woodland for recreation</i>	22	20	26	21
<i>Plant trees*</i>	14	16	26	16
<i>Wildlife habitat/fisheries improvement projects</i>	14	14	19	15
<i>Prepare site for tree planting*</i>	11	12	23	12
<i>Produce maple products</i>	9	11	14	10
<i>Apply pesticides or herbicides*</i>	3	5	10	4
<i>Other management activities*</i>	2	0	2	1

* Significant differences between size of ownership at $p \leq 0.05$ (Chi-square test).

When asked about the future of their land, about half the owners indicated that they planned to do the “minimum activity” required to maintain their woodlots. Owners of small woodlots were more likely to have no plans or to plan to “leave it as is—no activity.”

Forest certification and alternative management approaches

The majority of owners (64 percent) felt that they were not well informed about forest management certification. More owners agreed (38 percent) than disagreed (8 percent) that certification was necessary for New Brunswick forest products to compete in international markets. The remaining owners said they were neutral or didn’t know, or did not say. The proportion of owners who cited market-related reasons for considering certification increased with ownership size (Table 6). A minority (19 percent) said they would never consider certification for their woodlots; agreement with this statement decreased as ownership size increased.

Table 6 *Owners’ reasons to consider forest certification, by size class*

Reasons to consider certification	Size of ownership			Percentage of total
	Small	Medium	Large	
<i>It may make my forest healthier*</i>	49%	51%	54%	50%
<i>It could improve wildlife habitat</i>	43	43	47	43
<i>It could help protect the environment*</i>	41	44	48	42
<i>To demonstrate that I practice sustainable forest management on my woodland*</i>	29	36	44	32
<i>I could sell my wood products for a higher price*</i>	21	38	54	28
<i>I could gain access to wood markets that would not otherwise be available*</i>	18	31	48	24
<i>I can afford both the time and money to obtain certification*</i>	3	9	12	6
<i>Other reasons*</i>	5	3	4	4
<i>I would never consider certification of my woodland*</i>	22	13	9	19

* Significant differences between size of ownership at $p \leq 0.05$ (Chi-square test).

Most woodlot owners said they were unlikely to participate in alternative management approaches and programs (Table 7). This suggests that woodlot owners are sceptical about those who might influence their land management choices. About a third of owners would likely participate in a voluntary land conservation program if it made them eligible for grants, assistance programs, or other benefits. Roughly the same proportion would likely have a management plan and carry out its recommendations if it allowed them to participate in a property tax reduction program. However, there appears to be limited appetite for

cooperating more closely with industry or with one another, or for accepting government subsidies if strings are attached.

Table 7 Likelihood of participation in programs and partnerships, by size class

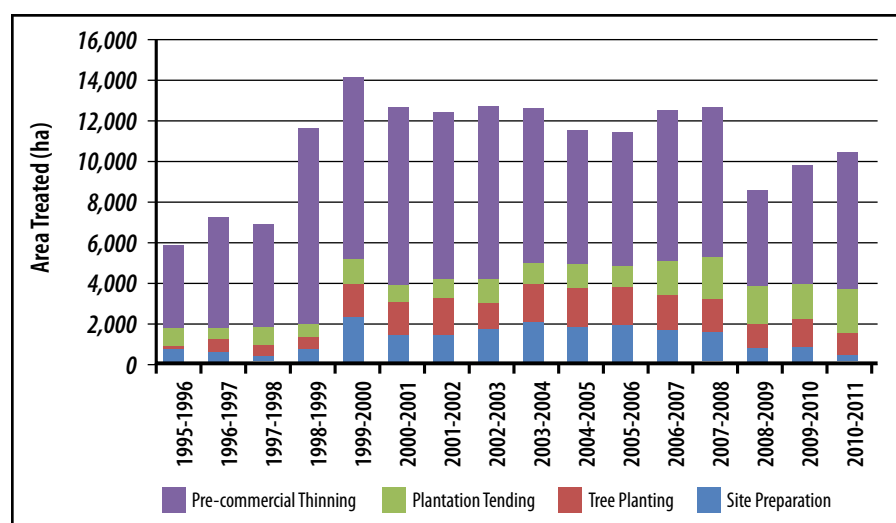
Would you ...	Likelihood	Size of ownership			Percentage of total
		Small	Medium	Large	
<i>Participate in a voluntary land conservation program if it made you eligible for grants, assistance programs, or other benefits*</i>	Unlikely	44%	34%	32%	40%
	Likely	33	36	40	34
<i>Have a management plan and carry out its recommendations if it allows you to participate in a property tax reduction program*</i>	Unlikely	40	31	26	36
	Likely	28	40	52	33
<i>Accept government funding to conduct forest management activities on your woodland, if it means you have to harvest the trees once they are mature*</i>	Unlikely	55	43	31	50
	Likely	24	32	47	28
<i>Become a member of a group of woodland owners in your area to jointly manage these woodlands for habitat, recreation, or water quality*</i>	Unlikely	56	46	42	51
	Likely	17	21	31	19
<i>Accept management services from a forest products company in return for sale of wood to them*</i>	Unlikely	65	57	50	62
	Likely	14	17	25	16
<i>Become a member of a group of woodland owners in your area to jointly manage these woodlands for logs, pulp, chips or biomass*</i>	Unlikely	64	52	39	58
	Likely	10	18	35	14

* Significant differences between size of ownership at $p \leq 0.05$ (Chi-square test)

Cost-effectiveness of silviculture

Between 1995 and 2010, the federal and provincial governments spent \$106.7 million on private woodlot silviculture in New Brunswick. Landowner contributions were \$25.4 million, for a total of \$132.1 million. From 2003 to 2007, approximately 73 percent of the funding was spent on pre-commercial thinning. The balance supported plantation establishment, tending, and other projects. Figure 4 displays the area treated from 1995–96 to 2010–11.

Figure 4 Area treated under Private Lands Silviculture Program, 1995–96 to 2010–11, by practice



Our cost-effectiveness analysis considers reduced time to operability, reduced harvest costs, and increased product content. The effects of silviculture are long term and are realised at rotation age, which in most cases is more than 60 years after planting and about 45 years after pre-commercial thinning. The financial return from the investment depends on the success of the treatment, quantity and quality of the wood, the future price of the forest products, changes in operating costs, and time between treatment and harvest.

Tables 8 and 9 provide an analysis of the combined public and private (cost-share included) investment in private woodlot silviculture in New Brunswick from 1995 through 2010.

Table 8 *Cost-effectiveness of Private Lands Silviculture Program*

Activity	Government + landowner, MB = total investment (1995–2010)	Present value at 3%	Present value at 5%	Expected increase in volume (m ³)	Cost of investment/ m ³ at interest rates of...		
					0%	3%	5%
<i>Plantation</i>	\$24,705,282 + 5,835,497 = \$30,540,779	\$36,703,294	\$41,680,548	1,377,653	\$22.2	\$26.6	\$30.3
<i>Thinning</i>	\$82,007,305 + 19,536,856 = \$101,544,161	\$126,305,905	\$146,774,431	7,792,759	\$13.0	\$16.2	\$18.8
<i>Total</i>	\$106,712,586 + 25,372,353 = \$132,084,939	\$163,009,199	\$188,454,980	9,170,412	\$14.4	\$17.8	\$20.6

MB = marketing board. Present value (0%) = year 2010–2011.

Table 9 *Required increase in timber volume at \$20/m³ for breakeven investment in silviculture*

	Required increase in timber volume at interest rates of ...		
	0%	3%	5%
<i>Plantation, per hectare</i>	72 m ³	87 m ³	98 m ³
<i>Thinning, per hectare</i>	46 m ³	57 m ³	66 m ³
<i>All activities, all woodlots</i>	6,604,247 m ³	8,150,460 m ³	9,422,749 m ³

Present value (0%) = year 2010–2011

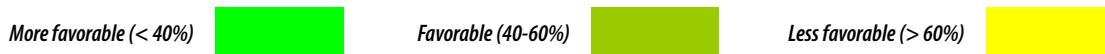
Under the assumptions of the analysis (Appendix B), the silviculture program will increase total volume by approximately 9.1 million m³. Most of that volume (7.8 million m³, or approximately 86 percent) is the result of pre-commercial thinning; the remainder is from plantation establishment and tending.

Over the life of the program, using the assumptions in the model, pre-commercial thinning is cost-effective at a 5 percent interest rate when stumpage prices reach \$18.80/m³ or higher. Plantation establishment and maintenance is cost-effective at a 5 percent interest rate with a stumpage price of \$30.30/m³ or more.

The cost-effectiveness of stand interventions varies considerably with site productivity. Figure 5 illustrates the percentage of volume increase required for a cost-effective investment at various stumpage prices. The dark green colour indicates a more favourable investment, yellow indicates less favourable investments.

Figure 5 Percentage increase in volume required for breakeven investment, by stumpage price

Total Expenses														
\$	2,955.00	Required Growth (m ³)	Percentage of minimum increase in volume required at different Stand Yield levels per ha											
Stumpage			120	140	160	180	200	220	240	260	280	300	320	340
\$	10	296	246%	211%	185%	164%	148%	134%	123%	114%	106%	99%	92%	87%
\$	15	197	164%	141%	123%	109%	99%	90%	82%	76%	70%	66%	62%	58%
\$	20	148	123%	106%	92%	82%	74%	67%	62%	57%	53%	49%	46%	43%
\$	25	118	99%	84%	74%	66%	59%	54%	49%	45%	42%	39%	37%	35%
\$	30	99	82%	70%	62%	55%	49%	45%	41%	38%	35%	33%	31%	29%
\$	35	84	70%	60%	53%	47%	42%	38%	35%	32%	30%	28%	26%	25%
\$	40	74	62%	53%	46%	41%	37%	34%	31%	28%	26%	25%	23%	22%
\$	45	66	55%	47%	41%	36%	33%	30%	27%	25%	23%	22%	21%	19%
\$	50	59	49%	42%	37%	33%	30%	27%	25%	23%	21%	20%	18%	17%
\$	55	54	45%	38%	34%	30%	27%	24%	23%	21%	19%	18%	17%	16%
\$	60	49	41%	35%	31%	27%	25%	22%	21%	19%	18%	16%	15%	14%
Plantation Activities														
\$	1,906.00	Required Growth (m ³)	Percentage of minimum increase in volume required at different Stand Yield levels per ha											
Stumpage			120	140	160	180	200	220	240	260	280	300	320	340
\$	10	191	159%	136%	119%	106%	95%	87%	79%	73%	68%	64%	60%	56%
\$	15	127	106%	91%	79%	71%	64%	58%	53%	49%	45%	42%	40%	37%
\$	20	95	79%	68%	60%	53%	48%	43%	40%	37%	34%	32%	30%	28%
\$	25	76	64%	54%	48%	42%	38%	35%	32%	29%	27%	25%	24%	22%
\$	30	64	53%	45%	40%	35%	32%	29%	26%	24%	23%	21%	20%	19%
\$	35	54	45%	39%	34%	30%	27%	25%	23%	21%	19%	18%	17%	16%
\$	40	48	40%	34%	30%	26%	24%	22%	20%	18%	17%	16%	15%	14%
\$	45	42	35%	30%	26%	24%	21%	19%	18%	16%	15%	14%	13%	12%
\$	50	38	32%	27%	24%	21%	19%	17%	16%	15%	14%	13%	12%	11%
\$	55	35	29%	25%	22%	19%	17%	16%	14%	14%	12%	12%	11%	10%
\$	60	32	26%	23%	20%	16%	16%	14%	13%	13%	11%	11%	10%	9%
Thinning Activities														
\$	2,955.00	Required Growth (m ³)	Percentage of minimum increase in volume required at different Stand Yield levels per ha											
Stumpage			120	140	160	180	200	220	240	260	280	300	320	340
\$	1,049.00	105	87%	75%	66%	58%	52%	48%	44%	40%	37%	35%	33%	31%
\$	15	70	58%	50%	44%	39%	35%	32%	29%	27%	25%	23%	22%	21%
\$	20	52	44%	37%	33%	29%	26%	24%	22%	20%	19%	17%	16%	15%
\$	25	42	35%	30%	26%	23%	21%	19%	17%	16%	15%	14%	13%	12%
\$	30	35	29%	25%	22%	19%	17%	16%	15%	13%	12%	12%	11%	10%
\$	35	30	25%	21%	19%	17%	15%	14%	12%	11%	10%	9%	9%	9%
\$	40	26	22%	19%	16%	15%	13%	12%	11%	10%	9%	9%	8%	8%
\$	45	23	19%	17%	15%	13%	12%	11%	10%	9%	8%	8%	7%	7%
\$	50	21	17%	15%	13%	12%	10%	10%	9%	8%	7%	7%	7%	6%
\$	55	19	16%	14%	12%	11%	10%	9%	8%	7%	7%	7%	7%	6%
\$	60	17	15%	12%	11%	10%	9%	8%	7%	7%	6%	6%	5%	5%



Overall, the combined public and private investment in private land silviculture is marginally cost-effective. Given its marginal or negative returns (based on the practice), the program should focus on the most productive treatments, sites, and stands and target higher-value products rather than volume.

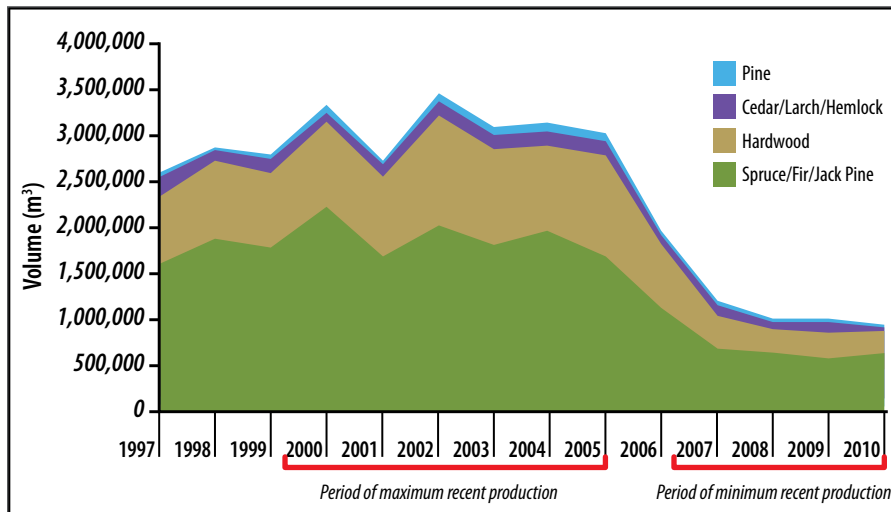
In addition to providing fibre, the Crown and private lands silviculture programs also provide direct and indirect employment and benefits to the community. The data are difficult to interpret because Statistics Canada’s category for silviculture employment includes some support work in agriculture. The total number of full-time New Brunswick jobs in “Support Activities for Agriculture and Forestry” (for Crown and private lands combined) has declined by 39 percent, from 1,210 jobs in 1997 to 740 jobs in 2010. Most of these jobs are seasonal (generally May to December). The seasonally unadjusted total for December 2010 was 440 jobs, with weekly earnings of about \$760.

Timber supply objectives

New Brunswick's forest industry has consistently identified timber supply as a significant problem. The industry asserts that over the long term, it needs an expanded supply to remain globally competitive. Assuming that Crown land and industrial freehold are being managed and harvested at levels approaching their sustainable allowable cut, optimizing production from private woodlots is the most feasible approach to increasing supply. Private woodlots have significant potential to produce both additional timber and ecological goods and services, but many challenges need to be addressed if the potential is to be achieved. Specific recommendations for timber objectives are found in Section 9, Recommendations.

In recent years, the annual harvests have fluctuated considerably (Figure 6). Between 2000 and 2005, harvests from private woodlots reached a recent high of 3.11 million m³/year. Following the 2006 downturn in the industry, wood volume produced and sold by the marketing boards dropped dramatically. Between 2007 and 2010, annual production averaged 1.04 million m³/year, a drop of 67 percent.

Figure 6 Total production for all marketing boards, by species group, 1997–2010



Forecast assumptions and limitations

The New Brunswick Department of Natural Resources (DNR) Forest Management Branch provided new wood supply forecasts under four scenarios: a theoretical maximum fibre model, 90 percent of the maximum, 80 percent of the maximum, and 70 percent of the maximum. The complete report is provided as Appendix C.

We assume that woodlot owners make decisions about the timing, intensity, and type of operation they conduct without consideration of the effect on the overall condition of the forest or on other landowners. Harvesting patterns and silviculture activities on private woodlots, when viewed at the landscape level, are assumed to be best represented by a

Monte Carlo simulation, in which stand types are harvested in proportion to their abundance on the landscape.

The harvest treatment types used in the model were clear-cut, shelterwood, strip/patch, and selection harvests. The silviculture treatments were planting, hardwood pre-commercial thinning, and softwood pre-commercial thinning. Based on past practices, as indicated by marketing board representatives, it is assumed that 90 percent of harvests will be clear-cuts for the forecast period (the next 80 years), and many woodlots are harvested 35 to 40 years from regeneration. It is also assumed that in each region, the historical proportion of silviculture activities will continue over the next 80 years.

An important limitation is that the province's forest inventory for certain regions is up to 10 years out-of-date. Three sources of information were used to update the private woodlot forest inventory: DNR's timber utilization survey, the marketing board annual production summaries, and the Forest Products Commission's transportation certificate system. These data sources provided an estimate of the harvest volume from 1997 to 2010, and the highest value of the three in any given year was assumed to be the correct volume.

To determine the area treated with planting or pre-commercial thinning, the silviculture certification reports, which record the treatment area of silviculture activities funded by the province, were cross-referenced with the forest inventory.

The modeling approach is aspatial. That is, it does not indicate which particular parcel is harvested or treated with silviculture and does not take into consideration road access. We consider this appropriate because any woodlot owner can engage in management activity at any time; a spatial model would require making many assumptions.

Forecasting exercises have inherent uncertainty, even without the data limitations discussed above. Forest modeling necessarily uses assumptions about how a complex natural system will react to treatments and how these events unfold over time. When this system is divided into units owned by some 46,000 individuals, the complexity is magnified. Nevertheless, forecasting is a useful tool for anticipating overall trends and the capacity of the forest to supply timber and other forest values.

Wood supply forecasts

Tables 10 and 11 summarize the softwood and hardwood theoretical maximum harvest rates; 90, 80, and 70 percent of the maximum rates; and average harvests for two recent periods for each marketing board. Harvest rates in the North Shore marketing board region in the early part of the decade were clearly unsustainable; softwood harvesting rates in Northumberland and Madawaska were barely sustainable.

Table 10 *Annual Sp/Bf/Jp harvest volume (m³, all products) expected as harvest pressure is reduced from theoretical maximum. Expectations averaged over first 25 years*

of forecast. Recent harvest estimates included for comparison.

Marketing board	Maximum theoretical rate	90% of max.	80% of max.	70% of max.	2000–2005 actual harvest (% of max.)		2007–2010 actual harvest (% of max.)	
Carleton-Victoria	140,000	125,000	110,000	100,000	125,000	89.3%	135,000	96.4%
Madawaska	105,000	85,000	80,000	75,000	135,000	128.6	80,000	76.2
North-Shore	260,000	245,000	205,000	180,000	510,000	196.2	95,000	36.5
Northumberland	180,000	160,000	140,000	120,000	205,000	113.9	20,000	11.1
South-Eastern N.B.	345,000	315,000	275,000	250,000	285,000	82.6	100,000	29.0
Southern N.B.	495,000	445,000	405,000	345,000	345,000	69.7	115,000	23.2
York-Sunbury-Charlotte	385,000	335,000	290,000	265,000	295,000	76.6	95,000	24.7
Total	1,910,000	1,710,000	1,505,000	1,335,000	1,900,000	99.5	640,000	33.5

Sp/Bf/Jp = spruce, balsam fir, jack pine. Figures in bold indicate harvest levels above theoretical maximum fibre production.

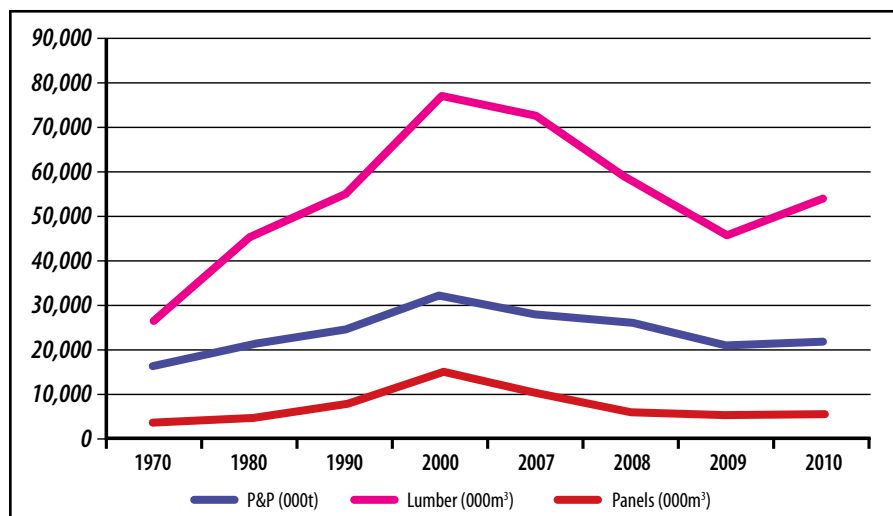
Table 11 *Annual hardwood harvest volume (m³, all commercial species and products) expected as harvest pressure is reduced from theoretical maximum. Expectations averaged over first 25 years of forecast. Recent harvest estimates included for comparison.*

Marketing board	Maximum theoretical rate	90% of max.	80% of max.	70% of max.	2000–2005 actual harvest (% of max.)		2007–2010 actual harvest (% of max.)	
Carleton-Victoria	190,000	175,000	150,000	125,000	160,000	84.2%	70,000	36.8%
Madawaska	145,000	140,000	115,000	95,000	105,000	72.4	50,000	34.5
North-Shore	310,000	270,000	250,000	215,000	245,000	79.0	50,000	16.1
Northumb-erland	125,000	110,000	100,000	90,000	80,000	64.0	10,000	8.0
South-Eastern N.B.	270,000	240,000	225,000	185,000	95,000	35.2	20,000	7.4
Southern N.B.	430,000	385,000	330,000	305,000	175,000	40.7	35,000	8.1
York-Sunbury-Charlotte	345,000	325,000	285,000	235,000	135,000	39.1	60,000	17.4
Total	1,815,000	1,645,000	1,455,000	1,250,000	995,000	54.8	295,000	16.3

Timber quality objectives

The decline in Canada's paper and pulp industry (Figure 7) is partly due to the recession but is more closely linked to changes in our competitive position and technological changes: a decline in newspaper circulation has resulted in a drop in newsprint production in Canada from 9 million to 4.5 million tonnes. The market for pulpwood has disappeared in northeastern New Brunswick. This has important implications for forest management objectives. Forest managers need to adopt strategies to respond to the structural changes in the province's forest industry.

Figure 7 Canadian production of major forest products, 1970–2010



Woodlot management in New Brunswick occurs at the parcel or ownership level and is not coordinated across ownerships. The current age class structure is unbalanced, with younger age classes predominating. Woodlots consist primarily of unmanaged mature stands and unmanaged natural regeneration, with shade-intolerant hardwoods and mixed-wood. Intolerant hardwoods are often pioneer species that thrive in openings created by disturbance. That these species are persisting across the landscape indicates clear-cut harvesting is prevalent.

Shade-intolerant hardwoods are a low-value product used largely for hardwood pulp; they make a limited contribution to a forest that can support a truly competitive forest industry. Moreover, intolerant hardwoods are only a few of the species characteristic of New Brunswick's Acadian forest type.

In the near to mid-term, the profitability and competitiveness of the New Brunswick forest industry require a forest that supplies (1) trees large enough to offer cost-effective harvesting,

transport, and processing; and (2) a higher proportion of sawlogs and stud logs and a lower proportion of pulpwood.

Participants in the task force listening sessions in northern and western New Brunswick complained about the lack of attention to the management of shade-tolerant hardwoods, such as yellow birch and sugar maple. High-quality tolerant hardwoods have potential for value-added products, but this resource has declined over many decades. Many who called attention to this issue cited persistent high-grading (removal of the most valuable trees), clear-cutting, and in some cases, conversion to conifer plantations on Crown lands as well as on woodlots. New Brunswick does not regulate harvest methods or regeneration on private lands. Promoting shade-tolerant hardwood stands on private lands depends on collaboration between skillful harvest contractors and forestry professionals and may require policy intervention.

The costs of harvesting and delivery are sensitive to tree size, particularly for sawmills, which need to lower their costs and improve their profit margins. Because the New Brunswick forest products industry has little influence on the price of the products it sells in the international marketplace, forest landowners and the industry must reduce costs, increase margins, and improve competitiveness.

The benefits of larger logs accrue to all participants in the supply chain. Harvesters are more efficient when cutting fewer large trees than many small trees. Similarly for truckers and sawmillers, size matters. Trees that allow reduced costs and higher profit margins are more valuable, and the forest landowner will be paid more for the timber.

The size range for the “optimal tree”—the size class that allows significant reductions in harvesting costs and improvements in sawmill efficiency—is 0.25 to 0.50 m³. Currently, however, the average tree sold through marketing boards is only half the optimum size:

Carleton-Victoria	0.13 m ³
Madawaska	0.12
North-Shore	0.12
Northumberland	0.10
Southeastern N.B.	0.12
Southern N.B.	0.12
York-Sunbury-Charlotte	0.12

Table 12 indicates that as small-end diameter increases, the volume per truckload, value recovery per log, and lumber recovery increase. Management policies should therefore encourage growth and harvest of larger trees.

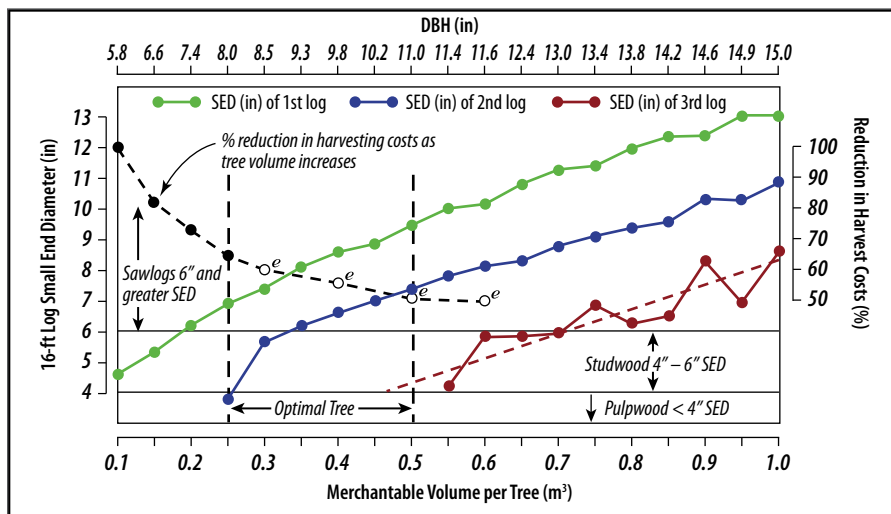
Table 12 Relationships between small-end diameter and value

Small-end diam. (in.)	Vol./log (m ³)	Logs per m ³	Logs per 38 m ³ truck-load	Board feet per log	Board feet per 38 m ³ load	Value recovery per log (\$/log)	Potential value to sawmill (\$/load)	Potential value recovery (\$/m ³)	% of value (\$/m ³)	Potential lumber recovery (fbm/m ³)
4	0.076	13.2	500	17.8	8,900	\$5.17	\$2,585	\$68.25	100	235
6	0.145	6.9	260	39.1	10,166	\$11.45	\$2,977	\$79.03	116	270
8	0.229	4.4	165	69.2	11,418	\$20.05	\$3,308	\$88.25	129	301
10	0.338	3.0	115	104.0	11,960	\$31.18	\$3,585	\$93.54	137	307
12	0.472	2.1	80	146.9	11,752	\$47.18	\$3,774	\$99.07	145	311
14	0.588	1.7	65	199.1	12,941	\$63.47	\$4,124	\$107.90	158	338
16	0.833	1.2	45	280.0	12,600	\$94.19	\$4,238	\$113.03	166	344

Logs are spruce/pine/fir (SPF) and 16 feet long. Sawlogs are classified by small-end diameter, in inches. Data sources: SAWSIMâ analysis conducted by HALComm Software Systems Ltd.; lumber price assumptions used in the calculation are based on 1998–2008 averages.

Figure 8 illustrates small-end diameter (SED) log sizes in inches, linked to tree size in cubic meters. The green line indicates the SED of the butt log, the blue line the SED of the second log, and the red line the SED of the third log. Trees smaller than 0.60 m³ do not produce a third sawlog. The black line, harvesting costs, indicates a significant percentage reduction in the cost of harvest-to-roadside using “cut-to-length” systems as tree size increases.

Figure 8 Optimal tree size



DBH = diameter at breast height. SED = small-end diameter.

Table 13 relates diameter at breast height to cubic volume. Recall that average trees sold through the marketing boards are in the 0.10 to 0.13 m³ range and thus have a diameter of 5.8 to less than 6.6 inches. These trees are clearly suboptimal.

Table 13 *Relationships between tree volume and diameter*

Vol. (m³)	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75
DBH (ins.)	5.8	6.6	7.4	8.0	8.5	9.3	9.8	10.2	11.0	11.4	11.6	12.4	13.0	13.0

DBH = diameter at breast height. Figures in bold indicate optimal tree sizes.

Although pulp and paper mills can continue to use pulpwood, in most cases pulp mills prefer sawmill chips, which are easier to transport and handle. Because larger trees produce bigger logs and, indirectly, a more profitable sawmilling industry, the pulp and paper mills should have a steady flow of chips if the sawmills are profitable.

The analysis indicates the need for changes in management objectives that will support a more competitive industry. Forest managers and policymakers should not be discouraged by a task that may take decades to achieve.

Fair market value and equitable market share

Imagine that you own a house in a community with 1,000 houses. The government owns 500 of these houses and has a policy of selling a fixed percentage of them each year to a company that holds a license to process the sales. The company is marginally profitable. Its employees pay income and sales taxes to the government, but the government loses money on the overall home sales program, even though it was meant to fund schools, hospitals, and other social programs, both directly and through increased tax revenues.

You would like to sell your house. What price do you expect to receive?

Because of historic land tenure patterns, private forest owners in New Brunswick find themselves in the position of our imaginary homeowner. Over the past two decades, their market share has fallen from about 25 percent to 10 percent. At the same time, the forest products industry has experienced a dramatic restructuring; the few remaining firms have been forced to cut their operating costs to the bone.

The basic relationship among government, forest products firms, and private forest landowners has existed for many decades, but the flaws in the system have become more evident now that demand is weak, especially in the pulpwood market. There is little hope that the pulp and paper industry in New Brunswick will return to its former status. The lack of markets for pulpwood quality material will create forest management and marketing problems until new products and markets are developed for this material.

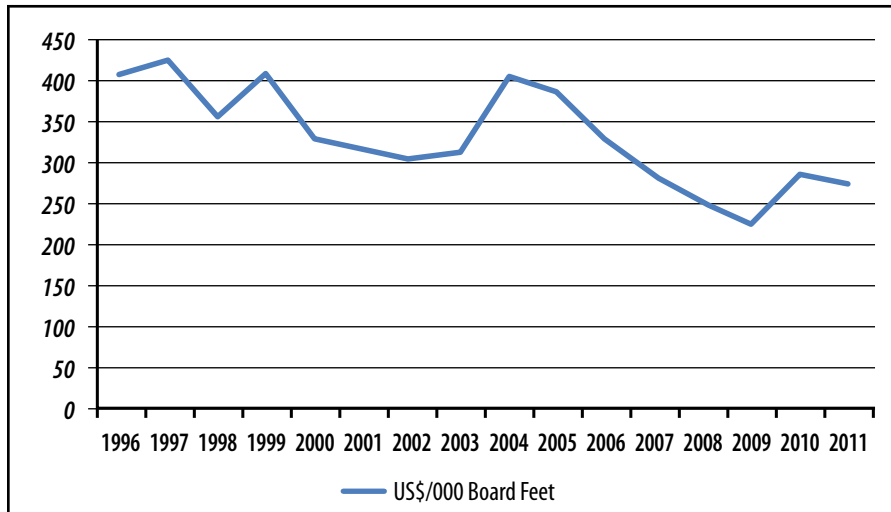
Establishing the fair market value for harvested timber in New Brunswick and determining an equitable market share between private woodlot owners and the Crown lands are the most important issues for the woodlot owners. These landowners often sell standing timber to a contractor for a fixed price, which varies with stand conditions (road access, merchantable volume, etc.). Some companies have active programs for purchasing standing timber or harvested wood (delivered at the mill or “roadside”). Seven regional marketing boards are responsible for giving woodlot owners market information about mills’ purchasing and pricing; they collect a levy on all private wood sold. Under a recent negotiated agreement among the marketing boards and the New Brunswick Forest Products Association, the member mills purchase private wood solely through the marketing boards.

Fair market value

The Random Lengths framing lumber composite price (a widely used index for U.S. lumber prices) peaked in 2004 at US\$404 per thousand board feet (Figure 9). It was less than US\$222 in 2009 and increased to \$272 in 2011. Current prices for New Brunswick kiln-dried framing

lumber (delivered in Boston) are US\$300 to \$320. With the Canadian dollar trading at or near par, lumber producers are pressured to reduce their costs.

Figure 9 Random Lengths framing lumber composite price (monthly average)



Compounding the problem of slack demand, wood from northeastern New Brunswick must travel long distances to reach processors. In western New Brunswick the situation is less critical but remains fragile. Along the border with Maine and Quebec, woodlot owners have more opportunities to negotiate prices for all products.

Under the current system for Crown wood (approximately 56 percent of total market in 2010), a consultant hired by the Crown periodically surveys transactions between private woodlot owners and forest products purchasers in New Brunswick and Nova Scotia and adjusts them through a proprietary formula that is not available to the public. The reported private transactions occur in the context of already-established Crown prices and are used to set prices in the next administrative cycle. The approach was criticized in an Auditor General's Report (2008):

5.36 The fact that the mills directly or indirectly control so much of the source of timber supply in New Brunswick means that the market is not truly an open market. In such a situation it is not possible to be confident that the prices paid in the market are in fact fair market value.

Perfectly competitive markets are only theoretically possible; no market meets all the conditions required by economic theory. In a competitive market, with many players, no single buyer or seller has the power to affect prices, and auctions and private transactions between buyers and sellers determine price. New Brunswick's forest products market combines aspects of a bilateral monopoly (a single dominant seller, the Crown; and a single dominant buyer, J.D. Irving, Ltd.) and an oligopsony (many small sellers, the private woodlot owners; and a few buyers, the mills, which purchase from both private woodlot owners and

the Crown). Two parties dominate the transactions, and prices for a large proportion of the total harvest are set administratively. Thus it is difficult to establish fair market value.

Most forestland in Canada is Crown land, and private companies that own mills hold licenses to manage the forest and purchase Crown wood. Setting prices is politically and economically complicated in provinces with substantial numbers of private forest owners—eastern Ontario, southern Quebec, Nova Scotia, and New Brunswick.

In theory, an auction system would reflect fair market value for wood sourced from both private woodlots and Crown lands. British Columbia has used auctions for some Crown forests, and Quebec will use auctions for a portion of Crown volumes. In the United States, local, state, and federal governments typically invite sealed bids for their standing timber in a designated area. They do not rely on licensees to manage public lands; rather, the costs of management are direct costs to the government.

We are sceptical that an auction system would achieve actual fair market value here because of the dominance of one or perhaps two purchasers in each region. However, tendering has merit where mill closures have left Crown fibre unallocated or where Crown and private land can be aggregated to attract a new milling facility.

The approach to price setting used by the Canadian dairy, poultry, and egg industries is to control the supply of products in the market. Prices for both producers and consumers are set by boards based on the costs of production, which in turn are estimated based on records submitted by the producers and processors. Critics point out that supply management increases prices to consumers and erects significant barriers to new producers through the enforcement of quotas. And whereas agricultural producers must sell their products at regular intervals, the long periods of time inherent in forest management mean that producers may not come to the market for decades.

Ontario revises stumpage rates monthly based on the prices of commodities sold from different processing facilities. The stumpage rates take into account three main components: regeneration (Forestry Futures Trust), forest inventory (Forest Resource Inventory), and general revenues or minimum rates per species (Consolidated Revenue Fund). Prices are referenced from pulp, paper, sawmills (Softwood Lumber Agreement quota and non-quota based), veneer, and composite processing plants. The U.S. exchange rate is also taken into account. Ontario's fair market value is solely market based, includes market pricing outside the province, and does not distinguish among tenures. This implies that all tenures are equal in terms of value and precludes discrimination based on ownership.

The New Brunswick Forest Products Commission has the power to survey private wood sales and investigate information about the cost structure of processors (mills). As far as we can determine, it has used this power only rarely in the past few years in support of the equitable

market access negotiations. The Commission does not have the power to set prices, but it can—and should—disseminate price information from private transactions in New Brunswick and the region.

One of the simplest ways to improve the determination of fair market value in New Brunswick would be a more regular and systematic report of prices from Nova Scotia (recently included in the Crown price survey), Maine, and Quebec. Because the current system of establishing Crown prices is proprietary (DNR will not share the formula), many woodlot owners distrust the administratively set prices. The ability to compare prices across jurisdictions will tend to reassure potential sellers.

We see no easy solution to overcoming the imperfect market conditions for wood from private woodlots in New Brunswick. Our best advice is to strengthen price reporting from adjacent jurisdictions where administrative pricing of Crown wood is less of a factor. Providing timely, accurate market information is a necessary first step in restoring the confidence of woodlot owners. At the same time the province must attract new wood-using industries to rebalance wood supply and demand.

Equitable market share

Commissions established by the New Brunswick government have raised the problem of market access for private woodlot owners for more than 50 years. The *Crown Lands and Forest Act*, passed in 1982, continued an existing policy of “primary source of supply” from private woodlots: companies that held forest management licenses on Crown lands were required to negotiate the purchase of fibre from the regional marketing boards. The policy, which contained procedures for negotiation and arbitration of disputes, ensured that private woodlot owners could reasonably expect an “equitable” share of the total market and that Crown forests would be managed to provide a wide array of public values, and not be managed primarily for timber production.

In 1992, the act was amended and “primary source of supply” was changed to “proportional source of supply.” At the time, demand for pulpwood, studs, and logs was strong, and there seemed little need to develop an administrative mechanism to enforce the new language. Although required by the law, no new policy was implemented.

As demand for wood and the industry declined through the first decade of the new century, the market share provided by private woodlots declined substantially. The New Brunswick Federation of Woodlot Owners and the New Brunswick Forest Products Association began negotiations over a voluntary “equitable market access” program, in which the mills would commit to an annual estimate of demand for private wood and the marketing boards would commit to providing an estimated volume. The resulting Wood Flow Agreement lasted for two years. It was not renewed, although discussions among the Association, the Federation,

and DNR continue. A principal problem for the marketing boards is aggregating management across ownerships so that they can contract with the mills to provide a specified volume at a fixed price on a date certain. Woodlot owner organizations in Scandinavia, Quebec, and Nova Scotia have approached this problem through joint ventures and owner cooperatives. There are successful examples in New Brunswick as well, and we believe they deserve further support and development.

In some respects, the situation is analogous to what happened when Walmart began to dominate the retail sector. This globally competitive company sources its products internationally and can require suppliers to cut their production costs. Inefficient producers who cannot accept the prices Walmart offers must find alternative buyers. For woodlot owners in New Brunswick, however, alternative markets are limited, particularly for those distant from the Maine and Quebec borders.

When prices are declining, commodity markets enforce relentless reductions in production costs. Almost all of New Brunswick's forest products companies are export-driven commodity producers subject to global competition. To survive, they must source their wood from the least expensive, most reliable suppliers. If Crown wood is their least expensive and most consistent fibre, it is entirely rational that they would harvest it first before seeking higher-cost wood or wood that is more difficult to schedule.

Members of the Forest Products Association argue that if the Crown exercised its power to require that they buy a proportion of their wood supply from private woodlot owners at a price above the current rate, mills would be threatened. At current prices, even Crown wood is more expensive than in many provinces. Furthermore, they contend, solutions that are not voluntarily agreed on are ultimately not sustainable.

Woodlot owners want the government to intervene in the market because prices (particularly for pulpwood) are low, given the imperfect competition in New Brunswick's market. But the government is a self-interested party, and the Minister empowered to act in this regard is also responsible for managing (and producing revenue) from Crown forests.

There are at least two barriers to a new Wood Flow Agreement. First, at current prices, many woodlot owners are reluctant to enter the market, making it difficult to aggregate the producers and volumes necessary to fulfill contracts that would reach the sector's timber objectives. Second, the industry association insists that there be no binding arbitration, and the woodlot owners' federation insists that binding arbitration is a necessity.

Options

We see few options for resolving the price and market share issues. Each has advantages and disadvantages.

1. Return to primary source of supply.
2. Implement the current policy of proportional source of supply using timber targets from this analysis and prices established by a combination of (newly) published Forest Products Commission regional price reports and the existing Crown price survey.
3. Use the equitable market access process to negotiate an agreement between producers and sellers, with oversight by the Forest Products Commission.
4. Publish current regional market information to illustrate prices across jurisdictions.

Our preference is that the government intervene in the market as little as possible. We see options 3 and 4 as preferable to options 1 and 2.

Private woodlot organizations and institutions

Assisting the private woodlot sector are several organizations that offer services, collect information, conduct research, and encourage good stewardship. Their ability to deliver the promised help can affect woodlot owners' competitive position.

Marketing boards

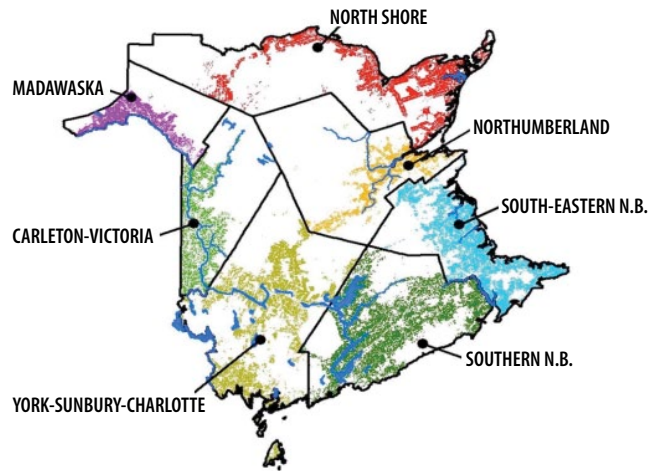
The province has seven regional wood marketing boards that provide services to woodlot owners (Table 14, Figure 10).

Table 14 *New Brunswick wood marketing boards*

Marketing board	Area (ha)	Average property size (ha)	Median property size (ha)	Properties (n)	Woodlot owners (n)	Woodlot owners (%)
Carleton-Victoria	154,293	21	18	7,482	3,337	8
Madawaska	96,127	23	21	4,343	1,999	5
North Shore	275,840	17	13	16,583	8,858	21
Northumberland	133,433	22	18	5,715	3,429	8
Southeastern N.B.	284,888	18	14	15,652	8,547	20
Southern New Brunswick	428,321	26	21	16,118	8,628	21
York-Sunbury-Charlotte	326,563	25	19	12,899	7,109	17
Unknown	52	13	13	4	2	0
Total	1,699,517	22	17	78,796	41,909	100

Source: SNB (2011).

Figure 10 Location of woodlots and boundaries of marketing boards



Source: NBFPC.

The marketing boards operate on the levy they receive for each cubic metre of wood they sell and on overhead from the private lands silviculture program. Some boards have developed additional enterprises, such as wood yards and management cooperatives. Others focus on providing market information, processing sales, and delivering some silviculture services.

The Forest Products Commission (2011) reports that three boards (North Shore, Southeastern NB, and Southern NB) had recent operating losses and that the system as a whole has operated at a loss each year at least since 2007–08. As volumes processed by the boards declined, many laid off staff and reduced services. Some have severe financial constraints. Those problems suggest that significant changes are needed in the New Brunswick regional marketing board system. Discussions about reorganization and significant policy changes at the New Brunswick Federation of Woodlot Owners and the Forest Products Commission have not gained traction. For example, requiring notification of intent to harvest would add considerably to the predictability of volumes available in the coming year; the idea has been on the table since at least 2008 without action. Moreover, both the levy system and the charges and payment for the silviculture program are not standardized across boards, prompting some contractors to attempt to short-circuit the system.

We recommend that the province consider consolidating the current marketing board system. The regional boards should operate under a single, comprehensive set of policies, objectives, and procedures. Within this framework each regional office should develop a business model appropriate to the regional forest conditions and marketplace, offer a full range of technical field services, and provide market information and services. Administrative services and data management should be centralized where possible to achieve savings and efficiencies. The province should incorporate the staff and functions of INFOR into this organization.

New Brunswick Forest Products Commission

From an institutional perspective, the Forest Products Commission is the province's most important organization for providing market information and resolving disputes about prices and market share. Its potential is largely unfulfilled, however. Important basic data collection (such as a regular survey of woodlot owners and periodic updates of wood supply forecasts) occurs infrequently, and its primary function has been reduced to providing financial oversight over the marketing boards and administering the transportation certificate program. In fact, the Commission has become something of an orphan as DNR focuses energy and resources on Crown lands management.

The Commission is structured to balance the public interest, the forest products industry, and the woodlot sector. It has broad authority under the *Forest Products Act* and the *Natural Products Act*. It has a mandate to investigate production costs, recommend prices, act as a conciliator, arbitrator, and adjudicator, and "conduct inquiries into any other matter related to primary forest products." It has the power to require woodlot owners to register and report their harvests.

The Commission currently has a staff of three and a normal operating budget of about \$228,000 a year, with supplemental allocations for specific projects. Current staffing and budget are inadequate to undertake its mandates. We believe establishing a strong, independent Commission with an adequate budget and insightful, non-partisan leadership is a necessary step to long-term resolution of the disputes between the forest products industry and the woodlot owners.

Over the past five years, the marketing boards and the Forest Products Commission have been unable to implement a shared management information system. Such a system makes administrative reporting transparent; more importantly, it creates the beginnings of an information technology network that woodlot owners, marketing boards, and mills can use to expand market opportunities. We believe the Commission should be publishing (at least) monthly price and market information on its website. Some of the marketing boards do this now. Those boards that do not say they lack staff. The cost of maintaining current market information is substantial, but it should be one of the highest priorities of the Commission and the boards.

Market development initiatives

Because of their higher cost structure, private woodlots need to develop markets beyond traditional commodities, such as pulpwood, studs, and logs. The province devotes significant resources to expanding markets for wood-using industries: there are frequent international trade missions, and staff at the regional economic development organizations, Business New Brunswick, and DNR are charged with assisting development of the sector. Despite their

energy and expertise, it is difficult to cite any large effect on private woodlot sector market development, and past value-added wood products initiatives have had limited success.

Our conversations with mill owners, marketing boards, and woodlot owners suggest that much of the current economic development strategy focuses on maintaining the pulp and paper and commodity lumber sectors, without adequate attention to productive use of biomass or adequate investment in engineered and composite wood products and technologies.

For example, some marketing boards and groups of woodlot owners are pursuing wood pellets as a business. At least two firms are in discussions with marketing boards about pellet manufacture for export to European markets. Yet there is little technical assistance available to these boards from either the universities and colleges or the provincial and federal agencies. Despite some recent movement, provincial agencies have been slow off the mark in pursuing opportunities for biomass heating and combined heat and power operations in schools, hospitals, and other medium-scale facilities that would benefit from fuel switching. Universities and public schools in New England have been successfully pursuing such projects for more than a decade with proven savings.

In the short term, market development strategies for low-grade wood should be a priority. It will take decades to improve the relatively poor quality of much of New Brunswick's private woodlot resource. New markets for low-grade wood may facilitate the transition to better-quality growing stock. Where the opportunity presents itself, competitive advantage can be captured by locating facilities such that all four parts of the harvested tree—sawlogs, stud logs, pulpwood, and biomass—can be processed in close proximity.

Research and development

Governments from both parties have subsidized loans and offered grants and tax credits to improve the efficiency of existing pulp and paper mills and save jobs. This satisfies short-term, local economic interests but does not deal with longer-term structural issues. Long-term growth in the forest sector depends on investing in research and technology that will develop new knowledge, products, and processes. Carbon-neutral renewable energy, climate change adaptation strategies, biomass products, and engineered wood products are examples of products and processes that can make New Brunswick a global leader based on forest science. A high-tech forest sector that combines the life sciences with engineering promises many more new jobs than do existing mills. To achieve true sustainability for forests and forest-dependent communities, the province must diversify its forest products industry by supporting research and development and create conditions conducive to investing in new technologies.

One unintended consequence of focusing on the pulp and paper and commodity lumber segments is its effect on forest management objectives. Much of our forest management has been oriented towards producing volume at the expense of quality. Over the long term, one key to the economic sustainability of private woodlots is producing higher-value and quality products that provide higher operating margins and are less subject to commodity price pressure.

Marketing “wood baskets”

In our listening sessions, we consistently heard that New Brunswick should be managing its forests “holistically.” That is, forest development strategies should take advantage of regional wood baskets based on the combination of private industrial forests, Crown land, and private woodlots. Opportunities for new wood-using industries may arise from cooperative, coordinated wood supply planning. The Commission, the boards, and the economic development organizations should explore the idea of tendering aggregated volumes of surplus wood to domestic and international processors.

Technical assistance and good stewardship

We strongly recommend that the province create a system for providing technical assistance to woodlot owners and harvesting contractors. A significant proportion of woodlots will change ownership in the next 10 to 15 years, and many of the new owners will lack the experience and expertise to conduct sustainable forest management. We see a strong link between accessible technical assistance and providing fibre to the market and meeting environmental goals.

We recommend creating a province-wide system of registered working woodlots. Owners would agree to develop and implement a sustainable forest management plan that includes both habitat and fibre production objectives. In return, these owners would be eligible for technical assistance and services from forestry professionals. This program should give priority to the medium and larger ownerships that are most likely to participate in the market.

Recognition for woodlot owners who are excellent stewards is effective and inexpensive. The Minister should establish a highly visible program in which local awards are presented by MLAs and provincial winners are honoured by the Premier or Lieutenant-Governor. We met hundreds of woodlot owners who are working hard to “do the right thing” and deserve more recognition.

A similar recognition program for exemplary harvesting and woodlot service contractors is an essential tool for improving active forest management by woodlot owners. In our discussions, many indicated that the inability to find skilled contractors was a barrier to harvesting.

Woodlot certification

Discussions continue about the efficacy of certification for woodlots. At least two marketing boards made significant investments in the management information systems required for third-party certification but ultimately declined to pursue it because of the costs and lack of clear benefits.

Crown lands and industrial freehold in New Brunswick are certified. This may put private woodlot owners who are not certified at a disadvantage. Some woodlot owner organizations in Nova Scotia have pursued Canadian Standards Association and Forest Stewardship Council certification. Woodlot land management organizations may provide some advantage in increasing conformity with management requirements.

Woodlot certification has proven effective where demand for certified wood ensures market access for high-quality and high-value products. It seems less relevant where the products are intermediate inputs (e.g., dissolving pulp for rayon). We do not see woodlot certification as a short-term priority, but it may be appropriate for some producers and have the potential for improving access to specific markets.

Summary of findings

On its face, the task force's mandate—to clarify the considerations associated with defining a timber objective for New Brunswick's private woodlots, and then recommend a specific timber objective—appears relatively simple. In fact, the problems associated with this task are several and complex. Below, we summarize the issues that collectively define the problem.

Aggregation is insufficient. The marketing boards need to contract with the mills to provide a specified volume at a fixed price on a date certain but lack mechanisms to aggregate management across ownerships and reliably meet timber production targets.

Technical services are inadequate. The technical services (extension programs) available to forest owners in New Brunswick have declined significantly in the past decade but will be particularly important in the next decade as a large percentage of the private forests transition to new owners. The next generation of owners is unlikely to have the same level of knowledge and skills as the current generation. Many will be absentee owners.

Incentives for conservation are missing. The current dilemma is not simply a question of wood supply. The province cannot meet its objective for biodiversity without recognizing and rewarding private landowners who contribute to this objective.

Fair market value (prices) and market share are elusive. The current system for pricing wood from Crown lands is opaque. Many private woodlot owners have little confidence in the system. Robust, timely price information from all sources is hard to come by.

Between 1990–91 and 2010–11, market share for the private woodlot sector fell from 28 percent of the total to 9 percent. Many woodlot owners see themselves in direct competition with the Crown, and in their opinion, the Crown keeps its wood prices low to stimulate economic benefits and indirect revenue generation.

Members of the Forest Products Association argue that if the Crown exercised its power to require that they buy a proportion of their wood supply from private woodlot owners at a price above the current rate, mills would be threatened. The industry contends that at current prices, Crown wood is more expensive than in many provinces.

Woodlot owners want the government to set minimum targets for market share and establish a mechanism for negotiating prices. The provincial government is a self-interested party, and the Minister empowered to act in this regard is also responsible for managing (and producing revenue from) Crown forests.

The silviculture program is inefficient. Each year, the government of New Brunswick spends approximately \$6 million for private lands silviculture. Some activities in the private lands program are marginally cost-effective. The federal contribution has been framed in terms of employment; the provincial program goals are not clearly stated. In addition, the government of New Brunswick spends \$24 million for silviculture on Crown lands. We suggest that a review of that program's cost-effectiveness is also in order.

Current forest conditions are depauperate. DNR monitoring data indicate that many (but we do not know what percentage) of New Brunswick's private woodlots are clear-cut with little concern for regeneration of the next forest. Many of these areas eventually regenerate as low-grade, shade-intolerant hardwood or mixed-wood stands.

Because woodlot management occurs at the parcel or ownership level and regeneration is not regulated, the age and class structure that has emerged across the landscape is not aligned with sustainable forest management goals. Younger age classes predominate, and the low-grade timber is not well suited to developing higher-value forest products.

Existing organizations and institutions are unable to meet the challenges.

- ◆ **Marketing boards.** The financial condition of the seven regional marketing boards is not strong. Funding the boards through levies on wood sales and overhead on the silviculture program is not sustainable at current harvest levels. Several boards have missed deadlines for required management reports because of a lack of personnel. The services they provide vary, as do the levies and overhead they charge.
- ◆ **New Brunswick Forest Products Commission.** The Commission has been largely neglected by successive governments. It has not provided the leadership and management required to resolve the continuing disputes. Its budget and staff are not adequate to fulfill its current statutory mandates.
- ◆ **INFOR.** A remnant of New Brunswick's former extension program, INFOR now serves Christmas tree growers and maple syrup producers. It is not financially sustainable in its current configuration.

Silos preclude coordination of policies. Private woodlots have become the poor cousin in New Brunswick's forest policy, with DNR staff and funding concentrated on Crown land management. Management objectives and policies to achieve forest policy goals are not coordinated across all classes of ownership.

Timely, transparent information is missing. A consistent challenge in our work over the past 11 months has been finding the data required to answer even basic questions about forests and forest policy in the province. Basic data are either unavailable to the public or

published long after the fact. DNR, for example, publishes a “State of the Forest Report,” but as of December 12, 2011, the most recent version available on its website was the 2008 report, which is based on 2006–07 data and focuses on Crown lands, not private forests. The Forest Products Commission posted its 2009–10 annual report in October 2011, after comment from this task force. Price-setting formulae and volume allocations are not easily accessible by the public. The province should be publishing the results of its forest inventory on a regular basis in a publicly accessible format. In some cases where reporting is required by statute or regulation, it is not complete.

The pervasive lack of transparency in both Crown forest and private woodlot policy suggests that “opaque” best describes DNR’s and the Commission’s approach to sharing public information. Opacity leads some citizens to believe that decisions are being made by “insiders” who seek to profit from public policy discussions held behind closed doors, and it undermines citizens’ faith in civic process.

Market development efforts are inadequate. New Brunswick needs to make a commitment to supporting research and development for new markets, products, and processes. Private woodlot owners will find it increasingly difficult to compete in markets for commodities like lumber and pulp as globalization enforces input cost reductions. Developing new markets and a better-quality wood supply will take decades but must begin now.

Recommendations

Overall, there are three pressing sets of issues in the New Brunswick forestry debate. The forest industry is concerned about wood supply certainty and availability. The environmental community is concerned about the certainty and availability of forests for biodiversity conservation and production of ecological goods and services. Private woodlot owners are concerned about the certainty of markets, market share, and prices.

We believe that the private woodlot sector, given appropriate incentives, can make significant contributions to the first two sets of issues, and that the provincial government can facilitate the third.

Setting sustainable timber objectives

From an ecological perspective, a reasonable timber objective for New Brunswick's private woodlots is approximately 2.0 million to 2.5 million m³ annually. This figure includes firewood production, which is largely underreported and unregulated. Table 15 and Figures 11 and 12 detail the objectives for hardwood and softwood, by marketing board.

Table 15 *Target harvest volumes (000 m³)*

	Hardwoods	Softwoods	Total
Carleton-Victoria	125	100	225
Madawaska	95	75	170
North Shore	215	180	395
Northumberland	90	120	210
Southeastern N.B.	185	250	435
Southern N.B.	305	345	650
York-Sunbury-Charlotte	235	265	500
Total	1,250	1,335	2,585

Figure 11 Hardwood timber objectives and recent hardwood harvest rates

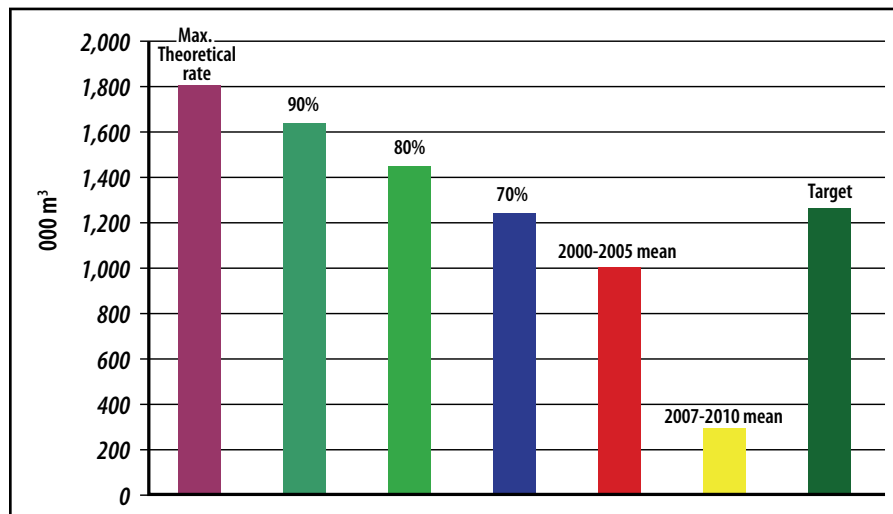
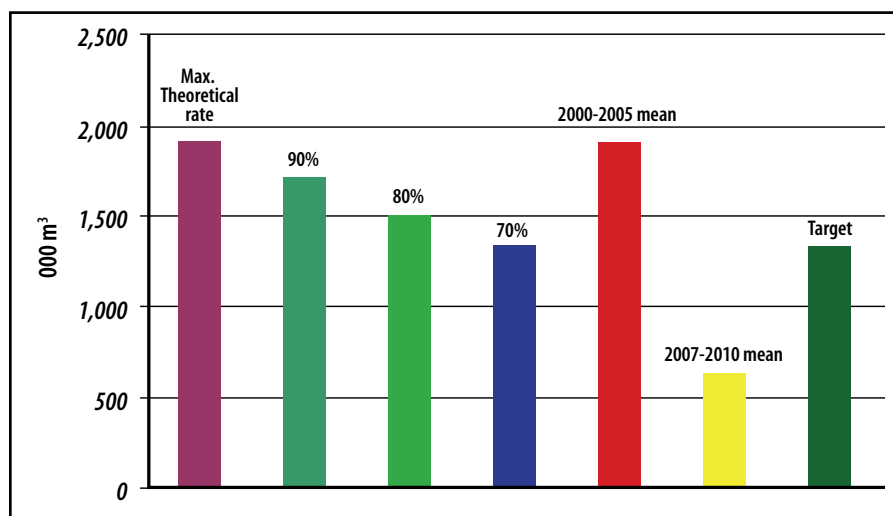


Figure 12 Softwood timber objectives and recent softwood harvest rates



We arrived at the timber objective by seeking a sustainable harvest level that stabilizes the operable growing stock and considers wildlife habitat needs. In forecasting the wood supply, DNR observes that harvest rates set at 20 to 30 percent below the theoretical maximum “are more likely to meet the broad notion of sustainability” (Appendix C). Furthermore, old forest habitats generally are stable or increase when harvest levels are set at 70 percent of the maximum. We considered harvest volume, piece size, operable log potential, growing stock, area of old forest, and old forest wildlife habitats. Figures 9 through 15 in the accompanying wood supply analysis (Appendix C) illustrate the relationships among these variables.

Our recommendation is that overall, harvests from private woodlots in the province not exceed 70 percent of the theoretical maximum. Where the woodlot forest has been “hammered,” it should be less than 70 percent.

The recommended objective is approximately three times the current harvest reported in the Timber Utilization Survey for the marketing boards. It does not consider the social and economic factors that influence landowner behaviour. Given current market conditions, the biological timber objective cannot be easily met.

Achieving timber objectives

Establishing timber objectives from New Brunswick's private forests is considerably simpler than implementing the incentive programs that will allow the woodlot owners to reach them.

Participation in active forest management

Although it is not their primary goal, most of the respondents in our woodlot owner survey indicated that they were interested and willing to participate in sustainable harvesting on their woodlots. Maintaining participation through the coming demographic transition in forest ownership will be challenging. Information and technical assistance encourage active management and forest retention. Commitment to a sustainable forest management plan and working with a forestry professional may qualify woodlot owners for deferral of capital gains in an intergenerational ownership transfer.

Recommendations

- ◆ Within one year, create and implement a system of technical service provision (extension service) that encourages sustainable forest management (explicitly including both fibre production and conservation benefits) by private woodlot owners. The extension program should subsume the functions and staff of INFOR.
- ◆ Provide incentives to create a system of registered working woodlots. To qualify for technical assistance and best management practice funding, woodlot owners would complete forest management plans and pledge to implement them. Similar to the Environmental Farm Plan in agriculture, the forest management plan will encourage voluntary, sustainable forest management and be completed with the help of a qualified forestry professional.
- ◆ Set incremental goals and implement strategies to reach the private woodlot timber objective within five years.

Aggregation of management across ownerships

The difficulty of aggregating management across multiple ownerships is a principal barrier to reducing the costs of production. Woodlot owners who participate in a woodlot management organization can reduce their costs of production and increase their ability to deliver products profitably. Owners might voluntarily delegate management authority to the group and in

return receive an annual payment based on a proportion of total sales rather than a periodic payment. Spreading the income evenly over time may have tax and planning advantages.

Viable woodlot land management organizations could also enhance the effectiveness of silviculture because of greater certainty in scheduling treatments. This approach may eventually facilitate forest certification.

Although there was lukewarm support for this approach in the landowner survey, the success of several working woodlot programs (Coopérative forestière du Nord-Ouest and Southern N.B., and cooperatives in Nova Scotia and Quebec) suggests that sufficient interest may exist among the larger woodlot owners to establish at least one such organization in each region.

Recommendation

- ◆ Establish a program of registered woodlot owner organizations (e.g., cooperatives).

Silviculture program

The province's goals for its private lands silviculture program are not clearly defined. If the goal is to expand the fibre supply through sustainable forest management, treatments should be concentrated on the most productive sites and limited to clearly cost-effective investments.

The greatest potential for increasing productivity (and reducing management costs) is most likely on aggregated medium and large holdings. The experimental silviculture program currently undertaken by DNR and some of the boards recognizes the importance of focusing on more productive sites and practices.

Recommendations

- ◆ Focus provincial benefits and services on larger and medium-sized holdings that can be aggregated into efficient management units through a program of registered woodlots and woodlot management organizations. Smaller units that agree to participate in the registered woodlot program should also be eligible.
- ◆ Expand available treatments to a full suite of best management practices, including uneven-aged management.
 - Require a woodlot management plan and registration in the registered woodlot program to qualify for technical services and silviculture funding.

Securing private forests' environmental values

The current dilemma is not simply a question of wood supply. The province cannot meet its objective for biodiversity conservation without recognizing and rewarding good stewardship by private landowners. Conservation-minded forest owners may be more willing to participate in active management if they can find well-trained harvest contractors who offer options beyond clear-cutting.

Recommendations

- ◆ Develop an incentive plan for forest owners who are willing to provide long-term conservation values from their forests. These incentives might involve property tax incentives or a system like the Alternative Land Use Service (ALUS) programs in Prince Edward Island, Manitoba, and Ontario.
- ◆ Establish explicit objectives for a private lands best management practices program that expands the existing silviculture program to include uneven-aged forest management and other practices with measurable conservation benefits.
- ◆ In cooperation with DNR and environmental organizations, such as Nature Conservancy Canada and the Nature Trust of New Brunswick, identify private lands that have high probability of meeting conservation objectives. These lands should receive priority for technical service and incentive programs. The initiative to expand provincial protected natural areas (PNAs) should consider the potential of private landowner incentives.

Resolving disputes over fibre supply, market share, and price

Discussions of fibre shortages or surplus are most useful when they include the concept of price. Realistic timber targets recognize what is economically and socially available as well as what is biologically possible. From a biological perspective, there is adequate fibre to support the existing industry when all ownership classes participate. As the price the industry can pay for wood increases or the cost of wood supply decreases, the economically available volume increases. For the supply chain to work, all the component links must be able to make a reasonable profit.

The wood supply, market share, and price equation varies regionally. In northeastern New Brunswick the issue is not so much market share and price as it is demand within reasonable distances. Demand has been stronger in western, northwestern, and until recently, southeastern New Brunswick, where wood producers have access to additional markets in Maine, Quebec, and Nova Scotia.

We see no easy solution to the ongoing dispute over market share and prices. If the Minister sets a price that industry cannot pay, no wood will change hands unless he reduces access

to Crown fibre. If he sets a price that industry can pay but is below the breakeven point for woodlot owners, no wood will change hands. It will be difficult to force buyers to purchase wood at prices they can ill afford and impossible to force woodlot owners to harvest and sell at a loss. The long-term solution is finding new markets and buyers.

The current conflict between the Federation of Woodlot Owners and the Forest Products Association is similar in many respects to a labour-management dispute. This is clearly a situation that calls for mutual gains negotiation. Both sides need each other. They have a long history and they have come close to an agreement through the good offices of DNR.

Recommendation

- ◆ Appoint a professional neutral facilitator to pursue agreement between the Forest Products Association and the Federation of Woodlot Owners on equitable market access and wood flow. Purchasers that are not members of the Association should implement agreements that are similar in intent, effect, and structure. If, at the end of one year, there is no signed agreement between the Federation and the Association, the Minister should consider establishing an arbitration board.

Strengthening woodlot organizations and institutions

New Brunswick Forest Products Commission

The New Brunswick Forest Products Commission has not been providing the leadership and management required to resolve the continuing disputes between the woodlot owners and the industry. Its budget and staff are not adequate to fulfill its mandates under current statutes.

We believe one key to resolving the on-going disputes about market share and pricing is establishing a strong, independent Commission. Posting timely market information from across the province and neighbouring jurisdictions is critical for resolving the controversy over prices and market share. This should be one of the most important roles of the Commission.

Recommendations

- ◆ Fund the New Brunswick Forest Products Commission at a level that allows delivery of its mandated programs. The Commission should have a budget envelope separate from DNR.
- ◆ The Commission should establish and maintain a database that consolidates management information from the boards.

- ◆ The Commission should post timely market information from across the province and neighbouring jurisdictions regularly. This information should be used to supplement the existing Crown price survey.
- ◆ When necessary, the Commission should undertake investigations of the costs of production of the major purchasers of wood from private woodlots.
- ◆ The Commission should oversee the implementation of equitable market access or wood flow agreements between the marketing boards and the Forest Products Association.
- ◆ The Commission should survey the province's private woodlot owners at least once every 10 years to monitor changes in attitudes, demographics, and participation rates. A similar survey of the private lands forest resource (wood supply and inventory) should be completed at 10-year intervals by DNR.

New Brunswick wood marketing boards

It is important to retain local knowledge and efficient local services, but we question the need for seven separate organizations. Some of the boards have the capability to organize and administer woodlot management cooperatives, extension services, and registered woodlot owner programs. It seems likely that some administrative services could be centralized.

Recommendation

- ◆ Consider restructuring the boards and their services with the intent of increasing administrative efficiency.

Being transparent

Transparency in both Crown and private woodlot forest policy in New Brunswick would contribute to the sector's economic health and the public's faith in the government's decisions.

Recommendation

- ◆ Publish basic information, such as market transactions, Crown price-setting formulae, timber utilization data, forest inventory data, Crown license and sub-license allocations, and current annual reports, in a timely fashion on the Commission's and DNR's websites.

Ending cut-and-run forestry

Participants in our listening sessions and meetings consistently raised concern about cut-and-run operations. Many woodlots that are clear-cut eventually regenerate as low-grade, shade-intolerant hardwood or mixed-wood stands, with trees that are suboptimal for both

ecological and timber production purposes. We are confident that with more appropriate management, their productivity for both conservation and fibre values would improve.

Recommendations

- ◆ Establish a requirement for registration of all commercial harvests of 0.5 ha or more on private woodlots.
- ◆ Evaluate the advantages and disadvantages of requiring commercial harvesters to either contribute to a regeneration fund or work with owners to meet appropriate regeneration targets.

Improving timber quality and forest sustainability

A focus on production of low-grade pulpwood on woodlots in northern and northeastern New Brunswick has resulted in unsustainable harvest levels and diminished log quality. It will take decades to reverse the effects of high-grading and harvesting without adequate planning for regeneration. Over the long term, the goal for both private and Crown lands should be to increase the volume per tree and the quality of the trees harvested.

Recommendation

- ◆ All organizations involved in forest management should encourage the use of sustainable forest management plans that include prescriptions for regeneration and involve qualified forestry professionals.

Stepping up market development strategies

The woodlot sector in New Brunswick requires a revitalized approach to market diversification. Many small and medium-sized woodlots have difficulty competing in markets dominated by low-value commodities. Some regions of the province are suffering from a general lack of demand. In areas with low-grade fibre and low demand for pulpwood, the best short-term strategy may be focusing on biomass and torrefied pellets. Long term, producers should manage to increase the quality of their wood with an eye toward higher-quality niche products. This will take time and patience. The province should encourage chain-of-custody certification for the value-added wood products sector. An effective value-added strategy for New Brunswick has been discussed for many years with little result.

Recommendations

- ◆ Redouble provincial efforts to support and promote value-added production, including chain-of-custody certification and research and development for engineered wood products and composites.
- ◆ Set and meet firm goals to establish biomass heating and combined heat and power systems in commercial and public facilities.
- ◆ In regions where traditional market demand is deficient, initiate programs to tender surplus volumes (composed of both Crown and private wood from woodlot owner organizations) to new users.

Recognizing exemplary stewardship

Many landowners perceive that they have been protecting public values in their woodlots with little recognition from government and peers.

Recommendation

- ◆ Implement a highly visible woodlot stewardship recognition and contractor recognition program. Regional winners should be recognized by their local MLAs and provincial winners should be honoured by the Premier or Lieutenant-Governor, with appropriate media coverage.

Paying for implementation

We assume that the province will have no additional revenue to implement new forest policies in the foreseeable future. Reallocation of existing resources is the only viable alternative. We believe that money from the existing private and Crown land silviculture programs provide the most likely source of funds for redirection.

The private land silviculture program is not currently targeted to the most productive sites. Refocusing it on efficiency and investment quality would allow redirection of \$1 million (17 percent) or more of the current \$6 million budget. We also suggest diverting at least \$1 million (5 percent) or more of the Crown lands silviculture program, for the same reason. These funds should be redirected to (1) establish and sustain a system of technical service provision and working woodlot cooperatives for woodlot owners; and (2) fully fund the New Brunswick Forest Products Commission's existing mandates. Program and budget details should be developed by the Commission and the organizations providing the services.

Conclusion

At the end of nearly a year of interviews, listening sessions, and analysis, we conclude that additional environmental benefits and an increased wood supply can be achieved only by making the pie larger, not by continuing to squabble about who should get the largest slice.

Prudence requires taking the long view, with regard to both the forest and the industries it supports. Quebec economist Michel Vincent (2011) draws a useful distinction between “profitable” and “competitive.” Profitability reflects the short-term accounting difference between revenues and costs; it is easily measured. Competitiveness encompasses the long-term relationships between suppliers and customers and reflects the combination of land, labour, currencies, international trade, and capital; it is difficult to measure. Competitiveness requires long-term profitability, but profitability may not reflect long-term competitiveness. We are concerned that public policy has focused on maintaining a profitable rather than a competitive forest industry.

Several things are in short supply in New Brunswick’s forest policy debate. They include conservation strategies that meet public expectations for biodiversity, a fibre supply that meets the industry’s long-term needs, and a price and market share that approach woodlot owners’ expectations.

The challenge for government remains creating and maintaining vibrant rural communities, competitive natural resource industries, and resilient ecosystems. Fiscal issues often seem to work their way to the top of the list of concerns, and we are much better at measuring financial values and economic activity than we are at estimating community vitality and ecosystem resilience. But these latter values are equally or perhaps more important in the long term. They should not be discounted. The explicit goal of New Brunswick’s natural resource policies should be achieving this triple bottom line.

We believe that the province can address the conservation question by investing in incentive programs for private land owners who are interested and willing to commit their lands to long-term conservation strategies. Successful models (ALUS and property tax incentives) exist in Canada and the United States. Staff from New Brunswick’s environmental organizations (including Nature Conservancy Canada, Nature Trust of New Brunswick, and the New Brunswick chapter of the Canadian Parks and Wilderness Society) are already working with DNR to identify public and private lands with high conservation values. With effective wildlife habitat management planning and exemplary stewardship, working woodlots can play an important role in securing conservation values.

Using the wood supply analysis provided by DNR, we conclude that the sustainable annual harvest level of approximately 2.0 million to 2.5 million m³ can be achieved while gradually improving the quality of the existing forest and its wildlife habitats. Depending upon which data set one uses, that is roughly double the current harvest. The objective is intentionally conservative. To be sure, there are significant quality problems in our current private woodlot resource, and there are significant market barriers to reaching that volume objective.

We have chosen not to recommend immediate direct government intervention in the market share problem. Not recommending a return to “primary source of supply” will disappoint many in the private woodlot community. Instead, we recommend a longer and, we hope, more sustainable route—providing woodlot owners with the price information, technical assistance, and management services they need to compete in a highly competitive global market.

We remain convinced that the long-term future of New Brunswick’s forests and forest sector remains bright. Because of wood’s natural advantage as a renewable resource and the many environmental benefits that forests provide, our forests seem likely to increase in value over the coming decades. There are challenges to overcome, but with skillful leadership and incentives that encourage cooperation, we can produce a pie that satisfies all who share our table.

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