Response to Jaakko Poyry Report on Assessment of Stewardship and Management on the Crown Lands of New Brunswick
For the Select Committee On Wood Supply

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Part I
Introduction

What background do I bring to this issue?

I have been writing about forestry issues since 1976. My writing includes several books, some book chapters, a number of reports, and numerous articles, including some published in *Atlantic Forestry Review.* I've participated in forestry forums, including the Northern Forest Lands Council, the Maine Council of Sustainable Forest Management, the Maine Forest Biodiversity Project, and the Legislative Round Table on Forest Economic and Labor Issues. I am a founder of the Low-Impact Forestry Project and worked for a number of years with the Hancock County Planning Commission to inform people in mid-coast Maine on ways to improve forestry practices. My experiences from this effort resulted in the publication of my most recent book, *Low-Impact Forestry: Forestry as if the Future Mattered*.

Why would someone from Maine be interested in a debate in New Brunswick?

New Brunswick and Maine are both embedded in the Acadian Forest type--the complex mixture of northern hardwoods, red spruce, fir, cedar, hemlock, and pine. Maine and New Brunswick have traded information on biodiversity and management issues. Maine also imports significant quantities of New Brunswick wood for paper mills. Millions of acres of land in Maine are owned by Canadian companies. Maine imports Canadian loggers (mostly from Quebec) and exports the majority of its spruce-fir, yellow birch, and rock maple sawlogs to Canada (again, mostly Quebec).

Because there is regional and global trade in wood, prices in New Brunswick have an influence on prices in Maine. To the degree that there are major subsidies to companies operating on Crown Lands, this could lead to problems with free trade. What happens in New Brunswick, therefore, can have an impact on Maine policy and on Maine prices.

What are some of my conclusions about the report?

- The report is inaccurate and misleading in comparing New Brunswick with Maine. For example, Maine has a higher percentage of both public and private land in special management areas than suggested by the report.
- Jaako Poyry's idea of "scientific management" is forest simplification and conversion with use of plantations and herbicides. The interpretation of "scientific management" used by managers on Maine's public lands is ecosystem based management.
- Maine public lands do almost no clearcutting, herbicide spraying, or plantation management. The managers are trying to grow value, not just volume, and so they grow big trees, which require either uneven-aged management or long rotations.
- Increased cut in Maine over the last two decades has led to fewer jobs and lower pay. It has also coincided with lower tax revenues, both locally and statewide from the forest industry. If the goal is economic development, then there are more efficient investments for New Brunswick than the simplistic recommendations from the report.

- If New Brunswick follows the suggestions, it will result in increased, costly conflicts with envrionmentalists, woodlot owners, recreationalists, and tax payers in New Brunswick by subsidizing practices that are disliked and are economically inefficient.
- Massive subsidies to timber companies on Crown Lands could distort trade markets and could lead to conflicts with the United States.

Part II
Discussion of Findings

Mission for Crown Lands

The Jaakko Poyry (JP) report suggests that New Brunswick have, as a primary goal, meeting softwood timber supply objectives--in effect, maximizing wood volume output over a significant percentage of Crown Lands. The JP report suggests increasing wood harvest by 1% a year over the next 35 years to double the cut. This would be achieved by doubling investment in intensive silviculture, so that by 2035, 40% of all Crown Land would be plantations, mostly of boreal softwoods.

Since the new plantations would not supply the theoretical increased yields for 35 or 40 years, the increased wood needs in the short term would have to come, in part, from heavier cutting in "special management areas," such as riparian zones or deer yards. JP contends that heavier cutting, increased conversions of a significant part of the Acadian forest to boreal forest, shorter rotations, and heavier cutting in special management zones would have no impact on biodiversity. There are no references and there is no supportive information to back up such a claim.

Furthermore, JP claims that New Brunswick is on the extremes for the amount of land in special management areas. The JP report suggests that maximizing wood production is a worthy goal for public lands, and cites areas, such as Finland, as examples against which New Brunswick falls behind.

Contrast with Maine's Public Lands

The report spends a lot of time comparing New Brunswick with Finland. Finland is at a much higher latitude than New Brunswick and has a boreal forest with very different disturbance cycles and much fewer species than is the rule in the Acadian Forest of New Brunswick. The JP report admits that the Finish approach has led to *draining of wetlands*, the *elimination of natural forests* in the southern regions, and *shortfalls in hardwoods*. Such problems are an unacceptable tradeoff for increased productivity of softwood pulp on public lands that are supposed to be managed in the public interest.

Maine's public lands share the same Acadian Forest type as New Brunswick. In Maine, the Bureau of Parks and Lands manages 525,000 *acres* (not 485,000 *hectares* as mistakenly reported on page 38). The mission for Maine's public lands is to meet multiple objectives. The Bureau has zones where certain management goals are dominant, including: special protection areas, backcountry recreation areas, wildlife dominant areas, remote recreation areas, visual consideration areas, developed recreation areas, and timber management. Only 67% of total acreage is considered in the sustainable timber base.[1]

Even where timber is dominant, the bureau is mandated to do timber harvesting "designed to enhance vegetative diversity, to provide an environment characterized by a rich variety of plant and animal species, and to provide habitat conditions which will enhance population levels..." "This management approach," says the Bureau's Integrated Resource

Policy, "combined with wildlife management, creates diversity in the forest, which benefits the forest ecosystem, improves wildlife habitats, and provides natural barriers against the spread of disease and insects, resulting in healthier, more vigorous forest growth. "[2]

Of the 67% of forest that is "regulated" for timber, 80% is managed for multiple age classes. Of the 20% managed for single-age classes, rotations are from 100-150 years, except for stands that are mostly fir or poplar.[3] *The Bureau does almost no clearcutting* (less than 1% of all cutting). Clearcuts, when they are used, need to be smaller than 20 acres. Single-aged stands are regenerated by the shelterwood system, usually with two thinnings and two regeneration cuts.

The Bureau does almost no plantation establishment, and it has used herbicides rarely. *It is state policy in Maine to reduce reliance on chemical pesticides, so the Bureau has, as part of its mandate, to set an example for other landowners of minimizing pesticide use.*

The Jaakko Poyry report implies that plantation management is "scientific" management. In Maine, the Baxter State Park Scientific Management Area (which is also public land) has, as its mission, to do exemplary scientific-based management. *The SFMA, however does no plantation management at all*. The SFMA also uses no herbicides. The manager, Jensen Bissell, recognizes that *ecology is a science and scientific management needs to incorporate ecological principles, rather than treat the forest as a monoculture farm crop*.

Maine's public lands are managed to grow large trees because these trees are valuable for both wildlife and mills. Both the Bureau of Parks and Lands' and the SFMA's economic goal is to maximize *value* (within ecological, recreational, and aesthetic restraints), not just *volume*. The highest value is for sawlogs and veneer, not pulp or utility-grade 2x4s.

Long-term economics

In my book on low-impact forestry, I point out that if one is managing for the long term, then there are five factors that improve economic value:

- Increasing rate of growth. This is done by leaving better stocking, minimizing the land taken up in trails, roads, and yards, and by leaving wind-firm trees with good root systems and crowns.
- Improving species ratios. Long-lived species that can grow to large diameters are, in general worth more than short-lived species adapted to constant disturbance. Hard maple sawlogs, for example, can be worth twice as much as soft maple sawlogs. Thus it pays to favor more valuable species in residual stands--the opposite of highgrading.
- Improving product mix. As trees increase in diameter, they go from pulp, to sawlog, to high-value sawlog, to veneer. With each shift comes a leap in value. A unit of growth of hard maple veneer in Maine can be worth more than 70 times as much as a similar unit of growth of maple biomass.
- Improvements over inflation. While biomass, pulp, and utility-grade lumber may, over the long term, keep up with inflation at best, quality sawlogs and veneer have been increasing in value over inflation. So, once again, the strategy should be to improve product value in the mix.
- Decreasing risk. Diverse stands have a lower risk to insect, disease, or windthrow than monoculture stands. Diverse stands with complex canopies harbor a greater variety of predator/parasite complexes. Monocultures or near monocultures are at risk for total loss due to insects, such as the spruce budworm. Protecting such stands can be expensive. Managing for diversity also reduces financial risk, in that one cannot predict future markets. In Maine right now, for example, hardwood value has gone way up, even for pulp.
- Although not as economically quantifiable, growing well-stocked stands of quality trees also has benefits for wildlife, recreation, and aesthetics.

The approach recommended by Jaako Poyry would go against this common sense economic approach:

- Companies on Crown Lands would clearcut stands before some of the wood has reached peak economic value. This is at a time when large-diameter spruce is in decline. The best way to grow high-quality large-diameter spruce is on existing trees, not on seedlings.
- Citizens would subsidize plantation establishment and protection--activities that have a very long period between investment and payoff. In the meantime, markets can change and wood values of commodities grown this way are unlikely to increase in value over inflation.
- Crown Lands would have vast areas of monocultures or near monocultures that would be at risk to a variety of insects (such as spruce budworm, spruce cone worm, yellow headed spruce saw fly, balsam wooly adelgid) and other threats. There would be increased costs for protection, lowered yields than expected, or both.

Licenses and subsidies

The Jaakko Poyry management vision for New Brunswick's Crown Lands contrasts sharply with the vision under which the Bureau of Parks and Lands operates in neighboring Maine. Part of the reason that such an approach can even be considered in New Brunswick is that the province licenses out Crown Lands to industrial managers. Such a practice would not be possible in Maine, where the Bureau of Parks and Lands is mandated to manage for the broad public interest, not for the benefit of a handful of mills.

The Jaakko Poyry report recommends allowing the licenseholders to get the revenues from clearcuts and have the public help pay for plantations, herbicides, and thinning. *This is a subsidy that encourages practices that the public dislikes and that are not economically viable on such a scale in a free market. If they were viable, then there would be no need for subsidies*.

Subsidies for purposes that stray so far from the public interest would not be possible on Maine's public lands. These subsidies might also be a violation of free trade agreements under NAFTA. *The United States has already levied tariffs against other Canadian provinces because of subsidies involving Crown Lands*.

The subsidies are not only a problem for trade between countries, they are also a problem for trade within New Brunswick. *Flooding the market with artificially cheap softwood pulpwood and low-grade lumber may be good for the mills which buy the wood, but it is not good for woodlot owners who will be paid less for their products*.

In Maine, nearly all planting and precommercial thinning are done by Central American Guestworkers. Increasing such practices created no new jobs for Maine people, because Maine workers can not compete with workers coming from some of the poorest countries in this hemisphere. Since some of the landowners in Maine are also landowners in New Brunswick, it would not be surprising if, eventually, the same trends hit New Brunswick.

Special management zones

While waiting for plantations to come on line, managers on Crown Lands, according to the JP report, should cut more heavily in special management zones. The JP report says (pg. 34) that over 32% of New Brunswick's Crown Lands are in some form of protected area or special management zone. The JP report makes it seem like this figure is excessive. This figure is, however, similar to Maine's public lands where over 33% is in some form of protection.

A chart from the JP report on page 34 shows the percentage of total productive forest in protection at around 14% for New Brunswick and 7% for Maine. According to Maine's Land Use Regulation Commission staff, however, 18% of the LURC jurisdiction is under some form of special management restrictions or protections.[4] LURC regulates over half of the land area of Maine, most of which is privately owned. One wonders where Jaakko Poyry came up with its numbers, since there is no documentation in its report. *Such sloppy research raises questions about the credibility of the report as a whole*.

The JP report seems to imply that forests in special management zones, such as riparian zones, can not be as productive or profitable as other areas. The report does not say why this is so, since, in most of these areas, partial cutting is still allowed, even though clearcutting is not. The multiple-age forestry that Maine's Bureau of Parks and Lands favors in timber dominant zones can also be done in riparian zones, though extra care must be taken to avoid siltation.

Certification

The JP report suggests that Crown Lands can reduce employees involved in in-house oversight by relying on the oversight from certification. This suggestion is surprising, since certification involves fairly quick, random, on-ground audits, perhaps years apart. The audits give a general passing grade, they do not stop all poor practices, nor do they even stop violation of state forestry regulations.

In Maine, some companies that were certified by Forest Stewardship Council (FSC), Sustainable Forestry Initiative (SFI), or both last year violated either the state's Forest Practices Act concerning clearcuts, or Land Use Regulation Commission rules concerning siltation of water bodies. State studies on Best Management Practices found a low compliance on large commercial ownerships, much of which are certified by at least SFI. Meeting a passing grade from even an annual random audit is not the same as having adequate oversight on a day-to-day basis.

Industrial ownerships, which are certified under SFI in Maine, did 82% of the clearcutting and 91% of the herbicide spraying in Maine in 2001, practices that the consumers do not expect from certified "natural" forests.[5] These large landowners also hire Central American forest guestworkers who plant and thin forests for lower wages than would Maine workers, and bonded Quebec woodsworkers who take up logging and trucking jobs. Because of these facts, *to most of the consuming public, it is not clear just what certification as either "green" or "socially responsible" means*.

If Crown Lands managers want to be certified under FSC (as is Maine's Bureau of Parks and Lands and the Baxter State Park Scientific Management Area), they would have to demonstrate how they will reduce reliance on herbicides over time, not double the rate of spraying as recommended by Jaakko Poyry. The J.D. Irving company withdrew from FSC certification in both New Brunswick and Maine, in part because FSC was demanding that the company reduce its reliance on spraying.

FSC certification for "natural forests" is also supposed to exclude plantations. The SCS certifiers for J.D. Irving called that company's plantations "planted forests," to avoid that provision. It is not clear if such a claim could be used successfully by New Brunswick's Crown Lands, where the certifiers would be under pressure to assure that management meets higher ecological and social criteria than would be used for private ownerships.

Conclusion: Sustainable Growth?

The Jaakko Poyry report suggests that maintaining cut at current levels on Crown Lands is not sufficient; the cut must be increasing every year to keep the forest industry viable. *The report confuses increased cutting and mill capacity with increased public benefits of jobs or taxes*.

In Maine, the cut has greatly increased over the last several decades, but the number of jobs in both the woods and the mills has fallen. *In addition, inflation-adjusted wages for woods workers and truckers have also fallen at a rate worse than for most other industries*.

Because of heavy cutting that has changed forest species ratios, many towns are getting lower tax revenues from big forest landowners. Because mills have threatened to leave unless given property tax breaks, many towns have lower revenues from their mills. Industry lobbying has reduced the rate of income taxes paid to the state General Fund.

So, ironically, even though cut has increased in Maine, jobs, tax revenues, and even wages have decreased over the last several decades. I would be very surprised if the trends were not similar in New Brunswick.

Subsidizing silviculture on Crown Lands will divert capital from more efficient economic enterprises to an industry that will continue to lose jobs, despite any increases in cutting. Spending money in this way may not be the best use of Provincial funds if the goal is economic development. A better long-term strategy would be to grow more value, do more value-added processing in the province, and to diversify the economy so it is not so dependent on a single industry.

The report recommends increasing the cut by 1% a year for the next 35 years. The report does not say what will happen to the cut after that. *If, in 35 years, the level of cut is finally stabilized, then how viable can the industry be if it* needs *to have a continually increasing cut? If industry can live without an increasing cut in 35 years, then why can't it live without an increasing cut now?*

One thing is for certain, Crown Lands cannot sustain *a perpetual increase in cut of 1% a year*. In just one thousand years of such growth in cutting, the annual cut on Crown Lands would have to be nearly 21,000 times greater than it is today. I would suggest that even massive amounts of chemicals and genetically engineered trees could not boost yields to such an extent.

Given, then, that Crown Lands will have to reach a sustainable level of cut at some point, which would be preferable: having 40% of the province in short-rotation boreal softwood plantations dependent on pesticides and subsidies or having more in natural forest structures? The people of Maine have chosen the latter for their public lands. Which way do the people of New Brunswick want their public forests to be managed? Unless New Brunswick changes its direction, it will wind up where it is headed.

End Notes

[1][1]Personal communication from David Soucy, director of Bureau of Public Lands,

[2][2]*Maine Department of Conservation Bureau of Parks and Lands Integrated Resource Policy for Public Reserved and Nonreserved Lands, State Parks, and State Historic Sites*, December,

[3][3] *Forest Management Certification Evaluation on the Natural Forests of State of Maine Department of Conservation Bureau of Parks and Lands (BP&L) Public Reserved and Non-*

Reserved Forestlands, authored by Robert Seymour, Marie Gunning, and Michael Thompson for

[5][5] *2001 Silvicultural Activities including Annual Report on Clearcutting*, Maine Forest Service,