

Good evening everyone / Bonsoir à vous tous,

1. Introduction

First, I'd like to tell you who I am. I'm a registered professional forester who was born in and spent most of my life in New Brunswick. I had a career as a forest management professor at the University of Moncton's forestry school in Edmundston. As such, I'm very familiar with forest policy in New Brunswick as it relates to both public and private land, and also the development of management plans on both these types of land ownership. I've also always had an interest in the evolution of forest policy in the other eastern provinces, including PEI. I'm now retired from that position. In 2020, my wife Judy and I bought a property on the Blooming Point Road. We had a house built and moved there in 2021. Judy was born in PEI and grew up in Mount Stewart, so I now consider myself an "Islander by marriage". Our property has a woodlot, about 48 acres, and since we've been here, I've been getting up to speed regarding how private land forestry works here in PEI so that I can get help with the management of my woodlot. I've joined and participated in many of the PEI Woodlot Owners Association activities and I'm a member of the Sustainable Forest Alliance (SFA). I'm also a volunteer on the Board of the Island Nature Trust and chair the Trust's Land Acquisition Committee but, today, I'm speaking solely on my personal behalf, and not that of the Trust or any other organization.

When I first moved here, I read the 2005 and 2011 surveys of PEI woodlot owners published by Natural Resources Canada, and Forests, Fish and Wildlife Division's 2018 revision of the "Ecosystem-Based Forest Management Standards Manual". I've recently read PEI's *Forest Management Act*, first proclaimed in 1988, the province's 2006 Forest Policy document, the 2023 Auditor General's report as it relates to forestry, the provincial government's "State of the Forest Report 2020" and the three documents produced by the Commission, "Sustainability of Biomass Utilisation", "Improving the Success of Hardwood Seedling Production and Establishment" and "Towards a New Forest Policy for PEI". While I certainly don't claim to be an expert yet, I've done a lot of the required homework and I feel I now know enough about the PEI context and how forestry works elsewhere to make some informed suggestions which might help the work of the Forestry Commission.

First, I'd like to congratulate the provincial government for recognizing that it is time to revisit the province's forest policy. Much has changed since the current Act and Policy were developed. What the Commission is addressing is the age-old forestry question addressed by Marion Clawson in his 1975 publication, "Forests for whom and for what?", the big picture landscape-level vision. Clawson was concerned with such questions as how much land to devote to forests, how much timber to harvest and the best means of harvesting it, and the compatibility or incompatibility of different forest uses as the issues to be dealt with in formulating forest policy. It should be noted however that, today, these other forest uses are often more important than timber production was when Clawson penned his text on forest policy.

Yes, this Commission's mandate is focused on forest policy but there have also been recent calls for the province to develop an overall land use policy for PEI which simultaneously considers agriculture, forestry, tourism, and urban development. Of course, there is considerable difficulty inherent in such a task given that, unlike most other provinces, most of PEI is under private ownership. According to the government's web site, 88% of the total area of PEI is privately-owned and, as indicated in the "State of the Forest Report 2020" document, 85% of PEI's forests are privately-owned compared to 6% for Canada as a whole. So how can the provincial government influence how much land is reserved for forests and the evolution of forest management in PEI given this high percentage of private ownership? Of course, there are only two ways, the carrot or the stick, that is, either through incentives or through regulation. But, more on this later. Concerning the Commission's work, I did fill out their recent online

survey asking Islanders for their opinions, and I now appreciate the opportunity offered by the Commission to elaborate on some of these opinions.

2. Province-wide concerns

First I'd like to offer a few comments related to some province-wide concerns discussed in the recent Auditor General's report.

As noted in this report, section 9 of the Forest Management Act states that Crown forest lands may be divided into forest management districts and that management and operating plans must be prepared for each district and made publicly available. The Auditor General states that such plans have not been prepared. As a permanent resident and taxpayer in PEI, I would like to be kept informed on the question of "For whom and for what?" each forest management district is being managed so I agree with the Auditor General that, to ensure transparency, these plans need to be prepared and made public.

Also, in the context of overall provincial land use policy and planning, all sectors should be on the same page when it comes to subdividing the province into units for which land management decisions are made. The Auditor General noted that the provincial Department of Environment, Energy and Climate Action (DEECA) which manages our public forests is moving towards landscape-level planning based on land units with ecological rather than arbitrary human-made boundaries. I'm not sure what this means exactly but I would submit that watershed boundaries are the most appropriate way to subdivide the landscape. Doing so would allow us to assess and mitigate (when necessary) the cumulative impacts of land management practices on water quality and fish habitat. If they are not already doing this, I would therefore recommend that the forestry sector show leadership in this regard by redrawing boundaries of the forest management districts and the provincial forest technician regions to follow watershed boundaries. Given that some watersheds in PEI are quite small, some districts and technician regions will include several watersheds.

Concerning biomass harvested in the province to heat public buildings, the Commission in its "Sustainability of Biomass Utilisation" document notes that "sustainability" and "sustainable harvest" are not defined in any provincial legislation. Curiously, the Auditor General states that "Post-harvest audits were not completed to ensure that biomass used to heat public buildings was harvested in a sustainable manner." As a forester who taught wood supply analysis and forest management activity scheduling at the strategic level for 30 plus years, this statement makes no sense. It isn't possible to determine if harvests of any forest product are sustainable *a posteriori*, i.e. just monitoring and reporting post-harvest on how much has been harvested. This must be done *a priori*, i.e. before harvesting. This requires a projection with a forest-level model of various harvest levels to determine which harvest level is sustainable. Harvest must be less than or equal to growth, which depends on site quality, species composition, age-class distribution and management inputs, in this case silvicultural investments.

Also, special attention needs to be made to the possibility of excessive site nutrient removal which could lead to site nutrient impoverishment and reductions in future stand growth rates. This depends on how much of each tree is harvested (stems, branches, leaves, stump, roots, etc.), how often biomass harvests are carried out and the ability of different sites to replenish the soil nutrient reserve. As the Commission noted in its "Sustainability of Biomass Utilisation" document, like "sustainability", there is no definition of what exactly constitutes "biomass" in any provincial legislation so, as a first step, there is an urgent need for the province to define exactly what is meant by these terms.

I would also point out that, as stated in the Commission's Biomass document, some of the biomass contracts require that at least 80% of biomass be acquired from sustainable sources and harvested in a sustainable manner in accordance with the province's "Forest Management Standards Manual", and that biomass must be harvested from properties with a current and registered forest management plan. Well, in my view, this is a red herring. Having registered forest management plans for private woodlots, which I understand are the primary source of this biomass, plans which respect the requirements of the "Forest Management Standards Manual" in no way ensures that what is prescribed in these plans is "sustainable". Why? Because these plans are only prepared for very short 5 or 10-year planning horizons, and there is no projection of what will be the outcomes of the proposed activity schedules. So, how can we make any statement regarding long-term sustainability? I'll have more to say in a few minutes about management planning on private woodlots.

Finally, with respect to biomass production, I mentioned earlier that management inputs, in this case silvicultural investments, are one of the factors which control how much biomass you can sustainably produce and harvest. From my understanding, most or all the biomass now used to heat public buildings is wood waste, i.e. wood that could not be sold for pulp, lumber or other more valuable forest products. I would suggest that the province could investigate the possibility of providing incentives for landowners to invest in high yield plantations which can, if managed properly, provide considerable amounts of biomass with more predictable availability than just relying on wood waste. I'm not talking about spruce plantations here. I'm referring to high yield plantations with hybrid poplars or willow or other species which require more management inputs but require much shorter rotations and provide much faster returns on investments. Personally, I consider this type of land management more akin to agriculture than forestry. PEI has always been a province known for agriculture and this hybrid type management might prove interesting for our farmers. The province has much cleared flat land that is under-utilized and, with the proper incentives, our farmers might be interested in investing in such crops. Also, we don't have to reinvent the wheel. There is a research group in Quebec, the "Réseau de reboisement et de ligniculture", which could help us out with this, and the province could hire someone who already has this expertise to manage such a program.

3. Crown Land

In my opinion, timber production should not be an objective on Crown Land in PEI. The only priority for the management of provincially owned forest land should be on providing ecological goods and services, with timber production relegated to private woodlots.

As noted in the Commission's "Towards a New Forest Policy" document, the province has a stated goal of protecting 7% of its land area by 2030. It is also noted that, including public and private land, 5% is currently protected. The Commission then asks the question: "Should the provincial government work to set aside more public forest under the *Natural Areas Protection Act*?" In my opinion, the answer is a resounding YES. In fact, I would suggest that all Crown Land be protected under NAPA. The total land area of PEI is 567,113 hectares. Of this, 35,716 hectares, 6.3% is forested land owned by the Crown and, of this, 6,600 hectares, 1.7% of the total land area of PEI is already protected. If my math is right, putting all Crown Land under NAPA would add another 4.6% bringing the total to 9.6%, thereby surpassing the 7% objective. Also, as you know, the Island Nature Trust and the Nature Conservancy of Canada are working diligently on this issue and, together, we could very soon achieve 10%.

Also as noted in the Commission's "Towards a New Forest Policy" document, the province aims to achieve Net Zero by 2040. On the province's website, Net Zero is defined as "achieving a balance between the emissions we produce through day-to-day activities and how much can be absorbed by the natural environment and through technology". Emissions are not defined on the web site, so I'm assuming they are referring to carbon dioxide, which is the

primary greenhouse gas emitted through human activities which contributes to climate change. Protecting all Crown land under NAPA, which would mean no more timber harvesting on Crown Land, which would gradually build up carbon stocks in the provincial forest, would go a long way in helping PEI achieve this objective. Not sure if this is possible in this case, but the province might even be able to bring in revenue through the sale of carbon credits. Last May, I had a 4 acre back field on my property planted via the province's *Carbon Capture Tree Planting program* and I've signed up my whole woodlot for the carbon credit project being developed by the SFA.

4. Private Woodlots

The 2011 survey of private woodlot owners highlighted that landowners prefer incentives rather than regulatory measures. To many woodlot owners, protection of landowner rights, meaning their right to determine what to do on their land, how to do it and when to do it is of prime importance, the "sovereignty" concept that Dr. John Schurman discussed at the last PEI Woodlot Owner's Association AGM. There is opposition to excessive government intervention and a sense that regulations can be pushed too far. Also, in the principles section of the current forest policy it is stated that "private landowners make the forest management decisions on their own lands" and that the province favors "demonstration, education and incentives over legislation". Well, I think the Commission and the province must seriously question how well that approach has been working out.

The 2011 survey indicated that woodlot owners seem willing to rely on the moral and personal ethics of woodlot owners regarding their land stewardship. Personally, when it comes to managing the woodlot I had in New Brunswick and the one I now own in PEI, I've always lived by the pledge countries made at the 1992 Earth Summit in Rio de Janeiro: "I pledge to make the earth a secure and hospitable place for present and future generations", not just for humans but for all of the species which inhabit the forest. However, we have all seen instances where, often out of ignorance of other possible options, woodlots are not managed in the best interests of present and future generations and I would submit that there is therefore a need for some government intervention regarding the activities and timing of management activities on private woodlots.

Yes, I'm a woodlot owner but I'm also a taxpayer, as we all are. The incentives that woodlot owners want through the provincial *Forest Enhancement (FE)* program are our tax dollars and I believe that they should come with strings attached. I would propose that PEI adopt a registered woodlot system and only registered woodlots would be eligible for incentive money. The bottom line would be, no registration, no incentives. A registered woodlot would have a provincially approved management plan indicating what to do and when to do it to achieve provincial objectives, whatever they may be. Also, no more 5 or 10-year plans which do not ensure sustainability. There would also be a requirement for a minimum 25-year planning horizon with a projection of what the flow of harvested wood products would be over the years, if any, and a projection of the state of woodlot at the end of the planning horizon after the recommended interventions had been carried out. This is the only way to ensure sustainability. The landowner would be required to follow the plan as indicated and this requirement would follow with the title to the property if it was sold. So, basically, the landowner would have to give up some of their sovereignty if they wanted access to incentives funded by our tax dollars. If such a system were in place, I would personally register my woodlot and others could freely choose to opt in or opt out. No one would be forced to register. Finally, there could be a provision that a property could be removed from the registered woodlot system if the monetary value of all incentives received over the years from the province since registration, with interest, were reimbursed.

Finally, on the issue of private woodlots, the Commission notes in its "Toward a New Forest Policy" document that the *Forest Enhancement Program* does not offer incentives for woodlot infrastructure, including "boundary lines, roads, bridges, skid trails and landing sites". Apparently, there was once funding for this but no more. You can't

manage a woodlot properly unless you have adequate access to carry out stand interventions and for forest product extraction. Adequate access is also necessary for forest worker safety. So, I would strongly recommend that the province reinstate funding for this infrastructure, but, again, only for registered woodlots.

5. Quality Hardwoods

When it comes to the production of softwoods for pulp and lumber, PEI can't compete with other jurisdictions. As others have noted, there should be an increased focus on producing quality hardwoods in mixed stands and, compared to much of the rest of Canada, PEI does have some advantages in this regard. These would include: a warmer and warming climate which is and will be more favorable to hardwood growth and survival, and no deer or moose browsing of hardwood seedlings which is a significant issue elsewhere. I used to own a woodlot in northern New Brunswick and I had major issues with this type of browsing on my hardwoods.

In the Commissions' recent report "Improving the Success of Hardwood Seedling Production and Establishment", there is a call for greater production of hardwood seedlings either at the provincial nursery or by private nurseries, and modified silvicultural techniques that favour the establishment of natural regeneration of late-successional hardwoods in natural stands. It is also noted that hardwoods are more costly to plant and generally more difficult to establish because of many factors including poor seedling quality, improper handling of seedlings, improper planting technique, inadequate vegetation control, and predation by mammals. Yes, we don't have any deer or moose, but we do have browsing by snowshoe hare and girdling by voles under the snow in the winter. However, assuming that we want to grow these hardwoods for quality lumber and not just for pulp or biomass, as is suggested in the *Forest Management Act* where "best end use" is defined, there is also a requirement for long-term maintenance of individual crop trees which is not mentioned in the Commission's report.

With hardwoods, once the seedlings are planted or once the natural regeneration is established, future crop trees need to be taken care of for many years. This is unlike softwood plantations which, relatively speaking, require minimal care. With softwoods, you plant, maybe do some fill-planting if there has been inadequate survival in spots and you control competing vegetation for a few years, then don't come back for 50 years to harvest unless there is a need to control insects, disease or fire. Growing hardwoods takes much more care. Yes, at the start, you have to protect your little trees from the hare and the voles but, if you really have quality as an objective, you need to do much more.

Quality means straight, cylindrical, knot-free wood which requires that individual crop trees be regularly shaped and pruned as they grow. You also need to frequently remove any epicormic branching which forms on the pruned stems from dormant buds. This individual-tree focus is more akin to arboriculture than to silviculture where your focus is at the stand level. Protocols need to be developed, woodlot owners need to be educated in proper techniques and incentives provided through the *Forest Enhancement* program for this to happen. Other jurisdictions have been dealing with this issue for decades. If the province is serious about this, they need to hire a hardwood silviculture specialist. Ontario and Quebec have experts and, more locally, the Hardwood Institute in Edmundston, New Brunswick is developing this expertise. I used to be on the Board of Directors of this institute representing the University of Moncton. We also have people in the nurseries in this province who know how to prune and shape trees grown in the open, but techniques are somewhat different for trees grown in mixed stands. However, the world experts in producing quality hardwood are found in Europe. I have heard of instances in Europe where potential buyers walk into the forest with the forest manager, stand at the base of a large high quality tree and there is an auction for this single tree. There is a guide produced in France with the title "*Élagage et taille de*

formation des arbres forestiers”, in English “Pruning and Shaping forest trees” which contains many recommendations which I’m sure would work just as well with our Canadian hardwood species.

Finally, on this issue, members of the Commission visited the 15-year old red oak plantation at Glenaladale last May. I live about one kilometer from Glenaladale and visited this plantation a week ago. In my view, it is now time for some shaping and pruning of the oak trees in this plantation. The earlier you get at this, the smaller the branches and the easier the work, but you also need to have a plan for future follow-up.

6. Conclusions

In conclusion, I would like to summarize my suggestions that the Commission might consider as they finalize their recommendations for a new provincial Forest Policy:

1. Redraw boundaries of forest management districts and provincial forest technician regions to follow watershed boundaries, and promote this as an approach for planning all uses of the land in PEI.
2. Provide official legal definitions of “biomass” and “sustainability”, and carry out strategic analyses to determine sustainable levels of biomass harvesting.
3. Consider the possibility of providing incentives for the establishment and management of high yield plantations of hybrid poplar, willow or other species which could be used as biomass for heating.
4. All of PEI’s Crown forests should be put under NAPA protection enabling us to immediately reach and even surpass our objective of 7% protection. Since harvesting of wood products would no longer be allowed under NAPA, this would also accelerate carbon sequestration and contribute to the province’s Net Zero by 2040 objective.
5. The province should implement a registered woodlot system where only registered woodlots would be eligible for incentives, with a requirement that management plans with a minimum 25-year planning horizon be developed for these woodlots with projections to ensure that management activities are sustainable.
6. Reinstate incentives for construction and maintenance of infrastructure such as roads and bridges on private woodlots to ensure adequate access for stand interventions and wood products extraction, and also for the safety of forest workers.
7. In addition to promoting the increase of hardwood seedling production, develop protocols for the establishment and management of quality hardwood crop trees, and provide education and incentives for woodlot owners to apply these techniques.

Finally, I thank the Commission for organizing these public meetings so that the voices of the Islanders who care deeply about the management of our forests could be heard.

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