From:	Parkinson, Elizabeth PREM:EX
To:	Wade, Debbie PREM:EX; Renneberg, Tim FLNR:EX; McLaren, Kenn FLNR:EX
Subject:	FW: 21st Century Forest Plan & Program for B.C.
Date:	February 19, 2019 4:38:06 PM
Attachments:	British Columbia solutions.docx Attached Message Part
Importance:	High

Please find attached an email from Mike Harcourt.

Elizabeth

From: Moneca Gabriel s.22
Sent: February 19, 2019 1:58 PM
To: Parkinson, Elizabeth PREM:EX <Elizabeth.Parkinson@gov.bc.ca>; Minister, FLNR FLNR:EX <FLNR.Minister@gov.bc.ca>
Cc: Dewar, Bob PREM:EX <Bob.Dewar@gov.bc.ca>; MIKE HARCOURT <mharcourt@shaw.ca>
Subject: Fwd: 21st Century Forest Plan & Program for B.C.
Importance: High

Hi Elizabeth,

Please find attached a copy of 21st Century Forest Plans and Program for B.C.

To: Premier Horgan, Min. Donaldson,

Emails are not available for copies to be sent to: Geoff Meggs, John Allen, Tim Renneberg, Kenn McLaren.

I would appreciate if they could be forwarded.

Thank you for your assistance.

Best,

Moneca Gabriel

Executive Assistant to Mike Harcourt

Discussion Paper
The British Columbia Forest Sector in the 2020s

Introduction

British Columbia's forests are suffering to the extent that they can no longer meet the expectations that British Columbians place on them. Problems include:

- significant losses associated with beetle kill and fire;
- disastrous wildfires that threaten lives and property;
- reduced timber supply, resulting in reduced employment and loss of mills;
- decline of rural communities associated with job reductions in the forest sector
- capital flight from the forest sector, primarily to USA;
- reduced biodiversity, including populations of iconic species such as caribou;
- reduced markets, especially in the USA, due to tariffs and trade restrictions;
- uncertainties over the rights of First Nations and what this means for long-term tenures;
- reduced social license amongst the public;
- reduced confidence in the ability of resource professionals to deal with some of the major issues
- carbon policy and pricing uncertainty

Many of these issues are not new. In fact, over the past 100 years, BC has commissioned Royal Commissions, numerous inquiries, committee reports and other sources of advice. Some of this advice has been taken, much has been discounted. The reasons for past governments to discount proposals are numerous, but include political ideology, lack of political will and reluctance to change, pressure from licensees, ideology and lack of knowledge within the government services leading to failure to consider options adequately before discounting them, rivalry and lack of cooperation between government departments, pressure from perceived and actual public opinion and others. The importance of 'group think' should not be discounted: the current system is deeply engrained within the sector and change will be viewed with suspicion.

The current Government has begun to address some of these issues but is doing so on a rather piece-meal basis (unless there is a master plan that is yet to be revealed). This makes sense economically, but dealing with issues individually fails to take into account the need to adopt a more holistic approach, and also fails to address some of the underlying issues, many of which are connected. Broad, sweeping changes are required to inspire rural communities to adopt a sustainable future.

Forest sector employment

The current forest sector in British Columbia is dominated by a small number of large companies focused on the production of lumber to meet the US housing market. In the last ten years, there has been considerable adaptation to develop markets in China, but the USA remains the dominant market (accounting for 67% of BC lumber exports). The mills are mostly highly advanced and very efficient, and a result employment per unit production has dropped significantly. This has lowered processing costs, enabling more competitive products.

Employment in other parts of the sector will likely change associated with increased automation. This will be accompanied by a need for workers with more skills. This will affect all parts of the sector, but will increase its profitability and potentially open up areas that were previously excluded from harvesting (e.g. steep slopes).

Many small mills have been closed because of economic inefficiency or because of lack of timber supply. However, small-scale mills by definition require less timber supply and provide more jobs per unit production. They are also critical sources of employment for small, rural communities. They survive best when producing specialty products. These products often meet local demand, but may also be produced for export.

A major step in enabling this would be changes in governance that separated fibre supply and mills. This would be strongly resisted by some, but it is the model on which much of the USA operates. Fibre supply would instead be controlled through area-based management units held by First Nations, communities and others. The danger here is that some First Nations might have alternative revenue-sharing arrangements from other resources (e.g. pipe-lines) that would reduce their need to produce fibre. A transition period, during which resources are co-managed, would enable management capacity to be developed, and would enable licensees to transition. The process followed after the Nisgaa Treaty might be a suitable model for this transition.

Pulp mills are likely to be a key to the future bioeconomy of the Province. In the interior, there are already a number of pulp mills, and some of these are experimenting in diversification (e.g. Canfor in Prince George, Domtar in Kamloops). The links between Paper Excellence and APP, and the purchase of Catalyst by Paper Excellence, opens up possibilities of significant investment, given the global investments being made by Chinese pulp and paper companies (especially in Sweden, Finland, Russia).

Log exports have frequently been associated job exports, but the situation is a lot more subtle. Some logs, particularly low-value hemlock, fetch twice as much from overseas buyers as they do from domestic buyers. Obtaining these prices for logs deemed surplus to demand enables economically viable logging operations to occur, and encourages cutting across the profile (as opposed to high-grading, which reduces the long-term value of the forest). Banning exports would have serious repercussions on the logging industry, and would likely lead to significant job losses.

Potential actions:

- Create more area-based management units managed by communities, First Nations and others and encourage carbon-supported restoration activities. Integrate all different types of management units under the ‘bundle of rights’ concept. Estimated cost: $50 million annually.
- Provide the economic conditions (e.g. limited-period tax rebates) to encourage investment in small mills (while not aggravating the subsidy accusations by the USA). There are many examples around the world of economic development zones created by local or regional government to encourage industrial infrastructure investment. Estimated cost: $5-10 million annually.
- Move towards the separation of fibre supply and mills, creating an open market for logs that mills would compete for. This would undoubtedly put log prices up (unless mills colluded to keep prices low), increasing revenues for those producing fibre, but potentially reducing profitability of some mills. Estimated cost: uncertain.

- Create the economic conditions for diversification of pulp mills. In the Finnish model, a core mill owned by one company is surrounded by smaller facilities owned by start-ups and others that take waste or product streams to create products with much higher value. Estimated cost: unknown, as depends on attracting inward investment.
- Continue and strengthen efforts by FII and other organizations to increase the use of wood as an alternative to unsustainable materials. Estimated cost: $20 million annually.

Value from forests

There is a need to obtain more value from the timber being extracted from our forests. Steps are being taken to reduce the amount of waste that is left – the costs of this need to be offset against the costs of not doing so. Such costs need to include fire hazard, opportunity costs, implications for biodiversity, carbon emissions, implications for other forest users (for example ranchers), and others.

Previous governments saw the virtual cessation of all provincially-funded forest research in BC universities (other than forest genomics), and severe reductions in the research capacity of FLNRORD. This was combined with traditionally very low investment from the private forest sector, especially in BC. As more and more issues arise, and as it becomes apparent that the Province is not well prepared to address these issues, the need to catch up with jurisdictions is becoming increasingly apparent. Major European forest countries are about 20 years ahead of BC, especially in the introduction of new forest-based products.

Associated with this is obtaining more value added and innovative use of the harvested wood. The more a product is worked on, the greater the price of the end-product and the more jobs that can be supported. There are many new areas of value-added products: these range from mass timber and pre-fabricated houses to biotextiles to cellulose nanofibrils to cellulose-based biofoods and biopharmaceuticals.

The state of development of these new materials is quite variable. There have been very rapid advances in engineered wood, such as CLT, NLT, DLT and others. These are now widely accepted and market penetration is increasing, although still has a long way to go in industrial buildings and mid-rise. Others are at early stages of research, or the product exists but there is still too much risk to attract industrial-scale adoption. In the short-term, biotextiles offer the greatest potential, particularly given increasing concerns about the sustainability of cotton and polyester. Further research, and reliable demonstration facilities for the resulting innovations, are required to move this area forward.

Potential actions:

- Follow the lead of other Canadian provinces, and invest in forest and forest products research at BC's universities. Estimated cost: $40 million annually
- Encourage the further development of UNBC's Wood Design Centre. Estimated cost: $1 million annually
- Build on the momentum created at UBC by the Brock Commons Tall Wood Building creating a Tall Wood Research Institute at UBC. Estimated cost: $30 million investment and $2 million annually)
- Build on the tremendous concentration of expertise in forest bioproducts at UBC by investment in the Bioproducts Institute and the proposed bioproduct demonstration

facility in the Centre for Advanced Wood Processing. Estimated cost: $30 million investment and then self-financing.

- Fast-track the proposed Bioeconomy Science and Technology undergraduate program currently being considered for approval by the Ministry of Advanced Education, Skills and Training. Estimated cost: None, but the program could be accelerated with a seats allocation (ca. $20,000 per seat annually).

Forest resilience

There is a need to replant NSR acreages with newer, faster-growing, more fire-resistant species that are climate-change ready. With large areas needing to be dealt with, it is essential that a landscape-scale approach is adopted. The landscape scale is widely promoted as the correct scale to practice forest planning, and enables the adoption of climate-smart and fire-smart principles. Care will be needed not to adversely affect biodiversity and other values, so a balance is needed.

Our forests currently are not resilient, as amply demonstrated by events over the past 20 years. The province is ultimately responsible for the management of forests but its delegation of this responsibility to licensees has not worked well. The province should re-establish planning responsibilities – which might in future be undertaken in co-management agreements with First Nations. This would save licensees costs while at the same time removing the possibility of system manipulation.

Large-scale reforestation is required in some areas, including carbon management, and this should be done with a view to achieving a future forest condition that meets the needs of the province. These will vary across the province, but may include more emphasis on tree diversity (building resilience) and especially the use of more broadleaves. The current forest industry has not been able to make much use of broadleaves as it is not well suited to framing lumber. However, elsewhere, companies such as IKEA have been very successful in broadleaf utilization.

A major revision of the AAC process is needed. For forests to be resilient, the AAC must first and foremost be based on ecological sustainability. Harvesting at higher than the ecological growth rate may enable economic viability in the short-term, but will not permit long-term sustainability. However, some steps may be possible to provide higher yields per ha than are currently being obtained (see potential actions).

While not wishing to recreate the type of forests found in Sweden, their increasing AAC and increasing growing stock is in stark contrast to BC. Their productive forest land area is similar in area to the THLB in BC (ca. 24 million ha), although they have a much higher proportion of their forest in production (83%). Much could be learnt about increasing timber supply – perhaps adapting it for BC using the TRIAD approach (intensive, extensive and protected). Productivity in BC forests could be significantly improved by many means, including better growing stock, soil nutrition management, density management, and timely commercial thinning. This however would require a change in the respective roles of governments and licensees, including a move towards area-based tenures.

Potential actions:

- Adopt the recommendations of the BC Forest Inventory Review Panel. Recommendation No. 16 ‘Develop Growth and Yield models that cover the main stand types and

management regimes in BC' is particularly important given the problems with the current growth and yield models used in AAC determinations. Estimated cost: >$10 million

- Shift from volume-based to area-based management as recommended in the 2012 report by the Special Committee on Timber Supply. Link area-based management units to traditional territories of First Nations and instigate co-management approaches (see next heading). Estimated cost: this depends on whether compensation has to be paid to existing licensees; there are examples of AAC takeback both with and without compensation.

UNDRIP

There is a need to for much greater collaborative governance of resource with the Indigenous peoples of British Columbia. This requires a complete re-evaluation of the current land governance system that has evolved piecemeal over the past 100 years and now contains many anachronisms. The existing system is now incompatible with UNDRIP Article 26.1: "Indigenous peoples have the right to the lands, territories and resources which they have traditionally owned, occupied or otherwise used or acquired" and Article 26.2: "Indigenous peoples have the right to own, use, develop and control the lands, territories and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired".

There is a lack of capacity amongst First Nations, and insufficient capacity within FLNRORD, to undertake this. Given the significance of the change one possible way would be to undertake one of more pilot studies involving collaborative governance. A project covering the entire traditional of the Secwepemc Nation is already under discussion. A coastal pilot would also be beneficial (the Great Bear Rainforest Agreement might provide the basis for this).

I would advocate for a complete redesign of the forest governance system. Almost everyone agrees that it is not meeting today's needs. Volume-based tenures are incompatible with both a landscape approach to forest management and sustainable forest management. A new tenure system should be based on the 'bundle of rights' principal (i.e. it is not equivalent to privatization). Certain rights, such as access rights could be held by the government. Rights to non-timber products might be allocated to First Nations. Timber rights would require a careful evaluation with current license holders: could they be cancelled in return for guarantees of timber supply to an open market (for example)? How would this supply be guaranteed?

Potential actions:

- Do whatever is necessary to redesign the tenure system (this is a huge issue that will require much better handling than occurred under the last government. It will require education of Ministry officials, NGOs, licensees, First Nations and others). It will also require negotiation between the government and existing licensees: the latter are facing significant write-offs because of the current timber supply reductions, and this may be provide the opportunity for negotiation. Estimated costs: unknown.
- Start building capacity amongst First Nations to manage forest resources in a way that meets their needs while also generating timber supply (either for local or for independent sawmills, as well as for others using wood products). Estimated costs: $10 million annually

- Boost capacity at technical colleges, especially Nicola Valley Institute of Technology. Estimated costs: $3 million annually
- Support UBC's plans for a National Indigenous Forestry School. Estimated costs: initial investment of $30 million, accompanied by an allocation of 100 seats ($1.4-2.0 million annually). Note that the initial investment is likely to be co-funded by other sources.

Carbon

For the last 20 years, Canada's forests have been a net source of carbon rather than a net sink. This has largely been caused by the deterioration of forests in British Columbia, particularly the mountain pine beetle and fire, This presents major opportunities for BC: a major reforestation campaign, accompanied by appropriate steps to protect the growing resource, would represent a major carbon sinks. The inadequacy of current forest inventory means that it is difficult to get precise figures, a problem exacerbated by the tendency to report areas affected, even though there may be surviving trees within these areas. A second major uncertainty is the growth rates (= carbon sequestration capacity) of this new planting. Improved management and improved planting stock could increase rates by 100-500% or more. Added uncertainty surrounds the price of carbon: will be $30/tonne, as in the current federal proposal, $200/tonne as the IPCC has suggested is required, or even $300/tonne, which is what the federal government has estimated would be needed for Canada to meet its Paris requirements? A ten-fold range in carbon prices makes a massive difference given the scale of reforestation required in BC (especially if the remaining, growing, resource is taken into account).

Potential actions:

- Undertake sensitivity analyses using better estimates of growth and yield in the Province, and a range of carbon prices. Estimated cost: $500K.
- Accelerate research on and production of improved planting stock. Estimated cost: $7-10 million annually.
- Proceed with a massive reforestation effort, taking the opportunity to design fire-smart landscapes, using trees that are better adapted to climate change, working with First Nations and others to provide rural jobs. Note that this isn't simply about planting: improved planting stock will be required, and more nursery capacity will be needed to produce this stock. Estimated cost: unknown.

Social license

A major problem faced in forestry and other natural resources is a loss of confidence by the public in resource management. This is recognized by government and triggered the professional reliance review. A major effort is required to rebuild the trust of the people of British Columbia in the ability of the provincial government and professionals in and outside government to manage natural resources effectively and sustainably. There has been a long period of erosion of both skills and capacity, and this requires immediate attention. Mandatory continuing education, delivered by skilled and experienced educators should be required. The Province has considerable capacity in its universities and technical colleges that could be better used to achieve this, especially if they were mandated to provide extension services (as has been the case in the USA for over 100 years).

The public also expects resource professionals and others to protect it. This will be challenging at a time when the incidence and severity of natural hazards, including wildfire, is increasing. Recent wildfires illustrated that fire response needs to be improved, particularly in vulnerable remote communities (many of which are First Nations). Jurisdictional issues (Federal vs Provincial vs community) need to be overcome to improve the capacity of the First Nations Emergency Services Society (FNESS) to respond to such emergencies. The Rural Fire Services in Australia also provide a model of how to respond to emergencies in inaccessible areas.

Potential actions:

- Significantly increase the mandate of the Forest Practices Board to include all activities in forests, range and unenclosed lands (including oil and gas development), enabling it to address cumulative effects. Estimated cost $7.5 million annually (on top of current budget allocation).
- Place less reliance on industry-funded groups such as the Oil and Gas Commission. Estimated cost: $0
- Continue implementation of the recommendations of the Professional Reliance review. Estimated cost: depends on how many recommendations are accepted.
- Develop extension capacity at BC's universities and technical colleges to ensure the better training of professionals and others. Forestry and land management more generally, this would likely involve: UBC-V, UBC-O, TRU, VIU, UNBC, BCIT, NVIT and others. Estimated cost: $10 million annually.
- Continue implementation of the recommendations of the Filmon report. In particular, accelerate programs to fire-proof rural communities, paying particular attention to the recommendations in the Forest Practices Board 2015 review of wildland urban interface fires. Estimated cost: >$1 billion.
- Develop the capacity of FNESS to deal with emergencies. Estimated cost: unknown – cost-sharing with federal government and communities.
- Ensure that the three new "fire chairs" at UNBC, TRU and UBC-O are adequately resourced. Estimated cost: >$1.5 million annually.
- Support other efforts in this area, such as the proposed UBC Cariboo Fire Ecology Research Centre in Williams Lake. Estimated cost: $20 million.

Note: many of the larger cost estimates require a full and proper costing exercise, and many also offer the possibility of co-funding with federal initiatives. Costs also have to be placed in context: the cost of not doing something (e.g. fire protection) may significantly exceed the cost of the action. Similarly, an investment today (e.g. in research or education) may yield significant dividends in the future. Overall, there is the possibility of off-setting the cost of establishing a well-managed, resilient forest estate that acts as a significant carbon sink and store through pricing mechanisms for carbon.

John Innes

Robert Falls

FRBC Chair of Forest Management
Dean of the Faculty of Forestry, UBC

Adjunct Professor
UBC Forestry

Sent from my iPhone

From:	Eckardt, Dana R FLNR:EX
To:	Renneberg, Tim FLNR:EX; Jones, Tristan FLNR:EX; McLaren, Kenn FLNR:EX
Subject:	FW: 21st Century Forest Plan & Program for B.C.
Date:	February 20, 2019 9:57:39 AM
Attachments:	British Columbia solutions.docx Attached Message Part
Importance:	High

Hi, please let me know how you would like us to respond to this incoming letter.

d.

s.22

From: Moneca Gabriel
Sent: Tuesday, February 19, 2019 1:58 PM
To: Parkinson, Elizabeth PREM:EX; Minister, FLNR FLNR:EX
Cc: Dewar, Bob PREM:EX; MIKE HARCOURT
Subject: Fwd: 21st Century Forest Plan & Program for B.C.
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I would advocate for a complete redesign of the forest governance system. Almost everyone agrees that it is not meeting today's needs. Volume-based tenures are incompatible with both a landscape approach to forest management and sustainable forest management. A new tenure system should be based on the 'bundle of rights' principal (i.e. it is not equivalent to privatization). Certain rights, such as access rights could be held by the government. Rights to non-timber products might be allocated to First Nations. Timber rights would require a careful evaluation with current license holders: could they be cancelled in return for guarantees of timber supply to an open market (for example)? How would this supply be guaranteed?

Potential actions:

- Do whatever is necessary to redesign the tenure system (this is a huge issue that will require much better handling than occurred under the last government. It will require education of Ministry officials, NGOs, licensees, First Nations and others). It will also require negotiation between the government and existing licensees: the latter are facing significant write-offs because of the current timber supply reductions, and this may be provide the opportunity for negotiation. Estimated costs: unknown.
- Start building capacity amongst First Nations to manage forest resources in a way that meets their needs while also generating timber supply (either for local or for independent sawmills, as well as for others using wood products). Estimated costs: $10 million annually

- Boost capacity at technical colleges, especially Nicola Valley Institute of Technology. Estimated costs: $3 million annually
- Support UBC's plans for a National Indigenous Forestry School. Estimated costs: initial investment of $30 million, accompanied by an allocation of 100 seats ($1.4-2.0 million annually). Note that the initial investment is likely to be co-funded by other sources.

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For the last 20 years, Canada's forests have been a net source of carbon rather than a net sink. This has largely been caused by the deterioration of forests in British Columbia, particularly the mountain pine beetle and fire, This presents major opportunities for BC: a major reforestation campaign, accompanied by appropriate steps to protect the growing resource, would represent a major carbon sinks. The inadequacy of current forest inventory means that it is difficult to get precise figures, a problem exacerbated by the tendency to report areas affected, even though there may be surviving trees within these areas. A second major uncertainty is the growth rates (= carbon sequestration capacity) of this new planting. Improved management and improved planting stock could increase rates by 100-500% or more. Added uncertainty surrounds the price of carbon: will be $30/tonne, as in the current federal proposal, $200/tonne as the IPCC has suggested is required, or even $300/tonne, which is what the federal government has estimated would be needed for Canada to meet its Paris requirements? A ten-fold range in carbon prices makes a massive difference given the scale of reforestation required in BC (especially if the remaining, growing, resource is taken into account).

Potential actions:

- Undertake sensitivity analyses using better estimates of growth and yield in the Province, and a range of carbon prices. Estimated cost: $500K.
- Accelerate research on and production of improved planting stock. Estimated cost: $7-10 million annually.
- Proceed with a massive reforestation effort, taking the opportunity to design fire-smart landscapes, using trees that are better adapted to climate change, working with First Nations and others to provide rural jobs. Note that this isn't simply about planting: improved planting stock will be required, and more nursery capacity will be needed to produce this stock. Estimated cost: unknown.

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A major problem faced in forestry and other natural resources is a loss of confidence by the public in resource management. This is recognized by government and triggered the professional reliance review. A major effort is required to rebuild the trust of the people of British Columbia in the ability of the provincial government and professionals in and outside government to manage natural resources effectively and sustainably. There has been a long period of erosion of both skills and capacity, and this requires immediate attention. Mandatory continuing education, delivered by skilled and experienced educators should be required. The Province has considerable capacity in its universities and technical colleges that could be better used to achieve this, especially if they were mandated to provide extension services (as has been the case in the USA for over 100 years).

The public also expects resource professionals and others to protect it. This will be challenging at a time when the incidence and severity of natural hazards, including wildfire, is increasing. Recent wildfires illustrated that fire response needs to be improved, particularly in vulnerable remote communities (many of which are First Nations). Jurisdictional issues (Federal vs Provincial vs community) need to be overcome to improve the capacity of the First Nations Emergency Services Society (FNESS) to respond to such emergencies. The Rural Fire Services in Australia also provide a model of how to respond to emergencies in inaccessible areas.

Potential actions:

- Significantly increase the mandate of the Forest Practices Board to include all activities in forests, range and unenclosed lands (including oil and gas development), enabling it to address cumulative effects. Estimated cost $7.5 million annually (on top of current budget allocation).
- Place less reliance on industry-funded groups such as the Oil and Gas Commission. Estimated cost: $0
- Continue implementation of the recommendations of the Professional Reliance review. Estimated cost: depends on how many recommendations are accepted.
- Develop extension capacity at BC's universities and technical colleges to ensure the better training of professionals and others. Forestry and land management more generally, this would likely involve: UBC-V, UBC-O, TRU, VIU, UNBC, BCIT, NVIT and others. Estimated cost: $10 million annually.
- Continue implementation of the recommendations of the Filmon report. In particular, accelerate programs to fire-proof rural communities, paying particular attention to the recommendations in the Forest Practices Board 2015 review of wildland urban interface fires. Estimated cost: >$1 billion.
- Develop the capacity of FNESS to deal with emergencies. Estimated cost: unknown – cost-sharing with federal government and communities.
- Ensure that the three new "fire chairs" at UNBC, TRU and UBC-O are adequately resourced. Estimated cost: >$1.5 million annually.
- Support other efforts in this area, such as the proposed UBC Cariboo Fire Ecology Research Centre in Williams Lake. Estimated cost: $20 million.

Note: many of the larger cost estimates require a full and proper costing exercise, and many also offer the possibility of co-funding with federal initiatives. Costs also have to be placed in context: the cost of not doing something (e.g. fire protection) may significantly exceed the cost of the action. Similarly, an investment today (e.g. in research or education) may yield significant dividends in the future. Overall, there is the possibility of off-setting the cost of establishing a well-managed, resilient forest estate that acts as a significant carbon sink and store through pricing mechanisms for carbon.

John Innes

Robert Falls

FRBC Chair of Forest Management
Dean of the Faculty of Forestry, UBC

Adjunct Professor
UBC Forestry

Sent from my iPhone

Robinson, Jon PREM:EX

From: Robinson, Jon PREM:EX
Sent: June 10, 2019 1:59 PM
To: Meggs, Geoff PREM:EX; Hockin, Amber PREM:EX; Renneberg, Tim FLNR:EX
Subject: FW: Fwd: 21st Century Forest Plan & Program for B.C.
Attachments: British Columbia solutions.docx; Attached Message Part.txt

Importance: High

FYI….attached forestry paper from Harcourt.

From: Michael Harcourt s.22
Sent: Sunday, June 9, 2019 2:02 PM
To: Robinson, Jon PREM:EX <Jon.Robinson@gov.bc.ca>
Subject: Fw: Fwd: 21st Century Forest Plan & Program for B.C.
Importance: High

Jon,I haven't been able to see the Premier over the last month.

He was busy till end of May with closing down the Legislative Spring Session.

Plus he's been in Europe since then for the D Day 75 Anniversary events,as well as a trade mission now to Britain and the Netherlands.

Still trying for a get together.

In the meantime,I've been working on elements of the 30 Year Jobs and Sustainable Prosperity Vision you and I have been discussing-

-Forestry- I've got a small group putting ideas together. Attached is one example from the Dean of Forestry at UBC,John Innes.

-Vancouver area transportation,particularly the Broadway Line aka Bridge Line.

I hope to discuss both with John when we get together.

Wanted to keep you in the loop before then.

Mike Harcourt

From: Moneca Gabriel
Sent: Tuesday, February 19, 2019 1:58 PM
To: Parkinson, Elizabeth PREM:EX ; FLNR.Minister@gov.bc.ca
Cc: bob.dewar@gov.bc.ca ; MIKE HARCOURT
Subject: Fwd: 21st Century Forest Plan & Program for B.C.

Hi Elizabeth,

Please find attached a copy of 21st Century Forest Plans and Program for B.C.

To: Premier Horgan, Min. Donaldson,

Emails are not available for copies to be sent to: Geoff Meggs, John Allen, Tim Renneberg, Kenn McLaren.

I would appreciate if they could be forwarded.

Thank you for your assistance.

Best,

Moneca
Gabriel

Executive Assistant to

Mike Harcourt

Discussion Paper
The British Columbia Forest Sector in the 2020s

Introduction

British Columbia's forests are suffering to the extent that they can no longer meet the expectations that British Columbians place on them. Problems include:

- significant losses associated with beetle kill and fire;
- disastrous wildfires that threaten lives and property;
- reduced timber supply, resulting in reduced employment and loss of mills;
- decline of rural communities associated with job reductions in the forest sector
- capital flight from the forest sector, primarily to USA;
- reduced biodiversity, including populations of iconic species such as caribou;
- reduced markets, especially in the USA, due to tariffs and trade restrictions;
- uncertainties over the rights of First Nations and what this means for long-term tenures;
- reduced social license amongst the public;
- reduced confidence in the ability of resource professionals to deal with some of the major issues
- carbon policy and pricing uncertainty

Many of these issues are not new. In fact, over the past 100 years, BC has commissioned Royal Commissions, numerous inquiries, committee reports and other sources of advice. Some of this advice has been taken, much has been discounted. The reasons for past governments to discount proposals are numerous, but include political ideology, lack of political will and reluctance to change, pressure from licensees, ideology and lack of knowledge within the government services leading to failure to consider options adequately before discounting them, rivalry and lack of cooperation between government departments, pressure from perceived and actual public opinion and others. The importance of 'group think' should not be discounted: the current system is deeply engrained within the sector and change will be viewed with suspicion.

The current Government has begun to address some of these issues but is doing so on a rather piece-meal basis (unless there is a master plan that is yet to be revealed). This makes sense economically, but dealing with issues individually fails to take into account the need to adopt a more holistic approach, and also fails to address some of the underlying issues, many of which are connected. Broad, sweeping changes are required to inspire rural communities to adopt a sustainable future.

Forest sector employment

The current forest sector in British Columbia is dominated by a small number of large companies focused on the production of lumber to meet the US housing market. In the last ten years, there has been considerable adaptation to develop markets in China, but the USA remains the dominant market (accounting for 67% of BC lumber exports). The mills are mostly highly advanced and very efficient, and a result employment per unit production has dropped significantly. This has lowered processing costs, enabling more competitive products.

Employment in other parts of the sector will likely change associated with increased automation. This will be accompanied by a need for workers with more skills. This will affect all parts of the sector, but will increase its profitability and potentially open up areas that were previously excluded from harvesting (e.g. steep slopes).

Many small mills have been closed because of economic inefficiency or because of lack of timber supply. However, small-scale mills by definition require less timber supply and provide more jobs per unit production. They are also critical sources of employment for small, rural communities. They survive best when producing specialty products. These products often meet local demand, but may also be produced for export.

A major step in enabling this would be changes in governance that separated fibre supply and mills. This would be strongly resisted by some, but it is the model on which much of the USA operates. Fibre supply would instead be controlled through area-based management units held by First Nations, communities and others. The danger here is that some First Nations might have alternative revenue-sharing arrangements from other resources (e.g. pipe-lines) that would reduce their need to produce fibre. A transition period, during which resources are co-managed, would enable management capacity to be developed, and would enable licensees to transition. The process followed after the Nisgaa Treaty might be a suitable model for this transition.

Pulp mills are likely to be a key to the future bioeconomy of the Province. In the interior, there are already a number of pulp mills, and some of these are experimenting in diversification (e.g. Canfor in Prince George, Domtar in Kamloops). The links between Paper Excellence and APP, and the purchase of Catalyst by Paper Excellence, opens up possibilities of significant investment, given the global investments being made by Chinese pulp and paper companies (especially in Sweden, Finland, Russia).

Log exports have frequently been associated job exports, but the situation is a lot more subtle. Some logs, particularly low-value hemlock, fetch twice as much from overseas buyers as they do from domestic buyers. Obtaining these prices for logs deemed surplus to demand enables economically viable logging operations to occur, and encourages cutting across the profile (as opposed to high-grading, which reduces the long-term value of the forest). Banning exports would have serious repercussions on the logging industry, and would likely lead to significant job losses.

Potential actions:

- Create more area-based management units managed by communities, First Nations and others and encourage carbon-supported restoration activities. Integrate all different types of management units under the ‘bundle of rights’ concept. Estimated cost: $50 million annually.
- Provide the economic conditions (e.g. limited-period tax rebates) to encourage investment in small mills (while not aggravating the subsidy accusations by the USA). There are many examples around the world of economic development zones created by local or regional government to encourage industrial infrastructure investment. Estimated cost: $5-10 million annually.
- Move towards the separation of fibre supply and mills, creating an open market for logs that mills would compete for. This would undoubtedly put log prices up (unless mills colluded to keep prices low), increasing revenues for those producing fibre, but potentially reducing profitability of some mills. Estimated cost: uncertain.

- Create the economic conditions for diversification of pulp mills. In the Finnish model, a core mill owned by one company is surrounded by smaller facilities owned by start-ups and others that take waste or product streams to create products with much higher value. Estimated cost: unknown, as depends on attracting inward investment.
- Continue and strengthen efforts by FII and other organizations to increase the use of wood as an alternative to unsustainable materials. Estimated cost: $20 million annually.

Value from forests

There is a need to obtain more value from the timber being extracted from our forests. Steps are being taken to reduce the amount of waste that is left – the costs of this need to be offset against the costs of not doing so. Such costs need to include fire hazard, opportunity costs, implications for biodiversity, carbon emissions, implications for other forest users (for example ranchers), and others.

Previous governments saw the virtual cessation of all provincially-funded forest research in BC universities (other than forest genomics), and severe reductions in the research capacity of FLNRORD. This was combined with traditionally very low investment from the private forest sector, especially in BC. As more and more issues arise, and as it becomes apparent that the Province is not well prepared to address these issues, the need to catch up with jurisdictions is becoming increasingly apparent. Major European forest countries are about 20 years ahead of BC, especially in the introduction of new forest-based products.

Associated with this is obtaining more value added and innovative use of the harvested wood. The more a product is worked on, the greater the price of the end-product and the more jobs that can be supported. There are many new areas of value-added products: these range from mass timber and pre-fabricated houses to biotextiles to cellulose nanofibrils to cellulose-based biofoods and biopharmaceuticals.

The state of development of these new materials is quite variable. There have been very rapid advances in engineered wood, such as CLT, NLT, DLT and others. These are now widely accepted and market penetration is increasing, although still has a long way to go in industrial buildings and mid-rise. Others are at early stages of research, or the product exists but there is still too much risk to attract industrial-scale adoption. In the short-term, biotextiles offer the greatest potential, particularly given increasing concerns about the sustainability of cotton and polyester. Further research, and reliable demonstration facilities for the resulting innovations, are required to move this area forward.

Potential actions:

- Follow the lead of other Canadian provinces, and invest in forest and forest products research at BC's universities. Estimated cost: $40 million annually
- Encourage the further development of UNBC's Wood Design Centre. Estimated cost: $1 million annually
- Build on the momentum created at UBC by the Brock Commons Tall Wood Building creating a Tall Wood Research Institute at UBC. Estimated cost: $30 million investment and $2 million annually)
- Build on the tremendous concentration of expertise in forest bioproducts at UBC by investment in the Bioproducts Institute and the proposed bioproduct demonstration

facility in the Centre for Advanced Wood Processing. Estimated cost: $30 million investment and then self-financing.

- Fast-track the proposed Bioeconomy Science and Technology undergraduate program currently being considered for approval by the Ministry of Advanced Education, Skills and Training. Estimated cost: None, but the program could be accelerated with a seats allocation (ca. $20,000 per seat annually).

Forest resilience

There is a need to replant NSR acreages with newer, faster-growing, more fire-resistant species that are climate-change ready. With large areas needing to be dealt with, it is essential that a landscape-scale approach is adopted. The landscape scale is widely promoted as the correct scale to practice forest planning, and enables the adoption of climate-smart and fire-smart principles. Care will be needed not to adversely affect biodiversity and other values, so a balance is needed.

Our forests currently are not resilient, as amply demonstrated by events over the past 20 years. The province is ultimately responsible for the management of forests but its delegation of this responsibility to licensees has not worked well. The province should re-establish planning responsibilities – which might in future be undertaken in co-management agreements with First Nations. This would save licensees costs while at the same time removing the possibility of system manipulation.

Large-scale reforestation is required in some areas, including carbon management, and this should be done with a view to achieving a future forest condition that meets the needs of the province. These will vary across the province, but may include more emphasis on tree diversity (building resilience) and especially the use of more broadleaves. The current forest industry has not been able to make much use of broadleaves as it is not well suited to framing lumber. However, elsewhere, companies such as IKEA have been very successful in broadleaf utilization.

A major revision of the AAC process is needed. For forests to be resilient, the AAC must first and foremost be based on ecological sustainability. Harvesting at higher than the ecological growth rate may enable economic viability in the short-term, but will not permit long-term sustainability. However, some steps may be possible to provide higher yields per ha than are currently being obtained (see potential actions).

While not wishing to recreate the type of forests found in Sweden, their increasing AAC and increasing growing stock is in stark contrast to BC. Their productive forest land area is similar in area to the THLB in BC (ca. 24 million ha), although they have a much higher proportion of their forest in production (83%). Much could be learnt about increasing timber supply – perhaps adapting it for BC using the TRIAD approach (intensive, extensive and protected). Productivity in BC forests could be significantly improved by many means, including better growing stock, soil nutrition management, density management, and timely commercial thinning. This however would require a change in the respective roles of governments and licensees, including a move towards area-based tenures.

Potential actions:

- Adopt the recommendations of the BC Forest Inventory Review Panel. Recommendation No. 16 ‘Develop Growth and Yield models that cover the main stand types and

management regimes in BC' is particularly important given the problems with the current growth and yield models used in AAC determinations. Estimated cost: >$10 million

- Shift from volume-based to area-based management as recommended in the 2012 report by the Special Committee on Timber Supply. Link area-based management units to traditional territories of First Nations and instigate co-management approaches (see next heading). Estimated cost: this depends on whether compensation has to be paid to existing licensees; there are examples of AAC takeback both with and without compensation.

UNDRIP

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