

# Zero Net Deforestation

## *Stakeholders' Written Submissions*

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*Province of British Columbia*

*September 2010*

## Overview

This document compiles the written submissions received from stakeholders after the [Zero Net Deforestation Act](#) (ZND Act) was introduced in the British Columbia Legislature on March 22, 2010.

These submissions are summarized and referenced in another document titled *Zero Net Deforestation – Stakeholder Feedback Summary*.

Written feedback was received by mail, email and responses to a questionnaire posted on the ZND website (<http://www.for.gov.bc.ca/hfp/znd/>).

This document and the summary document are also posted on the ZND website.

The stakeholders' written submissions are compiled as follows:

- Section 1: Submissions from Organizations page 3
- Section 2: Questionnaire Responses from Individuals page 44
- Section 3: Submissions from Individuals Page 60

*Note: To protect privacy, individuals are identified only by a number and one of four BC regions.*

## Section 1: Submissions from Organizations

Submissions received from stakeholder organizations follow in this order:

|       |                                                      |
|-------|------------------------------------------------------|
| ABCFP | Association of British Columbia Forest Professionals |
| ALC   | Agricultural Land Commission                         |
| BCAC  | British Columbia Agriculture Council                 |
| BCCA  | British Columbia Cattlemen's Association             |
|       | BC Hydro                                             |
| BCBC  | Business Council of British Columbia                 |
| CAPP  | Canadian Association of Petroleum Producers          |
| CFPA  | Coast forest Products Association                    |
| COFI  | Council of Forest Industries                         |
| GCCBC | Grasslands Conservation Council of British Columbia  |
| LTABC | Land Trust Alliance of British Columbia              |
| MABC  | Mining Association of British Columbia               |
| WCEL  | West Coast Environmental Law                         |

August 4, 2010

Climate Change and Forest Carbon  
BC Ministry of Forests and Range  
PO Box 9513, Stn Prov Govt  
Victoria, British Columbia, V8W 9C2

Attention: Tom Niemann, RPF, Manager.

**Re: Zero Net Deforestation**

Thank you for the extended opportunity to respond to the Ministry of Forests and Range (MFR) discussion paper, *“Achieving Zero Net Deforestation in British Columbia (March 22, 2010)”*. In our view the legislation represents an important step forward in affirming the importance of forests and forest land to BC, not only for achieving greenhouse gas reduction goals, but also in providing a broad diversity of ecosystem products and services.

ABCFP members have responded and participated in the various engagement sessions as individual professionals or representatives of the various business interests. Regardless of the various perspectives, forest professionals all bring their knowledge, skill and expertise to a discussion. The ABCFP could not replicate this effort, nor respond to the same extent as the collective. The ABCFP can however, promote the conversation on the subject, bring the context of the regulator to the discussion and offer what the paper requests help in “developing the details on how to implement the ZND policy”. We have four primary areas to address, previously stated position of the ABCFP, the importance of professional forestry service, Land Based Management Concept, and some specific areas of concern.

**1. Previously Stated Position of the ABCFP.**

The ABCFP is mandated to comment on the conduct of forest professionals and the appropriate stewardship of forest lands. Forest Stewardship includes balancing present and future values against the capacity of the land to provide those values. In view of these responsibilities, the ABCFP stated publicly in April of 2008, that the profession is opposed to the removal of forest land from forest land management for other competing interests without careful consideration of

- the balance of values between the landowner and society;
- the specific and intended use of the land or level of ecosystem alteration;
- the location of the lands and corresponding public interest.

The statement above is consistent with ZND and recognizes that each land area is different and will likely require well crafted solutions to each situation. Solutions need to employ a ‘sliding scale’ of consideration. That is, as the scale of the forest lands affected by management decisions increases, there is a corresponding increase in the responsibility to ensure wise stewardship.

## **2. The Importance of Professional Forestry Service.**

The ZND discussion document recognizes the importance of building a credible national reporting system. It recognizes the need for appropriate definition and measurement. And it uses several examples of incentives and raising awareness that might be beneficial for implementing the policy. Two components of professional service that are fundamental to the success of a ZND policy are the forest professional and the professional service or product.

Forest professionals have the knowledge, skills and authority to work on the necessary credible methods and provide innovative alternatives to a ZND strategy. While the forest professional is the only practitioner entitled to practice in the areas specified above in BC, they are also professionally responsible and accountable for all aspects of their professional forestry work.

The practice of professional forestry is service and products from an ABCFP member including planning, directing, supervising and reporting on inventory, classification, valuation, conservation, protection, management, enhancement, silviculture and rehabilitation of forests, forest lands, forest resources and forest ecosystems; preparing, reviewing, amending and approving professional documents; assessing the impact of professional forestry activities ...; auditing, examining and verifying the results of activities ...; assessing, estimating and analyzing the capability of forest lands to yield a flow of timber while recognizing public values related to forests, forest lands, forest resources and forest ecosystems.

The forest professional provides professional products and services important to the success of ZND. For example,

- i) Inventories important to deliver on the actual areas and benefits of ZND.
- ii) Not all hectares are equal. A more robust measure of carbon benefit needs to begin now as it will likely be required in the future.
- iii) Measure, calculate, track results of ZND.
- iv) Develop suitable sampling methods for the ZND and carbon accounting.
- v) Prescriptions or design for reclamation of afforestation.
- vi) Standards tied to afforestation incentives
  - a. Planting standards
  - b. Species standards (promote various forest uses)
  - c. Speed of afforesting
  - d. Stand density and forest cover management
- vii) Professional assurance of achievement and reporting of outcomes for all forest land uses.

For more information about the Association of BC Forest Professionals, including access to its legislation, policies, guidance, and reports, please refer to the ABCFP website at:

<http://www.abcfp.ca/index.asp>.

### **3. Land Based Management Concept.**

Activities and plans that lead to achieving ZND will require an overarching vision for all forest land in BC, followed by the appropriate planning framework to achieve the most favourable blend of benefits and distributions of land use. The ABCFP has in the past few years advocated for Land Based Management as a concept to develop a tactical level of planning that more adequately deals with the various mismatches of land use, overlapping jurisdictions and environmental change. The absence of a single tactical platform to set and implement objectives has lead to planning or actions that exclude or disproportionately distribute other resources and values. The situation has resulted in fractured management of the land-base, operational inefficiencies, and financial waste. A volunteer program for ZND will likely not be successful without a clear coordinated approach.

Land-Based Management means that management of forest land in BC will be applied in a consistent, comprehensive, and cohesive manner, integrating all sectors, for all interests that respect the characteristics and potential of the land.

We recommend that the province pursue a strategy of Land-Based Management to ensure regulations and strategies such as ZND work together. Land-Based Management requires a clear understanding of the objectives that will achieve a vision for Crown land. In order for the vision to be delivered and carried out, these objectives must be current and unilaterally activated across the province. Land-Based Management is a philosophical change intended to allow all current agencies that are regulated to address land values and stakeholder relationships, to be delivered through a tactical planning platform that is consistent with all of the crown land objectives.

Embracing Land-Based Management will address and resolve many outstanding issues that have come about through the current circumstances of multiple jurisdictions, agencies, tenures, resource users, and influences such as climate change. It also has the capacity to link planning processes back to general stewardship objectives and create efficiencies for all parties currently struggling to work on the landscape.

### **4. Specific Areas of Concern.**

The ABCFP advertised the ZND legislation in the electronic newsletter the Increment. Members were asked to provide comment on the discussion paper. Some members expressed concerns in response. Some of those concerns are as follows:

- a. Who Pays? – The ZND initiative would end like others in the past, with the expectation that the forest industry would pick up the costs through tenure requirements. For example a reduction in road area density will be a new requirement of a tenure holder with a direct cost to the tenure holder in re-tooling; worker safety and little or no contribution from the government
- b. Ignoring Larger Issues. - The definitions appear to ignore the biological affects of problems such as MPB. There may be greater and more cost effective carbon benefits

from reforesting the large number of hectares lost to MPB infestation than afforestation projects related to human deforestation activity.

- c. Competition Position – Government/industry revenue and social benefits still largely turn on the profits of development. As a result, achieving ZND faces a different challenge that runs counter to this business model. Until end users begin to pay for ecosystem services ZND cannot compete with the market.
- d. Reporting - Report on the comparative hectares of deforestation or afforestation within the province. For example in rural forests, report by community or region, as a positive or negative ratio. Provide the same ratio for parks and other land use areas. Report on community strategies such as density development bonus, establishment of road corridor trees, minimized development area and tree retention bylaws.
- e. Measure - The need to measure forests as temporal and spatially variable entities. Any incentives for ZND would be short lived by a program that promotes the harvesting old forests by afforesting using the same area in early rotation forests as a quasi-offset. If Canada and BC are to be leaders in ZND then expend effort to improve the sophistication of the measurement to ensure real and dramatic gains are achieved rather than shallow accounting benefits.

Possibly the greatest benefit of BC ZND legislation is the basic message to society as a whole that we collectively need to stop deforestation. And alternatively to begin the social recognition shift that there was always a cost for every glass of water beyond the price to bring it to the tap and a cost for every metric tonne of carbon beyond the price of stumpage, harvest and transport to the market. A system that recognizes the value of ecosystem services will also provide businesses with investment opportunity to accumulate forms of ecological capital. The ZND Act establishes the platform from which this kind of innovation and adaptation are most likely to build on.

A strategy for ZND can benefit from the application of professional forestry and from the skill, knowledge and expertise of forest professionals. The ABCFP is committed to working with the MFR to support the ZND initiative.

Thank you again for the opportunity to review and comment. We look forward to further collaboration in the future. Should there be questions regarding our comments, please contact me at 604-331-2323, or Mike Larock RPF at 250-338-8653.

Sincerely,

Sharon Glover, MBA  
Chief Executive Officer



**Agricultural Land Commission**  
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July 6, 2010

Tom Niemann, Manager of Climate Change and Forest Carbon  
Ministry of Forests and Range  
PO Box 9525 Stn Prov Govt  
Victoria, BC  
V8W 9C3

Mr. Niemann:

**Re: Zero Net Deforestation Consultation and the Agricultural Land Reserve  
ALC File #81500-30/ZND**

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This is further to the recent public consultation process regarding Zero Net Deforestation (ZND) attended by Agricultural Land Commission (the “Commission”) staff. The Commission provides this submission regarding ongoing concerns about the potential direct and indirect impacts of the *Zero Net Deforestation Act* on the objectives of the *Agricultural Land Commission Act* and the Agricultural Land Reserve (ALR).

The ALR is a provincial land use zone where agriculture is the priority use and non-farm uses are restricted. The *Agricultural Land Commission Act* (the “ALC Act”) sets out the mandate of the Commission and the Agricultural Land Reserve Use, Subdivision and Procedure Regulation sets out the uses permitted in the ALR. The purposes of the Commission as per Section 6 of the ALC Act are:

- (a) to preserve agricultural land;
- (b) to encourage farming on agricultural land in collaboration with other communities of interest; and
- (c) to encourage local governments, First Nations, the government and its agents to enable and accommodate farm use of agricultural land and uses compatible with agriculture in their plans, bylaws and policies.

The Commission believes that ZND touches on all three parts of its mandate. Commission staff, with the assistance of representatives at the Ministry of Agriculture and Lands, has raised concerns throughout the internal and external consultation process regarding the ZND legislation. The purpose of this correspondence is to reiterate these concerns.

The goal of ZND of “no net loss of forest area” by discouraging deforestation and encouraging afforestation, may compromise the Commission’s mandate to encourage farming of ALR lands. The ALC Act and regulation allows for land clearing for agricultural purposes and limits non-farm uses within the ALR. The regulation is also supportive of timber production, harvesting, silviculture and forest production and has been since the introduction of the ALR program in

1973. However, neither the original ALC Act nor subsequent iterations contemplated tree plantations for carbon offsetting or afforestation.

It is the Commission's position that the permanent planting of trees on ALR land for afforestation purposes has the potential to alienate land from its primary and protected use of agriculture. The ALR only represents approximately 5% of the total area of British Columbia and the ALC Act was introduced almost four decades ago to preserve what little agricultural land was available and to maintain a stable economic land base for the business of agriculture. The Commission believes ZND has the potential to impact the provincial agricultural economy by either removing active agriculture from production by planting trees and/or discouraging land clearing for agricultural production. The potential risk to agriculture is avoidable.

While the Commission understands the ZND legislation is based on voluntary actions, unintentional consequences remain a concern and are outlined below.

1. Potential for large scale conversion of ALR lands, including active and inactive agricultural lands for afforestation purposes:
  - ALR land is the largest land use category that meets the criteria for qualification as afforestation;
  - ALR land is generally cheaper than other zoned lands and cleared land is an obvious target to plant trees for offset purposes;
  - Land that is considered "*marginal*" for some farming activities may in fact be well suited for other farming activities and may inappropriately be considered an area to focus afforestation activities;
  - ALR lands that are currently "*unused*" are intended to be available for future agricultural use; and
  - Potential for large scale conversion of agricultural lands to afforestation by outside interests.
2. Increased pressure on ALR lands:
  - Anything discouraging deforestation for agricultural purposes (voluntary or fee approach) may lead to a reduction in agricultural production in the long term;
  - ALR land already has attributes making it a preferred non-farm development area (cleared, flat, close to urban centers and cheaper to develop). As levies or mitigation credits under ZND would not be charged on already cleared land, existing pressures to convert ALR land to other non-farm land uses may increase;
  - Despite the voluntary nature of the ZND Act, the advent of this policy implies that it will become more difficult to cut down trees on private and public ALR lands making development of treed ALR lands for agricultural purposes more difficult and possibly more expensive. This may result in pressure to exclude these lands based on the argument that they are no longer suitable for farm use; and
  - Offset markets generally require that trees planted for offsets stay in the ground (or are harvested and replanted in a specific cycle) for long time periods such as 100 years. Commitments of this duration are considered prohibitive to the agricultural use of ALR land.

The ALR has been in place for almost four decades and has preserved the limited agricultural land base in British Columbia for future generations. The Commission believes that any

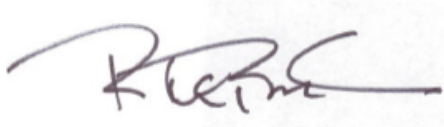
provincial policy that discourages deforestation and encourages afforestation should contain a clear message that the goals of ZND Act, while laudable, should not come at the expense of the ALR, agriculture and the provincial agricultural economy.

Having raised these concerns in advance of legislation and again following adoption of the ZND Act, the Commission recommends that ALR lands be excluded from the definition of deforestation when regulations are created. Furthermore the Commission would like assurance that it will be fully consulted in the development of any inventory of potential locations for afforestation and criteria that may direct this land use to areas in the ALR.

For further information regarding the ALC and ALR please refer to the Commission website at <http://www.alc.gov.bc.ca/>, the legislation <http://www.alc.gov.bc.ca/legislation/Act/alca.htm> and the regulation [http://www.alc.gov.bc.ca/legislation/Reg/ALR\\_Use-Subd-Proc\\_Reg.htm](http://www.alc.gov.bc.ca/legislation/Reg/ALR_Use-Subd-Proc_Reg.htm).

Yours truly,

PROVINCIAL AGRICULTURAL LAND COMMISSION

A handwritten signature in dark ink, appearing to read 'R. Bullock', is written over a light grey rectangular background.

Richard Bullock, Chair

Cc: Lindsay Kislock , ADM Ministry of Agriculture and Lands  
Mark Yawney, Regional Manager Ministry of Agriculture and Lands



## ***British Columbia Agriculture Council***

### ***Submission to:***

### ***Zero Net Deforestation Act***

### ***Consultation Process***

This submission is further to the recent public consultation process regarding the *Zero Net Deforestation (ZND) Act*. The submission covers two separate areas of focus:

1. Overall agriculture concerns regarding the *ZND Act*.
2. Agriculture and Zero Net Deforestation.

#### **1. Overall Concern with the *ZND Act*:**

Agriculture has the ability to play a very significant role in meeting the Province's objectives in the B.C. Climate Action Plan. This is a reflection of the nature of the BC agriculture industry and is why the BC Agriculture Council (BCAC), in partnership with the Investment Agriculture Foundation of BC, established the BC Agriculture and Food Climate Action Initiative in 2008. The BCAC is currently in the process of pursuing the establishment of a follow-up initiative to implement the BC Agriculture Climate Change Action Plan<sup>1</sup>. This Action Plan establishes a strategic direction and outlines actions for both climate change mitigation and adaptation, recognizing that BC agriculture's regional and sector diversity requires a wide range of creative strategies.

Given that there are many opportunities for addressing climate change on agricultural land, the BCAC is concerned with the single focus on forests and trees taken in the *ZND Act*. While the Act has entrenched zero net deforestation in legislation with a target date of 2015, we have been assured during the ZND consultation process that meeting this prescribed target will be strictly voluntary. While the BCAC supports voluntary implementation, we are very concerned that this approach will change if or when government determines through its prescribed reporting that it is not likely to meet its legislated target by 2015.

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<sup>1</sup> BC Agriculture and Food Climate Change Action Plan <http://www.bcagclimateaction.ca/wp/wp-content/uploads/2009/08/Draft-Agriculture-Climate-Action-Plan-April-2010.pdf>



The BCAC would therefore respectfully ask for clearly stated commitments that the implementation of the *ZND Act* will not result in:

- 1) Any restrictions in the ability for farmers and ranchers to clear and develop land for food, forage and other agricultural crop production; or
- 2) Any requirements for afforestation on agricultural land that is not strictly voluntary.

## **2. Agriculture and Zero Net Deforestation.**

The BCAC has been asked in this consultation process to identify ways in which agriculture can help government meet the *ZND Act* legislated target of zero net deforestation by 2015, so would offer the following recommendations with respect to both deforestation and afforestation.

*Deforestation:* The most effective way for agriculture to help government meet its 2015 ZND target is to exclude through regulation all agriculture and rangeland from the definition of “deforestation”, as provided for in the *ZND Act*. The BCAC makes this recommendation for a number of reasons:

- 1) The land-use activity that will occur on agricultural land following deforestation will in fact involve only the active growing of crops and range which (as with forests) will also result in carbon sequestration under proper management. This will not be the case for any of the other major causes of deforestation identified in the ZND consultation presentation (i.e. Oil and Gas, Mining, Settlement).
- 2) B.C. agriculture is already challenged with having only a very limited land-base, about 5% of the total area of the province, which is actually suitable for agricultural production.
- 3) Discouraging the development of agricultural lands for food production runs contrary to other stated government policy, most notably the Agricultural Land Reserve. The BC Agriculture Plan also clearly states that “All British Columbians should have access to safe, locally produced food” and the BC Government’s recently launched Produce Availability Initiative, intended to improve access to fruits and vegetables in remote communities, contemplates developing local agriculture production to improve the health of residents in BC’s more remote communities.
- 4) The economics of getting forested land into agricultural production have not been good, and having any additional incentives, voluntary or otherwise, in place to discourage deforestation for agriculture would not be in the interests of the agriculture sector, the rural communities that depend on agriculture, or the Province.
- 5) Forest encroachment is a significant problem affecting many areas of BC’s grasslands, and having additional incentives to discourage deforestation could present major challenges for grassland restoration projects.

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#230 – 32160 South Fraser Way  
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Phone 604-854-4484 Fax 604-854-4485 E-mail: [info@bcac.bc.ca](mailto:info@bcac.bc.ca)



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#230 – 32160 South Fraser Way  
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Phone 604-854-4484 Fax 604-854-4485 E-mail: [info@bcac.bc.ca](mailto:info@bcac.bc.ca)



**Afforestation:** The agriculture sector could play a role in supporting government afforestation objectives, as some farms and ranches have land available that is not well suited for agricultural purposes, providing opportunities for agro-forestry. Additional opportunities could be provided by developing a definition of “forest land” that is more suitable to what occurs on agricultural lands.

The working definition used in the consultation presentation considers “forest land” to be an area greater than one hectare, wider than 20 metres, a tree cover capable of achieving 25%, and trees capable of exceeding a height of 5 metres. There are many examples of afforestation on agricultural lands in BC that do not fit within this definition, as much of the afforestation occurring on agricultural lands takes place on a smaller scale in riparian areas or through development of shelterbelts. The Riparian Health category in the Best Management Practices identified in the Environmental Farm Plan Program<sup>2</sup> serves as a reference. It is important for these activities to be encouraged and supported, but the current definition of forest land would have to be expanded considerably for these activities to be acknowledged as contributing toward achieving government’s objectives.

In addition, the province needs to establish a parallel separate policy that acknowledges the unique status of B.C.’s agricultural and ranch lands, and fully recognizes the significant agricultural sequestration activities that occur. Carbon sequestration through soils, grasslands and perennial crops has the potential to contribute significantly to greenhouse gas mitigation. The development of policy that provides incentives and supports the full range of sequestration activities on agricultural lands would enable the agricultural sector to contribute significantly to government objectives with respect to climate change. The BCAC would be pleased to assist in the development of such a policy.

#### **Concluding Comments:**

There are many unknown potential implications for agriculture that could arise through the implementation of the ZND Act. The BCAC would therefore request that it be closely consulted in the development of any regulations or policies related to this Act. It is imperative the steps taken towards meeting government’s legislated goal of zero net deforestation by 2015 not have any negative impacts on the BC agriculture sector and the many communities that depend on agriculture across British Columbia.

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<sup>2</sup> Canada – BC Environmental Farm Plan Program [http://www.ardcorp.ca/index.php?page\\_id=14](http://www.ardcorp.ca/index.php?page_id=14)



# BRITISH COLUMBIA CATTLEMEN'S ASSOCIATION

*Representing the Beef Cattle Industry of British Columbia*

AGRI CENTRE - #4 - 10145 DALLAS DRIVE, KAMLOOPS, B.C. V2C 6T4 PHONE (250) 573-3611 FAX (250) 573-5155

July 7, 2010

**Ian McLachlan**

Senior Manager, Economic and Policy Analysis  
Ministry of Agriculture and Lands  
VICTORIA, BC

*Our File: LSC/Zero Net Deforestation*

*Our File # 2010-057*

SENT BY EMAIL: [znd@gov.bc.ca](mailto:znd@gov.bc.ca)

Dear Sir,

**RE: Zero Net Deforestation**

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First, I would like to thank you for the opportunity to respond to your Zero Net Deforestation Discussion Paper. As we have indicated this is an important topic that needs to be implemented with both caution and respect for BC's licenced grazing tenure holders. I have outlined specific concerns, general comments and suggestions for implementation below.

## Concerns

The BC Cattlemen's Association insists that we be fully consulted as this program is developed and implemented. As you are very aware our industry is currently dealing with considerable hardship and any new programs need to be developed so that they do not create additional difficulties for cattle producers. The BC Cattlemen's Association would caution that this program needs to be implemented very carefully with complete consideration to the needs of all agricultural producers. Going down the wrong path could cripple agricultural development in British Columbia.

Programs such as 'ecosystem restoration of grasslands', considered by cattle producers to be a significant step forward, actually involves deforestation activities that are required to maintain known ecological values associated with grasslands. Many of these values are red and blue listed species. We would insist that these types of programs are maintained with no associated obligation to afforest other areas.

Other activities such as pasture development on Crown land or Silva-pasture activities must not be curtailed or burdened with requirements to afforest other areas in order for these activities to proceed.

Licensed tenure holders must be consulted prior to any planting activities within their tenure areas. Land which a forester may consider a good candidate for afforestation may also be a good grazing area which would be diminished if the area was planted. All silviculture activities must be respectful of other, existing tenure holders.

## General Comments

Forests are good carbon sequesters. The mass of mature trees offer significant carbon storage capability. During the first twenty years after logging however, forests offer limited carbon storage capability. This period includes a regeneration delay period of up to seven years, a seedling growth

period, and a sapling growth period. During this period, trees are small (i.e. little mass) and offer limited carbon sequestration capability. During this first twenty year period grass offers a better opportunity for carbon sequestration capability. In addition, grass offers biomass nutrient recycling which will benefit tree growth.

If the intent of this program is truly carbon sequestration, then this program should have a component that would encourage a significant Provincial grass seeding program which would complement and enhance carbon sequestration capacity. Grass seeding would be more beneficial as a carbon sequester, more cost effective, and simpler to establish than creating a 'forest' (by definition in the discussion paper) that will only achieve a height of five metres at maturity. Grass seeding should be given serious consideration.

#### Suggestion for Implementation

Almost all ranches have some opportunity to afforest some land. Land that is not key to agriculture operations plus land along roads and driveways, along cross fencing and beneficial shelter belt areas could be afforested.

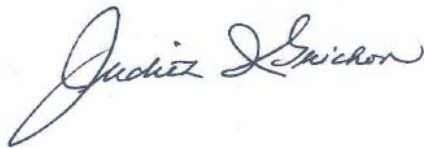
Government would however need to provide significant incentive to private land holders to afforest these lands including an acceptable property taxation classification. British Columbia's agriculture producers already provide many ecological goods and services to society for which they receive no compensation. Providing an additional 'free' ecological good to society is not a realistic expectation or request of agricultural producers. The incentives identified in the discussion paper are likely inadequate to encourage 'buy in' by agriculture producers.

Perhaps a scenario such as the government enters into an agreement with the land holder, afforestation opportunities are identified, government pays for the afforestation, and the land owner receives ownership of the trees in return for a commitment to maintain these areas as forest for a period of time. The land owner would also receive any carbon credit value created by afforesting these lands. The key to making this happen will be significant incentive to the land owner.

We would suggest that your implementation plan should include a number of pilot projects which would focus on different scenarios to assess possible impacts as well as 'buy in' by private land owners.

As stated previously, it is important that the British Columbia Cattlemen's Association be consulted as this program develops. Our goal will be to see that this program is implemented in a respectful manner that compliments existing ranching operations and avoids causing hardship and aggravation. I look forward to your response to our comments.

Yours truly,



Judy Guichon, President  
British Columbia Cattlemen's Association

## **BC Hydro comments on the Implementation of the Provincial Zero Net Deforestation Goal**

This document provides BC Hydro's feedback into the implementation of the Provincial Zero Net Deforestation (ZND) goal. The response is organized as per the feedback (Q/A) form provided by the Ministry of Forests and Range.

### **1. *What is the best way to raise awareness about deforestation and afforestation?***

- Develop information that is tailored to specific activities (i.e. deforestation and afforestation relating to urban development, industrial activities, utility corridors, etc). It would be helpful to include real life examples on how ZND can be achieved by individual entities or by government as a whole, including how the existing incentives work. This may result in greater awareness to ensure people understand what is to be achieved, and how/why they can contribute to the ZND goal.
- Maintain up-to-date information on ZND website.
- Conduct stakeholder information sessions.

### **2. *How can deforestation be reduced in your community/sector?***

- Consideration of ZND in upfront planning of infrastructure projects especially as related to site selection, footprint, and vegetation clearing. It would be helpful for the Province to provide a comparison of cost estimates (including the use of incentives) associated with *avoidance*, *minimization* of deforestation and *mitigation* (afforestation) in terms such as \$/hectare,

- **What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your community/sector?** One of the greatest risks of ZND is that it might drive the afforestation of ecologically unsuitable land, and thus exacerbate more serious ecological problems such as: grassland loss, wetland loss, species-at-risk, etc.
  - The Province provide information on how non-forest land would be protected from unsuitable afforestation, and how / if other agencies would be involved, i.e. Ministry of Environment, Ministry of Agriculture & Lands, etc.
  - The Province should provide guidelines on the suitability of afforestation as all afforestation projects are not the same (i.e. negative impacts can be caused by companies/individuals afforesting in unsuitable areas and therefore damaging existing ecology / habitat / species, etc.).
- ZND afforestation projects may create conflict with competing objectives as outlined under the BC Conservation Framework (protection of species and ecosystems at risk), the Wetland Stewardship Partnership, and Living Water Smart (wetlands protection). Impacts of afforestation need to be conducted with consideration of impacts to biodiversity, species at risk and important ecosystems such as wetlands and grasslands. It is suggested that information be provided stating what lands are excluded from afforestation (as an example, reference to the lands excluded as outlined in the BC Forest Offset Guide).
- Page 2 of the ZND Discussion Paper states “...it is desirable to avoid and/or minimize / reduce the area deforested wherever possible”. It is suggested that incentives for avoidance or minimization of deforestation be further examined as, in some cases, it may be less expensive to afforest than to avoid or minimize deforestation. Suggest the development of quality control and criteria for both 1) avoidance of deforestation and 2) afforestation activities in order for proponents to make the best decision. This may help in reducing the negative impacts of deforestation.
- As different ages and species of trees store carbon differently (and varies with biogeoclimatic zones / regions), it will take some time to realize the GHG reduction benefits of afforestation. To help explain and clarify the GHG reduction benefits of afforestation, it is suggested that accounting procedures be developed to measure the

GHG benefits associated with afforestation. These should be consistent with international best practices.

**4. What can we do to encourage you or your community/sector to avoid, minimize then mitigate deforestation?**

- Maintain and provide an inventory of areas where afforestation is the best ecologically sound option, and what type of afforestation can occur (i.e. suitable) in these areas. Ideally this would be a GIS inventory.
- Maintain and provide a list of companies which provide the service of “afforestation” in the Province. This could extend to an integrated list of seed collectors, nurseries and tree-planting companies.
- Provide oversight and coordination of land owners, developers and tree planters involved in afforestation.
- Ensure afforestation initiatives maximize the ecological potential in any given area (i.e. the Province could consider a broader strategy for conserving networks of natural features such as wetlands, forests, river corridors, lakes and meadows that maintain air quality, safeguard groundwater, provide habitat for native species and recreational opportunities).
- Provide clarity on the how afforestation activities will be monitored, regulated and validated, as stated earlier, areas slated for afforestation may not be suitable.
- Develop responses to potential conflicts between ZND goals and other provincial policy, i.e. BC Conservation Framework (species and ecosystems at risk), the Wetland Stewardship Partnership, and Living Water Smart (wetlands protection).
- Develop simple, robust mechanisms for non-forestry companies to afforest suitable Crown lands, verify those actions and receive credit and carbon offsets for their actions. It would be helpful to explain the linkages between the provincial *Emissions Offsets Regulation* and ZND.

**5. What existing incentives encourage you or your community/sector to avoid deforestation?**

- The BC Hydro Environmental Impact Goal - which sets a 20 year target for BC Hydro to have **no net incremental environmental impact**. This means that by 2024, BC Hydro's impact on the environment will be equal to or less than it was in 2004.

**6. What existing incentives encourage you or your community/sector to minimize then mitigate deforestation?**

- We understand that ZND is proposed to be achieved through voluntary actions encouraged through incentives. Many, if not all, of the incentives listed were already in place before the ZND legislation was passed. BC Hydro suggests that, if not previously done, there be an evaluation as to the effectiveness of the incentives in achieving the desired outcomes. Further, this review may help to identify existing barriers or gaps where additional efforts are required.

**7. What is the best way to ensure accurate reporting of avoidance, minimization, and total deforestation and afforestation?**

- The *Zero Net Deforestation Act* requires the Province to prepare reports (commencing in 2012) on the progress that has been made toward achieving the goal of ZND but only requires individual companies to report deforestation / afforestation activities on a voluntary basis. Other incentives should be considered to compel companies to provide reporting information. Another option is for the Province to rely on existing reporting processes to obtain this information (re: provincially maintained GIS data).
- Provide user friendly reporting forms for industry to report avoidance, minimization, deforestation and afforestation and explain how the Province would audit / validate the information.

**8. What else would you like to tell us about how to achieve zero net deforestation?**

- Further planning is recommended to implement ZND as it is not entirely clear how ZND will be achieved.
- BC Hydro welcomes future opportunities to engage in the operationalization of the ZND goal and implementation strategy.



**Business Council of  
British Columbia**

July 9, 2010

**Via Email: ZND@gov.bc.ca**  
(Original to Follow by Mail)

Mr. Tom Niemann  
Product Innovation and Climate Change Branch  
Ministry of Forests and Range  
PO Box 9525 Stn Prov Govt  
Victoria BC V8W 9C3

**Re: Zero Net Deforestation**

On behalf of the Business Council of British Columbia, I am providing the following brief comments on the Zero Net Deforestation Act and the government's request for input on developing a strategy to achieve ZND by 2015.

The Zero Net Deforestation Act does not appear to have significant direct impacts on the forest industry, and it is unclear to what extent other land-based industries may be affected by the legislation. However, most of the content of the initiative will come by way of regulations that are still to be developed. It is important that the Ministry engage with the forest industry and with other industry stakeholders who may be affected in the course of developing these regulations.

Overall, the Business Council questions the approach taken by the government with respect to ZND and how it is aligned with the goal of reducing greenhouse gas emissions by 33% by 2020. We doubt that the policy is sustainable given the province's finite land base and growing population as well as the rising demands on the landbase.

We support the Council of Forest Industries' recommendation to base the policy around the productivity of the landbase. This would increase the sequestration of carbon while also assisting in meeting other government objectives – expanding timber supply, generating more economic value from BC's forests, etc. Such an approach could be designed to attract greater private investment on the land.



Business Council of  
British Columbia

Mr. Tom Niemann  
July 9, 2010  
Page 2

The Ministry's goals on afforestation as a component of its ZND policy may not be realistic. Future afforestation activity needs to be judged in relation to the costs in areas where afforestation has been unsuccessful in the past.

Grazing land is identified as having potential for afforestation. The government is advised to ensure that agricultural interests have an opportunity to input into policy and regulation development.

The Ministry indicates that the initiative is voluntary. If so, why is it being pursued by way of legislation rather than through policy?

Thank-you for the opportunity to comment.

Sincerely,

*Original signed by*  
*Jock Finlayson*

Jock A. Finlayson  
Executive Vice President – Policy

/vjc



July 6, 2010

Mr. Tom Niemann  
Manager, Climate Change and Forest Carbon  
Ministry of Forests and Range  
PO Box 9525 Stn Prov Govt.  
Victoria, BC V8W 9C3

via e-mail: [tom.niemann@gov.bc.ca](mailto:tom.niemann@gov.bc.ca)

Dear Mr. Neimann:

**Re: Comments on Implementation of Zero Net Deforestation for British Columbia**

The Canadian Association of Petroleum Producers (CAPP) represents companies, large and small, that explore for, develop and produce natural gas and crude oil throughout Canada. CAPP's member companies produce about 90 per cent of Canada's natural gas and crude oil. CAPP's associate members provide a wide range of services that support the upstream crude oil and natural gas industry. Together CAPP's members and associate members are an important part of a \$110-billion-a-year national industry that provides essential energy products.

CAPP participated in the June 1, 2010 information session on the implementation of Zero Net Deforestation and appreciates the opportunity to offer comment. Although supportive of the intent of Zero Net Deforestation, CAPP does not believe that this program should extend to the oil and gas industry. Deforestation associated with oil and gas activities is already carefully regulated with respect to our operations and should be exempt.

Oil and gas companies pay silviculture fees for the purpose of reforestation, are subject to reclamation requirements and encourage natural regeneration of seismic activities. These practices need to be recognized under Zero Net Deforestation. There should be an exemption of oil and gas activities through the definition of afforestation that recognizes the silviculture fee included in area-based stumpage paid on every project on New Cut Crown Land. This approach fulfills the intent of Zero Net Deforestation in two ways:

- stumpage fees act as a cost driver for the oil and gas industry to minimize footprint; and
- the collection of fees facilitates the redirection of appropriate funds to others with the appropriate technical capacity to undertake afforestation.

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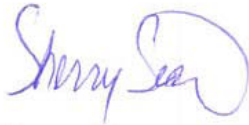
[www.capp.ca](http://www.capp.ca) • [communication@capp.ca](mailto:communication@capp.ca)

CAPP recognizes that silvicultural fees flow into general revenue. If these monies are inaccessible for the purpose of afforestation, alternative mechanisms should be explored to direct Silviculture fees to addressing the oil and gas industry footprint as was the original policy intent.

The application of Zero Net Deforestation to create carbon sinks should also be explored in the context of managing multiple, environmental outcomes on the land base. The system for Zero Net Deforestation should be created in a fashion that conveys the priority of candidate afforestation areas for composite land-based values. This approach allows oil and gas companies that wish to support afforestation as part of a corporate stewardship strategy, to understand where to apply this effort spatially so that it achieves a multitude of environmental benefits (i.e., habitat restoration, biodiversity management, etc.).

Please contact me directly (403) 267-1149 should you have questions or require further clarification on these comments.

Sincerely,



Sherry Sian  
Manager, Resource Access  
Canadian Association of Petroleum Producers (CAPP)

CAPP\_EDMS-#172467

**Niemann, Tom FOR:EX**

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**From:** Les Kiss [Kiss@coastforest.org]  
**Sent:** Tuesday, July 6, 2010 2:23 PM  
**To:** Niemann, Tom FOR:EX  
**Cc:** Jeffery, Rick FOR:IN  
**Subject:** Zero Net Deforestation

**Categories:** Red Category

Tom – please consider the points below as Coast Forest’s preliminary response to government’s zero net deforestation policy.

Bill 5, the Zero Net Deforestation Act does not currently appear to impose any direct obligations on Forest Act tenure holders. Rather Section 2 of the Act requires that *“government must achieve the goal of zero net deforestation within British Columbia by December 31, 2015.”*

While the Act provides definitions for “deforestation”, “afforestation”, “net deforestation” and “zero net deforestation”, it has left the definition of “forest land” to be enabled by regulation at a later date. The Act also enables the ability to make Regulations that may exclude areas of forest land from the definition of “deforestation” as well as clarify the methodology by which deforestation and afforestation are to be calculated. Obviously, these regulations could influence how much area is at issue and intentionally or otherwise create obligations on Forest Act tenure holders. As such we request Coast Forest be afforded the opportunity for input at the regulation making stage.

The current framework relies on a hectare by hectare model for balancing to zero, regardless of the site quality being deforested or afforested. It would appear an incentive approach could be utilized wherein proponents for land use (deforest) would be steered to marginal forest land for that use and focus their afforestation efforts on high site land. This approach which considers site quality would afford benefits not provided by the current 1:1 hectare model that does not consider site quality. This approach would also provide an incentive on Crown land. The incentives identified in the Discussion Paper appear to be focused on private land and are limited in application to Crown Land.

Thanks for the opportunity for input.

Les

Les Kiss, RPF, MF  
Vice-President, Forestry  
Coast Forest Products Association  
Suite 1200 - 1090 West Pender Street  
Vancouver, BC V6E 2N7  
Email: [kiss@coastforest.org](mailto:kiss@coastforest.org)  
[www.coastforest.org](http://www.coastforest.org)



**Niemann, Tom FOR:EX**

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**From:** Macdonald, Archie [Macdonald@cofi.org]  
**Sent:** Thursday, July 8, 2010 10:40 AM  
**To:** Niemann, Tom FOR:EX; AL Zero Net Deforestation AL:EX  
**Cc:** Routledge, Doug FOR:IN  
**Subject:** Zero Net Deforestation - COFI

**Categories:** Red Category

To: Tom Niemann

Re: Zero Net Deforestation

Tom,

On behalf of the Council of Forest Industries, I have compiled the following comments regarding the Zero Net Deforestation Act and initiative for your consideration.

- Although the Zero Net Deforestation Act does not appear to have any direct impacts on the forest industry, we are cognizant that much of the specifics and content of this initiative will be contained in regulations that have yet to be written. COFI looks forward to engaging with government to provide input into these regulations to minimize any adverse impacts on the forest sector.
- Overall, we question the approach adopted by the provincial government for this initiative and don't understand how it fits within government's broader objective "to reduce overall emissions by 33% by the year 2020". The basic premise to balance deforestation with afforestation has no bearing on emissions or sequestration. Furthermore, this approach appears to be unsustainable given the finite landbase of the province, expanding population, and ever increasing demands on the landbase.
- We recommend an approach based on productivity. Not only will such an approach increase the sequestration of carbon, but it will also contribute towards meeting other government objectives i.e. increased timber supply, bridge mid-term fibre supply, etc. Such an approach could easily be structured to facilitate increased private investment on the land.
- A productivity based approach will also differentiate between marginal land and productive land, as well as fully stocked land Vs marginally stocked land.
- Areas identified for afforestation may not be realistic. Backlog NSR, NC brush, and NP brush have been identified as potential areas for afforestation. Not only are these areas very difficult and costly to reforest, but it is highly likely that many unsuccessful attempts to reforest these areas have been made in the past.
- Grazing land has been identified as potential area afforestation. This will create a direct conflict with the ranching community.
- The December 1989 eligibility date is puzzling as it eliminates all areas killed by the current Mountain Pine Beetle. We question why the area killed by the mountain beetle area is not targeted?
- Government has advertised this initiative as being voluntary. We question why it is housed in a statute and not policy? Is there some further underlying initiative that we are not aware of? If everyone ignores it, will government invoke mandatory action and penalties?
- The Act states that government must measure and report results every two years on the even calendar years. This requirement is odd given that the statute contains a deadline of 2015 for government to meet the goal of Zero Net Deforestation.

Should you have any questions regarding these comments or require any further explanation, please call.

Archie MacDonald  
Council of Forest Industries  
#360 - 1855 Kirschner Road  
Kelowna, BC  
V1Y 4N7



## Grasslands Conservation Council of British Columbia

Tom Niemann  
Manager, Climate Change and Forest Carbon  
BC Ministry of Forests and Range  
PO Box 9504 Stn Prov Govt  
Victoria, BC V8W 9C1

27 July 2010

Dear Mr. Niemann,

**Re: Comments regarding Zero Net Deforestation Act**

The Grasslands Conservation Council of BC (GCC) would like to submit the following comments for your consideration on the above act. We apologize for not submitting the comments prior to the July 9 deadline, and appreciate you accepting them at this later time.

On June 3, I attended the stakeholder engagement session in Kamloops to discuss this act, and also had some in-depth discussions with my staff about the Zero Net Deforestation policy and its goal. The following comments resulted from those discussions:

**Afforestation**

- **It is not clear that there is an “afforestation” plan.**
  - It is imperative that all land available for afforestation is identified beforehand and approved by the Ministry and other sectors so that organizations that are hired to do the “afforesting” do not do so without sound ecological knowledge of where it is appropriate.
  - The afforestation that occurs must be ecologically appropriate – i.e. tree species used are part of the naturally occurring ecosystem (riparian, upland, conifers, deciduous, not planting cedars in IDF, etc.)
  - **Lands that are identified for afforestation must NOT be grasslands** (even if they are currently converted to intensive agriculture).
  - Afforestation must not have a negative impact on the current ecological processes and must take place in appropriate ecosystems (e.g. no draining of wetlands or removal of other vegetation to plant new trees)
  - All afforestation should go towards improving wildlife habitat (e.g. creating wildlife corridors in communities where there is fragmentation.)
- **Alternative solutions:**
  - Provide programs that provide incentives (e.g. free native species of trees) to landowners within a community that is deforesting for development, i.e. if a new development removes 100 trees, then 100 trees of the same species (or **ecologically appropriate species**) are made available for residents of the community to plant in their yards.

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[www.bcgrasslands.org](http://www.bcgrasslands.org)

Page 1 of 3

- Requiring the equivalent number of trees removed to be protected through bylaws or covenants in another area within the same ecosystem type (e.g. if 10 ha of trees are removed for development in an ICH ecosystem, then 10ha of ICH must be protected through a covenant, as the continued protection will allow for sequestration at a much higher rate than planting new trees that will take decades to reach the carbon sequestration/storage potential, and will not be protected from removal down the road.)

Trees can be protected through tree protection bylaws – for examples, please see the Green Bylaws Toolkit – section 12.3 Tree Protection (attached).

### **Prevention of Deforestation**

It is widely known that preventing the loss of most ecosystems is much more cost effective and ecologically productive than restoration or recreation in most cases. There are many legislative tools and planning practices that already exist—particularly when it comes to development—that can guide development to areas that have already lost most of their ecological values. The provincial government should be promoting these first and foremost. The Green Bylaws Toolkit ([www.greenbylaws.ca](http://www.greenbylaws.ca)) is a very useful tool for land use planners and decision makers to conserve ecosystem services when considering development. Some examples include:

- “Brownfield” development – that is development that takes place on exiting footprints (e.g. building shopping complex on abandoned industrial grounds)
- Housing infill on existing vacant or large lots vs. new subdivisions
- “Smart Growth” principles – build up not out
- Housing development plans that create footprints that minimize the amount of forest removed using tree protection bylaws (e.g. leaving mature trees standing and protected through tree protection bylaws)
- Provide a “cost” for each tree removed in potential carbon sequestration, and require the developer/utility/etc. to pay that cost, keep the tree or provide a tree (same species or equivalent) for planting in a park/residents yard in the community or other appropriate place. Trees that are planted should be protected through tree protection bylaws.

Finally, **deforestation for ecological restoration (i.e. grasslands restoration) must be exempt from this program so as to not discourage this important practice.** Grasslands are critically endangered covering less than 1% of BC, and restoration to reverse forest encroachment must not be discouraged.

Our biggest concern stems from feeling that there is little to no plan in place to determine where afforestation should be allowed to happen. Some language in the initial documents indicates that it is a potential source of revenue for ranchers; this could lead to ranchers planting trees on their grassland ranges to raise money. The GCC is working towards finding financial incentives for ranchers to keep their land in good, native condition; planting trees would be a detriment to grassland stewardship and restoration. We are currently working with the Pacific Carbon Trust and other partners to establish a

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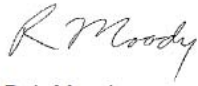
Page 2 of 3

model for non-forest based carbon offsets, particularly those that include soil carbon storage and grassland carbon sequestration.

The GCC feels strongly that there are many ways to address climate change mitigation that do not include afforestation, and if afforestation is the best option, it must be well thought out ecologically. The GCC has a wealth of information when it comes to mapping of BC's grasslands, and could be of assistance when creating an afforestation plan.

Thank you again for allowing us to submit comments at a later date. If you have any questions about these comments, please feel free to contact me at 250-374-5787 ext. 200, or at [bob.moody@bcgrasslands.org](mailto:bob.moody@bcgrasslands.org).

Sincerely,

A handwritten signature in cursive script that reads "R Moody".

Bob Moody  
Executive Director

Cc: David Zirnhelt, Chair, Grasslands Conservation Council of British Columbia

**Niemann, Tom FOR:EX**

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**From:** paul mcnair [paulmcnair@landtrustalliance.bc.ca]  
**Sent:** Thursday, July 8, 2010 10:42 AM  
**To:** AL Zero Net Deforestation AL:EX  
**Subject:** No Net Deforestation  
**Attachments:** LTA No Net Deforestation Final Submission.docx  
**Categories:** Red Category

Attached please find a submission on behalf of the Land Trust Alliance of British Columbia. Should you have any questions please contact our office.

With thanks,

Paul McNair

Paul D. McNair  
Executive Director  
Land Trust Alliance of British Columbia  
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Land Trust Alliance  
BRITISH COLUMBIA

## Achieving Zero Net Deforestation in BC - Land Trust Issues



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## Introduction

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This is a response to the discussion paper by the Ministry of Forests and Range (MFR) entitled “Achieving Zero Net Deforestation in British Columbia” (the Discussion Paper) that was made available in March 2010. This paper describes concerns that the Land Trust Alliance of BC (LTABC) has about the proposals contained in the Discussion Paper, particularly proposals concerning afforestation - producing trees on non-forested areas as an offset to timber harvesting elsewhere. LTABC is concerned that the MFR is taking a narrow view, focusing purely on carbon sequestration while disregarding ecological suitability.

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## Who We Are

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A land trust is a non-profit, charitable organization committed to the long-term protection of natural and/or cultural heritage. (The words “land trust” and “conservancy” are often used interchangeably.) Such an organization may own land itself, or it may enter into conservation covenants with property owners to restrict some land use activities to protect or restore natural or heritage features on the owner’s land. Land trusts also engage in stewardship, restoration and management of lands. Land trusts are independent non-government organizations; however they frequently work in partnership with governments, other organizations, foundations and businesses in achieving shared conservation goals.

The LTABC is an umbrella organization dedicated to the stewardship and conservation of our natural and cultural heritage through support of land trusts, conservancies and others. We provide education, research, communication and financial services. Our 100 members include over 30 local land trusts, two provincial land trusts and another 70 member organizations and professionals working in many communities throughout the province. Many of these land trusts work together on particular conservation or stewardship projects and campaigns. For more on who we are and what we do, go to <http://www.landtrustalliance.bc.ca>; in particular, see the BC Lands in Trust Registry for protected lands.

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## The Issues With Afforestation

Land trusts focus on the stewardship, protection and conservation of our natural and cultural heritage. At first glance, there would seem to be little overlap between land trust concerns and MFR plans to avoid and minimize deforestation and carry out afforestation. However, this policy has direct implications for the conservation values land trusts conserve and promote.

While land trusts are generally supportive of minimizing deforestation in areas that have historically supported forest, land trusts have strong concerns about afforestation. Afforestation is the direct human-induced conversion of land that has not been forested to forested land through planting, seeding and/or the human-induced promotion of natural seed sources. This

definition makes no distinction between converting non-forest to forest depending on what is ecologically most suitable.

Reforestation of land that has historically been suited to forest cover makes ecological sense. However, afforestation of lands that have not historically been suited to forest cover will be ecologically damaging. Afforestation is particularly inappropriate when applied to grasslands. Grassland ecological communities are critically endangered, covering less than 1% of BC, so grasslands restoration is of even greater concern and importance than reforestation. Restoration to reverse forest encroachment must not be discouraged. Indeed, MFR needs to actively deforest areas of Crown land in the provincial forest that have historically supported grasslands, but have experienced forest encroachment due to prevention of forest fires. This need to carry out some deforestation is not acknowledged in the Discussion Paper.

Beyond grasslands, it is imperative that all land considered for afforestation be identified and evaluated based on sound ecological knowledge beforehand, so that afforestation occurs only where that is ecologically appropriate (e.g.- no draining of wetlands or removal of other native vegetation to plant new trees). Further, the tree species used must be part of the naturally occurring ecosystem (riparian, upland, conifers, deciduous, not planting cedars in IDF, etc.)

Afforestation and reforestation should also be implemented in a way that enhances the full range of other ecological values such as wildlife and riparian habitats – e.g. creating wildlife corridors where there is habitat fragmentation.

In summary, MFR must only reforest and afforest where that is ecologically suitable, and such site treatments must be done in an ecologically suitable manner. Blindly converting land that has not been forested or is sparsely forested to forested land through planting, seeding and/or the human-induced promotion of natural seed sources in the name of carbon sequestration makes neither ecological, economic or social sense. The LTABC would be strongly opposed to that, notwithstanding the importance of measures to slow climate change.

## The Issues with Carbon Offsets

There is one other direct concern for land trusts and the LTABC, and this relates to the attempt to tie in afforestation and reforestation with carbon offsetting. British Columbia land trusts have protected more than a quarter million hectares of land, and their associated ecosystems, in the province for the public benefit. The protection of land offers multiple values in addition to fostering biodiversity. Conserving and protecting intact ecosystems helps mitigate and adapt to climate change. The conservation of ecosystems mitigates climate change by sustaining key processes such as photosynthesis that remove carbon dioxide from the atmosphere and by preventing the emission of carbon dioxide when an ecosystem is converted to human use.

A greenhouse gas or carbon offset is generated by the reduction, avoidance or sequestration of greenhouse gas emissions from a specific project. Offsets are so named because they counteract

or offset greenhouse gases that would have been emitted into the atmosphere. Therefore they compensate for voluntary reductions made at a specific source of emissions.

However, as the Discussion Paper notes, it takes time, while young trees grow, for afforestation to even partially offset the emissions associated with deforestation. The replanting of an unforested site with trees has no net carbon benefits for decades, and those benefits are much less than the avoided emissions from a protected mature forest of equal area. Worse, the conversion of a coastal old-growth forest to a younger plantation forest reduces carbon storage by several hundred tonnes of carbon per hectare during a rotation, and total carbon storage is reduced for at least 250 years. Whether produced by afforestation or reforestation, the contribution of these young forests to carbon sequestration is minimal, particularly if afforested or reforested stands are to be logged as they reach maturity. In contrast, forests on land trust lands are conserved in perpetuity, allowed to mature and evolve through several stages without removal of the carbon-fixing trees.

From the perspective of mitigation, planting trees is a reasonable strategy to remove carbon from the atmosphere in the distant future, but avoiding carbon emissions by protecting natural ecosystems is a much more effective strategy for the present. More conservation of healthy forests will produce greater and more immediate carbon sequestration benefits than those obtained through reforestation and afforestation. For both afforestation and reforestation, the benefits of carbon sequestration will be insignificant in early growth forests. Wilson and Hebda in their report *Mitigating and Adapting to Climate Change through the Conservation of Nature*, say that scientific studies have found that annual net carbon uptake is generally low or negative in forests less than 20 years old and reaching a peak from 30-120 years (p.19), whereas with conservation the benefits of continued carbon sequestration are immediate. Thus, LTABC has a strong specific interest in the role carbon offsetting can play in supporting conservation of intact forest lands.

There is also a more immediate LTABC interest. Voluntary market for carbon reductions by corporations and individuals is growing very rapidly. Land trusts are seeking to support their conservation work in part by revenues from the carbon offset market.. The LTABC has set up and registered a conservation carbon enterprise arm called Living Carbon Investments Ltd. ("LCI") to set the standard for highly credible carbon accounting and protocols, both in terms of climatic benefit as well as ecology. LCI's purpose is to enable land trusts (and other land owners

and managers) to structure their conservation and restoration carbon credit projects, and to permit potential investors to purchase these credits.

The LTABC seeks to protect the conservation community's credibility in regard to carbon offsets. In this regard, the LTABC is concerned that the Discussion Paper proposes to promote reforested and afforested lands as carbon offsets. These concerns have been raised previously with MFR to some extent.<sup>1</sup> In April 2009, the Pacific Carbon Trust put out a call for forest offsets based on three forest offset activities, including afforestation, which MFR had prepared. In June 2009, MFR released and requested feedback on a draft protocol for these activities. An alliance of conservation organizations, including the LTABC, expressed opposition to both the call for offsets and the draft protocol. The groups maintained that other activities would provide better offset opportunities.

Some of the criticisms around the use of carbon offsets include the validity of offsets, their accountability, and the need for standardization. Credible carbon offset projects must demonstrate real carbon benefits using full life cycle analysis. However, land use change offsets, which would include many forestry activities such as reforestation and afforestation, are controversial; many have failed rigorous accounting analysis. Carbon offsets are often difficult to verify, so credibility of carbon offsetting is critical. LTABC does not believe that a major effort at afforestation will meet any of these requirements, and that such an approach by MFR will damage the credibility of carbon offsetting generally.

This is not to say that the LTABC rejects the concept of using forests to offset carbon. However that support is contingent on the principle that no net harm results from offset projects. Application of the "no net harm principle" suggests avoiding timber harvest in old-growth/intact forests. It is more effective to invest in nature's intact ecosystems to mitigate climate change. However, virtually all government discussions and proposed solutions to the increasing concerns about climate change are about energy, transportation and other technological advances. Very little attention has been paid to our intact forested lands and wetlands – the critical role that existing ecosystems play in actively conserving vast stores of carbon-reducing greenhouse gas emissions to the atmosphere. The LTABC stresses that the

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<sup>1</sup> The LTABC has produced two recent reports in regard to carbon offsetting; see Hebda and Wilson, 2008, *Mitigating and Adapting to Climate Change through the Conservation of Nature in British Columbia* and Brinkman and Hebda, 2009, *Credible Conservation Offsets of Natural Areas in British Columbia*.

most effective way to benefit from the carbon storage values of natural ecosystems is to prevent or mitigate their conversion to other uses and keep them healthy. This is exactly what BC land trusts do.

The “no net harm” principle also supports the previously-mentioned LTABC concern that biological diversity and ecosystem functioning are not impaired. This concern arises most strongly in the case of grasslands, and especially fire-dependent grassland communities. Such areas can support forests, but only at the expense of encroachment of forest over the grassland communities.

## Conclusion

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The LTABC supports conservation of forests as a practical and highly effective means of carbon sequestration. [BC's forests ecosystems store an estimated 18 billion tones of carbon, equivalent to about 88 times Canada's annual greenhouse gas emissions . p 18 Wilson & Hebda]

As the carbon market for offsets continues to grow to address climate change, land trusts have an interest in ensuring that the carbon stored by conserving intact forests is recognized as high quality offsets. It is of paramount importance that ecosystem values also are respected and the highest standards be applied. There is nothing wrong with MFR managing provincial forests with a view to carbon offsetting, but that view must be credible. Any carbon offsetting practices must be ecologically sensitive and sustainable, or the public will lose faith in carbon offsetting. Environmental safeguards must apply to all forestation projects, particularly ensuring that the project type is appropriate to the forest landscape context. Forest offset protocols should avoid encouraging poor or shortsighted management practices (such as afforesting areas that are not historically or ecologically suited to forest) and should stimulate ecologically sound management practices.

In summary, LTABC is concerned that aggressive afforestation will do more harm than good. MFR's focus should be on more conservation and reforestation for healthy forests and ecological balance, with less emphasis on planting trees onto non-forested areas for short- term minimal net carbon sequestration benefits. The LTABC is also concerned about MFR creating artificial incentives for afforestation by encouraging the comparatively ineffective use of afforested lands as carbon offsets.



August 5, 2010

Tom Niemann, RPF  
Manager, Climate Change and Forest Carbon  
B.C. Ministry of Forests and Range  
PO Box 9504 Stn Prov Govt  
Victoria, BC  
V8W 9C1

RE: Zero Net Deforestation Comments from the Mining Association of BC

Dear Mr. Niemann,

Thank you for this opportunity to comment on the Zero Net Deforestation Act on behalf of the Mining Association of BC. We support the general intent of reducing deforestation and related greenhouse gas emissions.

The association would like to emphasize that every operator wants to minimize their footprint. Although clearing forest for a mining site is considered deforestation, detailed plans are always made to reclaim land at the end of the mining cycle. Where reclamation of mine sites re-establishes forest, this should count as afforestation for the purposes of the zero net deforestation policy.

Over the long term, mining followed by reclamation accounts for little net deforestation. We therefore suggest that reports on deforestation by sector should show net deforestation by sector. This would document the mining sector "credits" for its reclamation efforts.

Incentives are needed to avoid deforestation. Mines are designed as efficiently as possible, and while minimizing deforestation may be possible, it would likely increase costs to the operation. A protocol for avoided deforestation could lead to carbon offsets that would help defray these additional costs related to re-configuring a mine in order to reduce deforestation.

Reducing deforestation may not always be desirable. Making roads and interface areas narrower may increase safety and wildfire risks, and may be contrary to engineering standards. Reducing these risks should not be penalized.

**BC's Voice of Mining since 1901**

900 – 808 West Hastings St., Vancouver, BC V6C 2X4  
Tel: (604) 681-4321 / Fax: (604) 681-5305 / Web: [www.mining.bc.ca](http://www.mining.bc.ca)

For those companies wishing to offset any deforestation resulting from mine development or expansion it would be beneficial for the BC government to make available crown land that is suitable for afforestation projects. Making lands freely available for companies to conduct afforestation projects would eliminate the need to procure suitable land thus reducing the cost of such projects.

In closing, I would like to caution that when marketing or promoting zero net deforestation by recognizing some people or companies as being progressive for reducing deforestation, care should be taken to not characterize others as not doing their part because they do not change their behaviour, as they may be constrained by cost and safety considerations.

Sincerely,



Ben Chalmers,  
VP, Environment and Technical Affairs

Ben Chalmers  
Vice President, Environmental & Technical Affairs  
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July 9, 2010

Tom Niemann, Manager of  
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Ministry of Forests and Range  
PO BOX 9525 Stn Prov Govt  
Victoria, BC V8W 9C3

\*\*\* BY EMAIL AT [ZND@GOV.BC.CA](mailto:ZND@GOV.BC.CA) \*\*\*

Dear Sirs/Mesdames:

**Re: Zero Net Deforestation Act – Public Consultations**

Thank you for the invitation to comment on government strategies to achieve zero net deforestation in BC by 2015 and the implementation of the *Zero Net Deforestation Act*. We have reviewed the Act, your discussion paper,<sup>1</sup> and your feedback form. Given the lack of detail in these documents, our comments are similarly high level.

**Zero Net Deforestation misses the forest for the trees**

As we have previously noted,<sup>2</sup> while zero net deforestation is a valid and important goal, the discussion paper's claims about the benefits of the zero net deforestation goal are overstated. In particular, it does not address the rather more fundamental questions of how our laws, policies and practices about land use, particularly in provincial forests, should and must evolve in light of climate change. For example, while deforestation is a significant source of CO<sub>2</sub> emissions in the province, it pales in comparison to emissions from forest degradation associated with status quo industrial logging practices – practices which also serve to reduce the resilience of forest ecosystems at a time when climate change is putting increased stress on these ecosystems and their component species. Thus, we urge the Province to view the goal of zero net deforestation as part of more comprehensive package of needed reforms.

Please refer to *A New Climate for Conservation*,<sup>3</sup> by Dr. Jim Pojar, released by West Coast and others this past January for discussion of the changes which need to be made to land use more generally.

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<sup>1</sup> <https://www.for.gov.bc.ca/ftp/hfp/external/!publish/web/znd/files/znd-discussion-paper.pdf>, last accessed July 8, 2010.

<sup>2</sup> <http://wcel.org/resources/environmental-law-alert/zero-net-deforestation-act-sets-goals-not-rules>, last accessed July 8, 2010.

<sup>3</sup> <http://wcel.org/resources/publication/new-climate-conservation-nature-carbon-and-climate-change-british-columbia-ful>

### **Action should include legislative initiatives**

The scope of the *Zero Net Deforestation Act* is extremely limited, in that it primarily states a goal, with limited or no means of enforcing that goal should it not be reached, and a series of reporting requirements. We understand that the government believes that it can achieve the goal of zero net deforestation by 2015 entirely through existing policy tools.

We believe that this goal could be achieved more effectively and efficiently through a mixture of legal and policy tools, and that amendments to the *Zero Net Deforestation Act* should be considered to expand government's powers to restrict deforestation and/or require afforestation (e.g., requiring new residential developments to avoid or minimize deforestation). While incentives are important, we note that existing incentives and voluntary initiatives have not by themselves been successful in halting net deforestation in the past. There is no reason to assume that they will be successful in doing so in the future.

### **Prioritize preventing deforestation, and afforestation of non-agricultural lands**

We agree with the hierarchy embedded in the ZND goal as articulated in the discussion paper, namely that first priority should be placed on avoiding and minimizing deforestation, and only then on mitigating impacts by planting trees in appropriate non-forest areas. However, the Province's approach as laid out in legislation and the discussion paper fails to implement this objective.

In particular, because the Ministry's goal is to achieve no net loss of hectares of forested area, it treats afforestation as if it were on equal footing with avoided deforestation from a GHG emissions perspective. Indeed, virtually all of the incentives canvassed in the discussion paper relate to tree planting and not avoiding deforestation in the first place. Yet the two are not equal in terms of reducing GHG emissions on the time frames we need to in order to prevent runaway climate change (e.g., meeting 2020 targets). In other words, while avoided deforestation produces an immediate GHG benefit, carbon uptake from newly replanted forests will be low for some time.

Furthermore, little direction is provided with respect to where planting is 'appropriate', nor which lands should be planted first. As a result, the logging of a healthy old growth forests for residential development would be viewed as being offset by the planting of saplings on prime agricultural land. This raises significant questions about the implications of the Ministry's strategy for food security and whether it will do anything to limit urban sprawl. It introduces an entirely unnecessary tension between the goal of zero net deforestation and agriculture.

We would recommend:

- A robust package of legal and policy measures that prioritizes reducing deforestation in the first place
- Giving priority to afforestation efforts that focus on lands which are not sufficiently restocked, brownfields, or other lands which do not have high agricultural value.

### **Comments on the specific incentives**

As noted above, we disagree with the decision to rule out legislated requirements.

While we do not object to the incentives listed in the discussion paper, we remain concerned that, with the possible exception of Carbon Offsets, these existing incentives will not be strong enough to achieve the zero net deforestation goal or to maximize the GHG benefits of doing so.

The incentives listed appear to be piece-meal, with no real consideration of the full range of behavioural changes required to achieve zero net deforestation. For example, with the exception of the tax benefits of the *Private Managed Forest Land Act* there are few incentives proposed to keep land forested, and to avoid deforestation in the first place (nor do these particular tax benefits extend to lands which are not logged (or “managed”) but simply retained for ecological, cultural or other reasons). We have in the past been consulted by farmers who feel that they are compelled to cut their forested lands in order to achieve lower agricultural tax levels on those lands.

Other incentives for the conservation of forest lands should be considered, perhaps through financially recognizing the ecological services provided by such lands, including benefits for provincially owned wildlife, water quality, air filtration, etc.

Similarly, there are few further details provided regarding incentives related to smart growth or changes in transportation structure and planning, despite the paper’s recognition that these issues are an important part of a zero net deforestation strategy. Provincial incentives for employers to provide public transit and for developers to locate new development in existing urban centres are potential additions to this list.

The Carbon Offsets do, if correctly structured, have the potential to provide significant incentives for avoided deforestation and afforestation; however, the discussion paper omits completely a reference to the former.

A certification system related to forestation/deforestation is mentioned as a possible “education” initiative. We note that the Forest Stewardship Council is at present developing approaches to integrate carbon issues into its standards and procedures. Rather than evolving an entirely new system in BC, we recommend that the Ministry monitor the eventual outcomes from FSC. Among other reasons for doing so, a new BC certification system in this context would lack the global marketplace recognition that FSC offers.

### **Comments on educational initiatives**

We entirely agree with the value of educating British Columbians on the role of deforestation in climate change. In particular, matters related to smart growth and transportation and avoiding deforestation/forest degradation are issues of particular interest to West Coast Environmental Law.

However, the discussion paper provides no meaningful detail about how this “public engagement process” will involve, and we are unable to comment further.

## Conclusion

The goal of zero net deforestation is a good one. However, it should not be allowed to distract from more fundamental questions of changing our patterns of land use in the face of climate change. Moreover, we believe that achieving the goal requires more a more comprehensive approach to the behavioural changes required. In addition, achieving the goal requires not merely voluntary behavioural changes, but also mandatory legislation.

Sincerely,

WEST COAST ENVIRONMENTAL LAW

A handwritten signature in black ink, appearing to read 'Jessica Clogg', written in a cursive style.

Jessica Clogg,  
Executive Director & Senior Counsel

## Section 2: Questionnaire Responses from Individuals

### #1 - North Interior

1. What is the best way to raise awareness about deforestation and afforestation?

Through the provincial government's demonstration of a commitment to ZND in all that it does. For example: Site C - how will the many ha of deforestation be offset by the province? Another example: the Northwest Transmission Line - for ZND, wouldn't it make the most sense to use the existing parallel transmission corridor that already exists?

2. How can deforestation be reduced in your sector?

Northwest Transmission Line - for ZND, use the existing parallel transmission corridor that already exists. However, the only answer when this was suggested at a public meeting was that to do that would be too inconvenient and possibly more costly.

Forestry - encourage narrower roads. Also properly measure the ingress of trees onto road right-of-ways, which may actually demonstrate that the amount of deforestation from roads is less than estimated.

Mineral exploration - encourage narrow roads and use of existing roads.

Pipeline developments - encourage use of one right-of-way for multiple pipelines.

3. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your sector/community?

Provide a tax incentive for rehabilitation and afforestation of existing forestry and mineral roads.

Establish a provincial policy that prevents parallel transmission and transportation corridors; alternately create a policy that incentivizes multiple uses of the same corridor.

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

Provide a tax incentive for rehabilitation and afforestation of existing forestry and mineral roads.

Establish a provincial policy that prevents parallel transmission and transportation corridors; alternately create a policy that incentivizes multiple uses of the same corridor.

Costs need to be clearly understood, as well as what benefits will accrue from this policy, and to whom.

Extend the use of Forest Professionals to planning processes across all the resource sectors to ensure that ZND is properly considered.

Consider setting ZND as a "Land Use Objective" (as used in the Forest and Range Practices Act), and extend this across all the resource sectors (using the Land Act). Note that this may have cost implications, and will move ZND from Voluntary to Required.

There will need to be good information on real offsetting options and opportunities - otherwise there could be false or misleading claims made.

5. What existing incentives encourage you or your sector to avoid, minimize then mitigate deforestation?

Use of Forest Professionals in the development of forest plans. (This could be extended to all the resource sectors)

6. What existing incentives encourage you or your sector to minimize then mitigate deforestation?

Upper limits on site degradation in forest legislation.(This could be extended to all the resource sectors)

7. What is the best way to ensure accurate reporting of avoidance, minimization, and total deforestation and afforestation?

Creating or assigning this to a department within government is NOT encouraged.

Tax incentives might work - in order to receive the incentive, reporting would be required. Obviously the incentive would have to be large enough to offset the costs of measuring and reporting.

8. What else would you like to tell us about how to achieve zero net deforestation?

It is unclear how or why this program developed, and doesn't seem as well thought out as it could be. At this point it seems to primarily be a "slogan".

There are so many other factors at play that I would not be encouraged by a sweeping statement that this is now policy. There will be costs associated with this program - what are they? There needs to be an understanding of benefits before you will get any significant participation.

Generally, I think that there will be limited uptake of this Voluntary approach - the Province would have to initially lead by example. Some large corporations may choose to try this, but I expect limited buy-in from smaller operators in all the sectors.

Overall, I am not supportive of this concept without better and more thorough background information and discussion of implementation options/ costs/ true benefits.

## ***#2 – South Coast***

1. What is the best way to raise awareness about deforestation and afforestation?

The North Shore Urban Bear Club, BC Nature/Federation of BC Naturalists sends regular Emails to 60+ members about wildlife and environmental concerns. I have sent your email on Zero Net Deforestation to these members.

I have also been circulating a petition on the Enbridge oil situation where they will be connected to the Alberta Oil Sands project and putting our Ocean Waters at risk.

Emails is the best method I have found for communicating quickly and getting good responses because people can respond and send along the message to their Email contacts.

Direct email to BC Nature is also a very good way as they have 4500 members and email them promptly.

2. How can deforestation be reduced in your sector?

Emailing community contacts is the best way NSUBC has.

3. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your sector/community?

Living on Vancouver's North Shore we are surrounded by the edge of the wilderness, Lower Seymour Conservation Reserve. We walk in the Forest every day...it's part of our lifestyle.

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

Let us know what we can do.

5. What existing incentives encourage you or your sector to avoid, minimize then mitigate deforestation?

Surrounded by Forests our community needs to be reminded of its responsibility...walkers, hikers, bikers, dog walkers, all need to be reminded of what we can do.

6. to 8. (nil)

### *#3 – South Interior*

1. (nil)

2. How can deforestation be reduced in your sector?

I work in the forest sector. One simple way to reduce deforestation in the forest sector would be to reduce the area of productive land removed for construction of forest roads. In my part of the interior we can use up to 7% of the land area to be in permanent roads. However, I can accomplish good forest land management with approximately half of that road system, albeit at an increase in logging cost. However, I have calculated that each hectare of my productive land that I give up to road construction costs me approximately \$750 per year, when I consider lost timber production, cost of capital employed, and maintenance costs.

The stumpage system provides an incentive to build more road (an allowable expense) to reduce the cost of logging by reducing skid distance.

3. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your sector/community?

The negative impact will be an increase in logging cost, but a reduction in road construction and maintenance costs and an increase in standing volume in subsequent rotations.

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

Remove the incentives in the stumpage appraisal manual that cause a financial reward for building more road.

5. to 8. (nil)

#### *#4 – South Interior*

1. to 3. (nil)

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

Economic incentive such as direct subsidy for afforesting marginal farmland. Carbon credits will help fund such activities but will not contribute sufficient money to encourage many landowners to initiate such projects.

5. What existing incentives encourage you or your sector to avoid, minimize then mitigate deforestation?

6. and 7. (nil)

8. What else would you like to tell us about how to achieve zero net deforestation?

It is very important that this legislation does not limit efforts for ecosystem restoration such as conifer encroachment in grassland/shrubland ecosystems, prescribed burning for rehabilitation/creation of wildlife habitat or treatments which create open forest types which would have been naturally-occurring in fire-maintained ecosystems. Many volunteers, government ministries and NGOs are working hard to make some meaningful headway in getting ecosystem restoration projects moving, and it would be a huge disappointment to have the ZNG legislation undermine these efforts.

## *#5 – South Coast*

1. to 7. (nil)

8. What else would you like to tell us about how to achieve zero net deforestation?

There are well over 15,000 acres and possibly 30,000 acres of Agricultural Reserve Lands on Vancouver Island (in addition to non-designated, but lands capable of agriculture) that are currently forested. Will the direction of the ZND compromise our ability to produce food from our ALR lands that are currently forested? Would this be concern if the current afforestation rates do not increase as forecast?

## *#6 – South Coast*

1) Ways to raise awareness

- Community challenges. What community can afforest, plant the most trees. It all does not have to be "legally" afforestation.
- Community group (boy scouts, schools, ----) challenges. What community group can afforest, plant the most trees. It all does not have to be "legally" afforestation.
- Displays, booths, information kiosks at community and agriculture fairs.
- Making people report how much deforestation (area of trees removed) for building permits, or other items needing permits of some sort (some roads, agriculture clearing, ?). The idea is just to get people to think about it. It may be useful for reporting, but could not be a main source of data. See also other reporting suggestions in sections below.
- BC does not have a lot of abandoned agriculture land but some. As well there is some open fields derived from rural residential houses and lots, or old hobby farm/partial farm sites that are now abandoned or unused. These are small and scattered and perhaps complicated to get owners interested or approval to afforest the land, but the sites are usually beside a road or highway and a visible activity.

2) How deforestation reduced

- Develop a regulation that any well pad and any pipeline >10 m once abandoned must be restored to forest if it was forest previously. An addition would be to establish forest similar to what was there previously.
- Oil & gas sector - encourage or demand joint use of ROWs for multiple pipelines; placement of lines considering long term development of fields to ensure better joint use of future lines.
- Oil & gas sector - encourage or demand joint use of ROWs for pipelines and O&G access roads. It is done fairly well now. Forest roads do a good job of using the O&G roads now but this should be maintained and improved upon.

- A program to reforest (maybe even call it afforest) old abandoned well pads could be undertaken as candidate areas for “projects”, special projects by the O&G sector or a government program.
- Develop a regulation that any open pit mine site once abandoned must be restored to forest if it was forest previously. If not feasible offset projects must be used.
- Use abandoned gravel pits as an opportunity to “reforest”. Or regulate rehabilitation or provide tax incentives. If leased from crown land you certainly have authority to have regulations.
- BC government highways and forestry roads for any roads >10 m wide must offset this by “projects”. Municipalities could adopt the same approach.
- Any BC Government buildings or facilities must record the amount of deforestation and an offset project implemented.
- For regions with little forest remaining such as in or near metropolitan areas, the lower mainland and some areas in the Okanagan, a Forest Land Reserve could be developed similar to the Agriculture Land Reserve. This would be used for unique remaining forest areas, a sample of different remaining types, be designed to preserve other values like views, aesthetics, biodiversity, etc.
- The development of forest management units in Saskatchewan and the “green & white” zones in Alberta are undeniably extremely effective at limiting deforestation in total and its spread spatially. This could be considered for the Vanderhove and Peace River regions. Once established one has to be very strict about maintaining it and not allow agricultural or non-resource development in these zones.
- I am uncertain how the property tax system works but in Saskatchewan I believe a tax change where wooded land became taxed similar to agriculture land caused farmers to say “if I am going to be taxed on it the same amount as if it was cultivated and generating revenue, then I will convert it”. I am not sure the story is 100% correct but the point is taxing wooded land or providing tax breaks for having wooded land is probably reasonably effective. This could be extended to afforestation.
- Reuse or de-deconstruction of forest roads rather than building new ones may reduce deforestation somewhat.
- Encourage developers to keep greenfields forested as long as possible. Maybe again through different tax rates on forested land.
- There is considerable agriculture clearing that never gets used or is used only intermittently. This is often related to clearing of wet areas that do not get cropped or are cropped only in the occasional dry years. There needs to be encouragement to keep these areas in forest or perhaps some better way/help to predict whether the site will be useful/used for agriculture.
- An important driver is farmers optimizing their field configuration by removing residual patches and squaring off field boundaries. This is important but there might be some kind of incentive not to do this; not sure what (fuel rebate, ???)

- Outside of the box idea. Can a farm “forestry” or “green” certification concept be implemented. If they have and leave forest land intact and perhaps do other environmentally sound practices they get certified. Their products can be certified and perhaps other tax or other benefits be supplied.
- Engineering specification on ROW for forestry roads etc can be re-examined to see if some reduction of cleared width is possible in some cases. Even 2-4 m is helpful.
- Items that can be considered in the agriculture sector are reduction of certain agriculture practices such as “log and leave” and leases in crown land where areas are cleared and converted, and the encouragement of consolidation versus expansion.
- Ban skiing and golfing and the sale of ski and golf equipment. (just kidding).

3. to 6. (nil)

#### 7. Accurate reporting

- Any well pad construction needs to report area deforested, pad size; cleared area size and its location. If the new well and pad are added to existing pads, the new area only need be recorded. This can be part of the licensing requirements.
- Any pipeline construction needs to report area deforested, total cleared ROW width, legal ROW width/allowance and its location. For new pipelines added to a current ROW, the fact it is using a current ROW needs to be recorded and any new permanent ROW width cleared recorded. This can be part of the licensing requirements.
- BC government highways and forestry roads must record the amount and location of deforestation from any roads >10 m wide
- Make “deforestation” attribute of BC’s forest inventory and inventory update (we can provide details on this).
- Avoidance is difficult to report.

#### 8. Other items

- Remember the specific definitions of deforestation regarding shape, width, size etc are important and these details can have unintended consequences if not considered carefully. For example a developer making a development with scattered just small enough units versus developing the same area (or likely smaller area) as a contiguous unit. Another issue is clusters on many too small events adding to considerable deforestation. The same issue occurs with afforestation as for many community based activities sites will be < 1 ha, etc.

## *#7 – South Interior*

1. What is the best way to raise awareness about deforestation and afforestation?

Market forces.

2. How can deforestation be reduced in your sector?

Funding for treeplanting in MPB and Fire impacted areas. Do NOT make it another FFT fiasco or FIA nonsense. These are so administratively burdensome that they are not even worth considering. What percent of FFT funding gets sucked up in auditing/administration/RFP review? 25% 35% ?

3. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your sector/community?

The only area where deforestation is a problem is in urban centers.

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

Please do not consider logging to be deforestation. Even the most skeptical arm-chair cynics know that forestry is a renewable resource.

5. What existing incentives encourage you or your sector to avoid, minimize then mitigate deforestation?

High stumpage rates.

6. What existing incentives encourage you or your sector to minimize then mitigate deforestation?

High taxes.

7. What is the best way to ensure accurate reporting of avoidance, minimization, and total deforestation and afforestation?

Incentives to those who report efficiently. Do NOT make it overly bureaucratic, as this only serves to make the process too costly to administer

8. What else would you like to tell us about how to achieve zero net deforestation?

Don't expect the forest industry to pay for all your pet projects. How about a zero net impact to the taxpayer?

## *#8 – South Interior*

1. What is the best way to raise awareness about deforestation and afforestation?

Education

2. How can deforestation be reduced in your sector?

Lower property taxed for forest land.

3. (nil)

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

Mitigation: Create a point system rather than trying to mitigate ha by ha.

If someone has to deforest 1 ha, the mitigation should be to increase tree density or volumes/ha on 5 ha by 20%.

Most small private forests holdings a poorly managed, an extension service or a publicly funded consultation by a professional forest will be required.

5. What existing incentives encourage you or your sector to avoid, minimize then mitigate deforestation?

Let the commercial value of trees increase, give subsidies for reforestation on private land.

6. What existing incentives encourage you or your sector to minimize then mitigate deforestation?

Incentives: Managed Forest taxes are about 5-10 times higher in BC than in other jurisdiction. There is only a very weak incentive.

7. What is the best way to ensure accurate reporting of avoidance, minimization, and total deforestation and afforestation?

The private Forest Land Council already has a good reporting process.

8. What else would you like to tell us about how to achieve zero net deforestation?

Create an account with points, people that will have to withdraw points will have to pay people who can deposit points.

## **#9 – South Coast**

1. to 7. (nil)

8. What else would you like to tell us about how to achieve zero net deforestation?

After reading the discussion paper I had some reservation about using carbon offset sales as an incentive for afforestation. Afforestation is being positioned as a way for BC to reduce its carbon emissions, by balancing deforestation with afforestation. If a private land owner sells a carbon offset for afforestation activity, then the carbon emission benefits of that afforestation have been transferred to another party, and cannot be counted to offset carbon emissions from deforestation in BC.

## **#10 – North Interior**

1. What is the best way to raise awareness about deforestation and afforestation?

First get it in the news (print, radio, TV, web) so that society is aware of it and understands it. Second provide information on how to reduce and mitigate it through (web, public info sessions, brochures, mailouts etc)

2. How can deforestation be reduced in your sector?

City and regional district zoning laws that encourage densification instead of suburban sprawl. Land zoning and assessments that confirm the highest value for land and restrict the uses on that land. (ex. prime agricultural land should not be cleared for subdivisions and golf courses. There is other less valuable land where houses can go and balls can be hit).

Tax laws that encourage, or at least do not penalise people who manage their land as forests instead of fields and lawns.

Inform people of the many values of forested land versus other land uses. Ensure that when deforestation is approved (subdivision, ag leases etc) that the associated losses are considered, not just the benefits of the proposed new use, and that there is not a better alternative for where this non-forest use should happen.

3. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your sector/community?

As above - reduce urban sprawl etc.

Ensure that new roads, utility corridors etc are necessary and if so that they are located to minimise the deforestation. Part of the cost of these should include the cost to reforest this site, or another of similar area/value.

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

As above. Tax laws and incentives and zoning rules that ensure the land is used for its best use.  
Be able to claim reforestation/afforestation costs in your tax return.

5. What existing incentives encourage you or your sector to avoid, minimize then mitigate deforestation?

None that I am aware of. The only tax incentive, The Managed Forestland designation provides very minor incentive and is very onerous to achieve and maintain.

Several big box stores were built in our town during the past five years. They are all situated so that it is not convenient, safe or pleasant to walk between them, and they each have their own oversized parking lot, some that are never close to being full. With a little foresight and proper zoning the footprint probably could have been reduced by 50-100% and it would be a nicer and healthier experience to use them.

6. What existing incentives encourage you or your sector to minimize then mitigate deforestation?

None that I am aware of.

7. What is the best way to ensure accurate reporting of avoidance, minimization, and total deforestation and afforestation?

There are researchers developing satellite based photogrammetry assessment tools that can compare deforestation, reforestation etc. changes through time.

8. What else would you like to tell us about how to achieve zero net deforestation?

We have to get beyond the frontier attitude that still exists around how we use our land. There is very little restriction on what can be done on private land. With a little encouragement from government and the media, in the form of information/awareness, penalties for environmental damages and some tax incentives these attitudes could possibly be changed.

This has to be taken down to the grass roots levels with information and simple incentives and word will spread. Otherwise our rape and pillage approach will continue.

## ***#11 – South Interior***

1. to 7. (nil)

8. What else would you like to tell us about how to achieve zero net deforestation?

Cut a tree plant two it is a no brainer and in your graph you show no evidence of the contribution of the iceland volcano it caused more green house gases in four days than humans did in five years think

about the money we are wasting on the reduction of maybe 1 percent in total how about the 99 percent caused naturally rotten vegetation and other causes. it is quite the fad and makes some sense to try but we are not going to stop it think about the past ice ages and dinosaurs

## *#12 – Region unknown*

1. What is the best way to raise awareness about deforestation and afforestation?

Different media links - Run a Facebook or Twitter site about progress on ZND (for the public in general). Make sure it's showing some measurable feedback rather than "oh just another gov't initiative".

Different media target different interest groups. My suggestion is to identify your biggest deforesters and afforesters (take 1 random selection or 1 targeted one where success may be showcased) and then ask them what would make them move forward on your idea. Develop a blog where either group shows their interests and then show how ZND brings common interests out so the polarising diversity of interests often attributed to 1 or the other group begins to share common ideas/needs etc.

2. How can deforestation be reduced in your sector/community?

That's a very good question given this is all voluntary. I mean if it's so important why doesn't the group mandated to do this have some teeth and \$\$ to back it up? I digress... It depends on what deforestation is all about - are we talking high density living promotion, new agricultural land? Not all deforestation is bad. I think to address deforestation you have to ask what underlying needs push us to need space. What permit criteria do we have in place for mining/industrial/urban sprawl? Those core issues will be brought up when we get into the gritty of attempting to reduce deforestation. What greener measures can we use when we build/develop/extract to help conserve as much space and transfer it to forest (voluntarily).

3. How can the positive outcomes of zero net deforestation be maximized for your sector/community?

A dedicated site to follow the ZND progress could help establish a specific model which can be used in localised areas. A model for reducing deforestation in a local area, afforesting it and a business model to show companies in each different sector what something like this would look like.

Easy ones: cleaner air, less global warming, greener and pleasanter spaces, less CO2. Those outcomes show movement at a gov't level in a more positive direction and can be used to build local momentum to start thinking about how we manage our space and to become more sustainable. To ask ourselves have we used every available space to contribute and maximise to our health and well being and that of our land, air etc.

If I were a business I would want incentives - what's it going to cost me to do this and what \$\$ benefit (tangible) or gd reputation (intangible) benefit do I get and the former better be worth the latter. I'm not sure how you maximise that except to develop social consciousness in business - some of that is occurring. I wondered what your 'reports' you mentioned really add to a business. How much publicity? How can you use those to benefit a bsn?

4. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your community/sector?

Be committed - nothing is worse than if this is perceived as a (pardon my French) half-ass&d effort. A proper model for implementation would go a long way. Greater awareness of how much good this can bring - for both bsn and public. The perception of this is always that initiatives such as these limit economic development and in these recessionary times a valid argument can be made for jobs etc over ZND. A strong, well researched approach will always be better received. Use your support groups wisely and strategically.

5. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

\$ is 1 real motivator but you don't have that. I hope you have some gd psychologists to help you understand the various sectors and what's driving their needs to motivate them voluntarily. I'm sorry if I sound pessimistic but real change is what is required for a truly successful attempt at this and you appear to be required to reduce 5% of our emissions with no \$ or legislation. I mean if I can see this who else can? Your success is limited by your means. That said the ZND idea is very good but resources are required.

Best idea is to keep a list of available resources, how to access them, build awareness in the public so that companies see value in being perceived as contributing to the ZND, incentives for new green technology use that helps preserve forest - the 'green' bsn would profit and who knows who else might as well?

6. What existing incentives encourage you or your sector to avoid, minimize then mitigate deforestation?

I'm not sure. I'm not an expert this is my personal opinion.

Good reputation, tax advantages, social consciousness. The context of recessionary times makes it difficult to access funds or incentives which could normally have been effective.

7. What is the best way to ensure accurate reporting of avoidance, minimization, and total deforestation and afforestation?

Strong clear reporting criteria. Compliance checks could rely on: local knowledge, satellite, Google maps. Technology can probably help us quite a bit here but I am unsure of what specific type would do so. any additional reporting reqs without tangible benefit might be perceived as unfair and create backlash for ZND.

8. What else would you like to tell us about how to achieve zero net deforestation?

Use this as an opportunity to build a model (local, sector and public), build challenges and successes, use the implementation as a real life tool to show the nuts and bolts. Irrespective of the success in 2015 you will have built capacity.

### *#13 – North Interior*

1. What is the best way to raise awareness about deforestation and afforestation?

Public advertising - Radio, TV, Newspapers

2. How can deforestation be reduced in your sector?

Forestry Sector - The Primary source of deforestation in the forest sector is the construction of roads, both on block and operational.

Construction of new operational roads could be reduced through access management planning between forest licensees as well as other industries (mining, oil and gas, electricity) however there is currently no incentive to cooperate and competition between companies, as well as different planning timelines, transportation requirements and differing legislation between industries makes this very difficult. By finalizing the Resource Roads Act, and forcing coordinated access planning within management units, the amount of road constructed could be reduced.

Oil and Gas sector - The construction of roads, pipelines, leases etc. is part of the oil and gas industry and all result in deforestation, the only way this can be reduced is by enforcing proper planning requirements and forcing cooperation in planning between oil and gas companies and other sectors such as forestry and mining etc.

3. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your sector/community?

Reduction and reclamation of on block roads could be addressed through increased stumpage breaks through the appraisal system as reducing road percentage and reclamation adds cost to the forest licensee.

4. What can we do to encourage you or your sector/community to avoid, minimize then mitigate deforestation?

Stumpage breaks in the forest sector.

Increased focus and incentive for access management planning across sectors

Identification of areas available for reforestation on crown land.

For Private Land - make sources of trees & seedlings more readily available at reduced costs in rural areas and provide tax incentives to property owners (income tax break for planting trees, or reduction in property taxes for having forested property).

5. (nil)

6. What existing incentives encourage you or your sector to minimize then mitigate deforestation?

Deforestation (specific to the Timber Harvesting Land Base) eventually reduces the Allowable Annual Cut over time which reduces the amount of timber a Licensee is allowed to harvest, therefore it is in the forest industries best interest to reduce deforestation on the Timber Harvesting Landbase.

7. What is the best way to ensure accurate reporting of avoidance, minimization, and total deforestation and afforestation?

For Crown land require accurate and timely reporting of disturbances on the landbase across all industries (similar to the MFT RESULTS system) for all industries, not just forestry and require mandatory reporting of spatial (GIS) data identifying areas that have been de-forested.

Set maximums for each management unit of allowable permanent disturbance on the crown landbase for all industries by management unit (similar to a Timber Supply Review) based on crown landbase that is available to be re-claimed

8. What else would you like to tell us about how to achieve zero net deforestation?

Deforestation should be measured on three levels 1 - Non crown land, as this is largely out of the control of government, 2- non-Timber Harvesting Land Base as this has less of a "real" impact to the forest industry who is still the largest industry on the Crown Landbase and, 3 - the Timber Harvesting Land Base. Importance and value and effort should be assigned to these 3 categories accordingly with THLB being receiving the highest attention. Possibly charging increasing rates for permanent disturbance on each of these areas (reduction in future revenue to the crown if THLB is deforested). It is industries other than forestry (oil and gas, wind tenures, mines, crown range, etc.) combined that have the potential to have the largest deforestation impacts on Crown Land and the forest industry has been the one suffering from this.

## **#14 – South Coast**

1. What is the best way to raise awareness about deforestation and afforestation?

I am a registered professional forester and I find the term zero net deforestation a misleading term that is not achievable. As our population grows, infrastructure development will have to take place and land will have to be re-classified. The real challenge is to do this in a responsible manner such as create new

communities in which a car is hardly required, and green spaces are everywhere. In a low population province the goal of ZND is not achievable or desirable.

2. How can deforestation be reduced in your sector?

Deforestation is not a big issue in BC.

3. What are your ideas on how to minimize negative impacts (if any) from zero net deforestation on your sector/community?

Less independent Power Projects. Through IPP we are creating thousands of kilometers of new hydro lines through what previous was forested land.

4. to 8. (nil)

## Section 3: Submissions from Individuals

### #15 – South Coast

As you know there is lot of land use conflicts at Whistler. So the community forest also is losing lots of area to non forest uses.

A big one that is confusing to us is the recreation tenure issued by ILMB and the recreation tenure issued by MOTSA

They do not seem to have a lot of information on them

For example Canadian snow mobiles has a tenure in the Callaghan valley and they have build a large camp and built about 10 buildings. The sub division is 1 km long along the road – (by actual measurement) They have cleared 4 hectares for a horse corral – for the horses for their guests. It is right in the middle of the community forest. There is no boundary on how large their base operation can be. ILMB says there is a management plan for their operation but it is private.

Help

### #16 – Region Unknown

This policy, could have dramatic effects on available effective wildlife habitat, forage, and biodiversity. Many game and non game wildlife depend on open grassland, shrub dominated, natural meadows, edge habitat and other non forested areas for part or all of there life history. A Zero Net Deforestation Policy with out an ecosystem based and wildlife minded strategy could potentially be detrimental to wildlife populations and biodiversity. The forest industry with their economic based approach tend to plant vast monocultures of timber based on economic values, and tend to neglect ecosystem or wildlife values. Often these replanted trees are not even replacing existing species growing at the site, but rather a species which grows the fastest and will net the quickest financial turn around.

For example. In the central interior what little douglas fir stands remain, are being cut and replaced with lodge pole pine. The net result is less and less mule deer and ungulate winter range, either reducing the overwintering populations of deer, or forcing mule deer to winter in and rely more and more on agricultural lands for wintering creating increased conflicts with the agricultural community. Just planting back trees for the sake of carbon sequestration and/or economic viability without a ecosystem based approach, will not have a net benefit for wildlife. Also species like sharp-tailed grouse rely on open non-forested and edge habitats, lek sites in forested areas, created by logging, are constantly changing because cut blocks are replanted and are no longer suitable as they mature. Lek fidelity year after year enhances reproductive rates, but is this considered under current management regulations or this new policy? Some areas should not be replanted based on ecological/wildlife value significance and afforestation in naturally non-forested areas heavily scrutinized. There are many more examples I won't cover.

Under the fire suppression policies of the last century, we do not live in a natural or unaltered environment. Had natural and man made fires been able to occur as they had before these policies were in place, the landscape would be different than we now see it. Likely more extensive grasslands (both

natural and man made), a more diverse landscape (i.e. seral stages, timber types, ecotypes, etc...). To take a snapshot of today, or 30 or 50 years ago and create a policy that says we need to be at a certain point purely for the sake of carbon sequestration is poor stewardship. We need a balanced well thought out approach, one that looks at all facets

Also based on this policy, I fear less emphasis and funding will be given to Ecological Restoration (ER) Programs reducing or eliminating prescribed burns and other ER projects because they may contradict the ZND policy.

I certainly hope I am wrong in my assessment.

Please do not get me wrong, I am not anti forest industry (logging creates biodiversity in the absence of fire when done correctly) or anti carbon sequestration, I just want a balanced approach to reforestation.

Best Regards,

## **#17 – South Coast**

Thanks for your excellent presentation today on the ZND government goals. This initiative is laudable and for BC, a real challenge. We in BC have a pretty good record of retaining forests, and the deforestation rate has been continually dropping since the '70's, as you show in your graphs. And also as you noted, the proportion of deforested area is very low compared with the total forested area and afforestation rates are level to modestly rising. But as you suggest we can improve on this, and I would figure this is the intent of the legislation. How to do this is our challenge.

Some observations and proposals:

### **A) Notes from the Marrakesh Accord:**

“Afforestation” is the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human-induced promotion of natural seed sources;

#### **1. Would the BC Gov. definition of post-1990 eligibility hold water here?**

“Forest” is a minimum area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 per cent with trees with the potential to reach a minimum height of 2-5 metres at maturity *in situ*.

2. BC Govt. ZND definition is consistent with this, except for the minimum width of 20m. Why not have a minimum width of 10 m rather than 20? This change would not be against the Marrakesh Accord and this change will allow more opportunity to reforest linear deforested areas, such as power lines, road medians and a band of reforestation around subdivisions/ farms/industrial sites. Side note: If we convince BC Hydro to plant slow growing species such as wild cherry on their RW, that would satisfy the ZND goals, and BC Hydro goals as well, since cherry (and other species, such as dogwood), will reach 5 m, but not much more. I’m suggesting some flexibility here. Also, under this definition, there are nearly

NO forestry roads and landings which qualify, giving you an immediate 800 ha positive “hit” for 2010: just remove them from the deforested side of the ledger.

B) Afforestation Projects:

Crown Land: I can’t see any incentives around reforesting Crown Land by private or personal initiative (except maybe urban parks where local volunteers do this already, but often under a hectare.) I believe the rule around “no new incentives” will be a big constraint to afforesting Crown Lands. Minor opportunity.

Private Forest Lands: My work in environmental/forestry auditing indicates there are very few areas on Private Forest Lands that would qualify under the Afforestation rules. Big companies are reforesting, small companies have a few ha of deforestation, but not much. Maybe lands for sale, has a minor opportunity but these lands have been targeted only since 1995. So, log and flog is a relatively new concept in BC (to the extent that logging doesn’t leave the opportunity for natural reforestation).

Private Industrial Lands: Your comments on industrial sites are great, and this is one area of promise: to reforest, not just rehabilitate as one caller asked about. My sense is that this area may have the greatest opportunity for afforestation.

Public Industrial Lands: Land fills are a good opportunity, but limited in area. Still, this concept has promise. For example, the reforestation of the Hartland Landfill site has been started, but with somewhat mediocre results. I urge you to go on their annual tour and see the results of the reforestation efforts. It will be educational-they have the mistaken concept that forestry is easy, and the results of their efforts illustrate the lie to this concept. \*(Under Marrakesh rules, they would qualify, though!). Unknown opportunity, but may be significant.

Farm Lands: Minor opportunity, but as you gathered from today’s MAGL staff comments, just chock-a-block with political and social issues.

Residential lands: Zero opportunity, because the definition of forest is > 1 ha.

C) Deforestation: I believe that this is the area you should be focusing on. But changing miners/farmers/developer’s ethics and actions will require new incentives. I have helped developers in Victoria/Vancouver add tree retention to their plans. But these are individual trees rather than forests. If you can provide some incentive, and a good marketing strategy, this could help. Probably in the long term, not the short.

D) Measuring and monitoring: As I’m sure you know, this is a biggie! Keeping track of 1 ha + projects will be a challenge. And even keeping a database of projects, new, in progress and emerging, with the ZND goals in mind is a substantial undertaking. Fortunately, we have GIS that can do this. Call me. There are some opportunities to factually describe potential projects and to keep track of them.

E) Marketing this concept: a huge undertaking. Are you getting help from any marketing agency, either inside or outside government? I suspect that there is no budget for this, but the MOFR goal is in

fact to market it and if the executive and the Cabinet is serious about this ZND Act, marketing is a big \$ and requires substantial efforts to accomplish.

F) Sources for strategic and tactical information: Mexican forest service, Costa Rican finance dept re forestry incentives, check Chile, New Zealand and Australian sources for their success in promoting reforestation. Also China: checking deforestation penalties (jail terms for offenders!) and public policies for afforestation.

Again, thanks for your excellent presentation! Let's keep in touch.

Best regards

### *#18 – South Interior*

Re: Bill 5 – Zero Net Deforestation Act

Thank you for the opportunity to comment on the topic of Zero Net Deforestation. My comments and recommendations are included herein.

1. For the most part I am in favor of the Zero Net Deforestation (ZND) policy. Over time if we continue on the course that we are on, deforestation will slowly become more visible as the demand for land for non-forestry use increases. With the threat of climate change and greenhouse gas emissions, I believe that it is very important that BC works to achieve this goal. The use of tax incentives and carbon credits will help persuade the business community to contribute funds towards this goal.

The legislation will raise the issue of “How do we measure afforestation?”. Deforestation can be measured by remote sensing, but monitoring afforestation will be much more difficult. Afforesting 6,200 ha per year or 31,000 ha over a 5 year period will require 46,500,000 seedlings assuming a restocking at 1500 stems per ha. Most silviculture in the Province is currently conducted by the forest licencees and by the Ministry of Forests. They have the expertise. The need to plant an additional quantity of this magnitude raises several questions: Who will do the silviculture? What lands will they restock? What government ministry will be responsible? Who will be in charge of monitoring results? What will be the sampling process for these sites and who will perform conduct them? Who will be the authority to declare them free to grow?

2. The Liberals under Mike deJong have proposed converting 50,000 hectares of forest land to farm land. To achieve the goal of ZND, 50,000 hectares of land somewhere else in the province must be afforested. To achieve this, the use of incentives and carbon offsets could be used to persuade the corporate sector and others that are in a carbon credit deficit to contribute the funds needed to afforest this area. This approach may work well as it doesn't matter who contributes to afforestation so long as it is done. The question is, are the incentives good enough to encourage others to afforest this 50,000 hectares of land?

3. This policy should definitely apply to private land. Currently private land contributes to 40% of the deforestation in the province. It will be very difficult to police every private landowner that clears a small amount of their land and even more difficult to legislate that these individuals have the responsibility to replant. A mandatory system requiring an application and a reporting of the amount of forest land converted to other uses would be a first step to quantifying the extent of the problem. Private property rights are well entrenched in our economic and legal system. For this reason it will be difficult to hold the private land owner financially responsible for replacing the land he converts from forest land to other uses. At this point others, including, Federal, Provincial and Municipal Governments, as well as corporations and others requiring tax and carbon credits can become involved. Areas of land currently not sufficiently restocked and outside of the other legislation could be targeted. For example, areas that have been destroyed by the Mountain Pine Beetle for which there is no current plan to replant.
4. In order to achieve ZND I would recommend that the government should focus on putting the onus on big business. Forest companies that build logging roads should have to afforest the equivalent amount of area that the logging roads deforest. BC Hydro should have to afforest the equivalent amount of land that their power lines deforest etc...

Private land owners that clear a small amount of their land should not be taxed or penalized. This deforestation should be offset as stated above.

The following recommendations should be considered when formulating policy:

- ◆ All consumers of products and services in British Columbia are responsible for putting pressure on our forests lands. This includes those living in urban and rural areas. Accordingly all British Columbians have the responsibility for ensuring the goal of ZND.
- ◆ The Provincial Government's climate changes initiatives and goals drive the ZND legislation and as such it is separate from other legislation relating to forest stewardship. Forest companies should bear their share of the costs, but should not be responsible for the costs associated with land cleared for other non-forestry related purposes.
- ◆ Afforestation can be accomplished by means other than planting trees on cleared land. Others potentials such as the increased use of Class A genetically superior seedlings is a simple and cost effective method to achieve afforestation. In addition, the use of fertilizer on existing forest land should be re-examined.
- ◆ Private property rights should be respected.
- ◆ Government will have to be the leader on this initiative. While the flow through of tax and carbon credits will supply some of the funds to support the goal of ZND, it is possible that some of the funding will have to come from general revenue. If this is the case, then the Provincial Government must step forward.

- ◆ To accomplish the ZND goal, a concerted effort will be required from several parties including Forest Licensees and forest professionals. Registered Professional Foresters (RPF's) working for Forest Licensees, private consultants and government have, without doubt, the greatest knowledge of the forest land base in the province. Regardless of who an RPF works for, they must be charged with the responsibility of determining land suitable for afforestation and the monitoring process needed to declare the land free to grow. RPF's have the knowledge and expertise to ensure the success of the Zero Net Deforestation Act.
- ◆ In order to accomplish the goal of ZND I believe that we need to enhance the importance of the program. We can do this by selling the public and government on the idea that these new forests are part of the public infrastructure. These forests are no different than roads, bridges, school or hospitals. They are there for the benefit of all British Columbians and as such qualify for infrastructure funding during economic downturns such as the one we are currently experiencing. Good infrastructure projects require that the project is meaningful and has a significant labour component. Replanting lost forest land meets both of these criteria.

## *#19 – South Coast*

I quote from your web site:

“Approximately 6,200 hectares were deforested in B.C. in 2007. Approximately 2,000 hectares were afforested the same year. B.C.'s goal is to reduce deforestation and increase afforestation to close the gap by 2015 and beyond.”

Since 2001, the Ministry of Forests and Range has identified over 15 million hectares of forests lost to pests and over 1 million to fire. In addition to the portion of the 16 million hectares that are “not satisfactorily restocked”, the ministry has 2.762 million hectares of not-stocked productive land still on the books from 2000.

The video clip on the web site is misleading in one important respect. Dr. Werner Kurtz assumes the forest ministry is practising sustainable forest management on its productive forest land base. Although true for most (but not all) harvested lands, this assumption is not valid for productive forestlands lost to fire and pests. The Forests For Tomorrow program is wholly inadequate to address the replanting opportunity arising from the denudation of lands by fire and pests.

If the government is serious about the positive affect that forests have on reducing net atmospheric carbon and improving air quality, it would be better to set an example to the public by directing its efforts and resources at dealing with the principal forest source of carbon to the atmosphere, which is the unprecedented net area of “not satisfactorily restocked” productive forestland that is suitable for replanting plus the remaining area of backlog net NSR (pre 1987).

Additionally, more conservation of healthy forests would obtain greater and immediate carbon benefits to those obtained through both reforestation and afforestation. For both afforestation and reforestation the downstream benefits of carbon sequestration will not occur within the next critical 40 years (the window we have to mitigate global warming); whereas with conservation the benefits of carbon sequestration are immediate.

Although a worthy goal in itself (and I applaud the efforts of Shawnigan Lake School), zero net deforestation appears to be a public relations gimmick by the government to confuse and distract the

public from the real reforestation-NSR crisis facing the province and from the real forest opportunities for mitigating the adverse affects of global warming within the next critical 40 years.

Sincerely,

***And a later, supplementary submission:***

It appears that the intent of the 178,000 is to capture the pre-1982 and 1982-87 silviculture net NSR that has not been reforested.

What would definitely qualify as lands suitable for afforestation would be all the pre-1982 and poor and low sites and the 1982-87 low sites that remain as inventory not stocked lands (inventory gross NSR). Also the same could be said of all the post-1987 sites not included in silviculture net NSR figures ("current reforestation" in Ralph's tables) but still remaining as not stocked lands (inventory gross NSR) in the inventory.

If you looked at the opportunity for afforestation from an inventory gross NSR perspective (i.e., on low and poor sites once logged and netted out to obtain silviculture NSR area) instead of limiting the opportunity to pre-1987 silviculture net NSR lands on medium and poor sites not reforested, then you would be providing the full extent of the opportunity to afforest.

For this to happen you would need an updated inventory for some TSA and re-inventory for many TSAs. For example, 20-year old NSR data in the Kispiox is not much use to anyone! In short, all productive forest land needs to be re-assessed for stocking including (through FREPs SDM) many re-planted stands declared free-growing over the last two decades (see the SDM reports for the Lakes, Headwaters and Okanagan).

***#20 – North Interior***

It is my understanding that there is a significant area of "failed" agricultural lease land that has reverted to the Crown. Generally this land will have been logged and is currently not reforested. Pat Bell estimates that there are about 50,000 ha in the Prince George area.

I suggest that this land ( in parcels of 160-320 acres ) be offered to individuals of the public on condition that it is reforested. Once it has reached free to grow, it would be sold to that person for a small sum. It would be a "reverse ag lease. The person would assume all costs for establishing a crop tree plantation and the payoff would be carbon credits and the opportunity to acquire land (as well as a few warm fuzzy feelings). The payoff for the Crown would be that non productive land became productive and a fibre source for industry, at no cost or risk.

I estimate the cost of rehabilitating the land at \$1000 per ha with a carbon credit of \$90 annually (base on \$30 per tonne).

## *#21 – South Coast*

Thanks for the great ZND presentation today, this is an encouraging initiative in the right direction. A few thoughts to consider to help with success:

1. **Guidance on BAU for Afforestation Offset Projects** - It would be helpful if the Provincial Government could issue guidance that ZND is not the business as usual scenario in BC. If we're not careful, ZND could be perceived by project validators and program authorities as a law that requires afforestation in BC, and thus limit/eliminate the opportunity for a carbon project.
2. **GHG Accounting and Reporting** - Consider a simplified GHG accounting process to quantify and report emissions and removals associated with ZND activities (afforestation will result in some level of emissions). This might be done with a periodic GHG inventory of a sample of private lands.
3. **Identify Afforestable opportunity areas** - Perhaps an inventory of specific opportunities (ranked H, M, L) would be helpful, and might be used to encourage carbon offset projects and ZND.

Thank you,

## *#22 – South Interior*

I want to help with ZND initiative but it seems to be getting off to a rocky start. This is my feed back from the Kamloops meeting;

The ZND program was surprisingly unpopular with the Kamloops group. Archie Macdonald from COFI seemed to have little patience for it, there were a couple of participants in the back who essentially stood up and said it was missing all the real opportunities like MPB areas, and back log then walked out. A grumpy grass lands ecologist seemed threatened with the idea of planting trees on non forested areas, a representative Ministry of Agriculture had an overall negative view of the proceedings referring to societies collective “food addiction” and need for more agricultural land not less in the future.

I gave my 2 cents worth that the biggest opportunities for offsets and deforestation / afforestation balance lay in the existing forest land based i.e. addressing forest health and under managed stands. This all in the context that the Silviculture industry supported afforestation on an additional 6000 hectares annually but that the challenge seems to be to drum up funding and identify land that wasn't in conflict with other land management values.

Unfortunately the meeting never really got to the place of helpful dialogue and problem solving and got caught in the backlash of frustration around the perceptions of inactivity on larger forest health issues that easily eclipse the modest goals of the ZND act. The ZND legislation really came across as unenforceable (entirely voluntary) with no funding allocated to do any work. It some how sounded like the Provincial Government is “relying on the kindness of strangers” to meet public deforestation objectives.

I am going to submit some suggestions on line around the ZND helping facilitate the use of voluntary carbon credits on public land. Not sure were this is all going without more teeth in the legislation. I will take it as an opportunity to garner government support/facilitation of the creative funding of afforestation projects.

I think it is a worthy effort to do good things with little or no government funding by promoting others to pay, but the presentation should change to reflect this. There is a perception that this initiative is a green wash in the context of much larger sequestration opportunities being ignored in the working forest. More transparency and clearer goals up front would go a long way to reducing frustration and anger in the room.

Hope this feedback isn't too brutal .....I actually do want this to work and respect what you guys are trying to accomplish.

Can you send me the list of attendees?

Thanks

### *#23 – South Coast*

I attended (by phone) the meeting in Fort St. John yesterday and I have the following comments and concerns:

- 1) The Act defines forest on the basis of area and potential tree height meaning that orchards, tree farms and eucalyptus plantations would still qualify as forest.
- 2) The size constraints (among other things) mean for instance that much oil and gas based clearing (and that of other industries) is not considered deforestation even though these industries are responsible for more of BC's deforestation than the forest sector.
- 2) Area is the only forest metric used - although the premise is carbon storage, it pays no attention to carbon stored or site productivity
- 3) The Act ignores all elements of species composition, stand age, biodiversity, or other environmental co-benefits - these should be considered
- 4) The Act is voluntary meaning there will be no enforcement and progress will be difficult to track
- 5) First Nations were not consulted before passing the act in legislature
- 6) There should be no moves to take back farms leased on public lands in order to "reforest" them - most farmland in BC was once forested and people need to eat
- 7) There is no consideration of whether a site was ever forested - for instance wetlands, bogs and natural grasslands that also store carbon (sometimes more than forests) are considered undesirable under this act - this should be changed and other ecosystems considered

Thanks and best

#### **#24 – Region Unknown**

I am on your invitation list for zero net deforestation but unable to make your sessions.

I do find the topic interesting as forests are an important part of the climate change story.

My main concern with the potential policy that I would want to see addressed is: Without safeguards, the policy could conceivably allow cutting down of primary forests to be replaced by plantations. I hope others will bring this up and BC will safeguard against this.

Thanks,

#### **#25 – Region Unknown**

You have got to be kidding, ZERO DEFORESTATION !!! If a tree falls in the forest is anyone listening? How can anyone consider this concept as zero deforestation if one seedling goes into the ground after a giant 2000 year old tree is taken out? This is total white washing for carbon accreditation and someone else's profit while everything else loses bigtime. We cannot play this game any longer. Sincerely,

#### **#26 – North Interior**

I am the local Environmental Farm Plan planning advisor for the Peace River.

As the seminar in Fort St John was held on a weekday and during working hours I was unable to attend. It is my understanding that many others (primarily agricultural producers) were in a similar situation. I do not know who was in attendance but I suspect mostly government employees paid to attend.

Many have voiced their concerns on the lack of meaningful incentives to enable agriculture producers to voluntarily take part in this initiative. Many have stated that a lack of planning and a total focus on afforestation rather than considering other carbon sequestration measures could be very damaging to agricultural development and continuation in BC. There is a general feeling within the BC agricultural community that the present BC government at best ignores agriculture until they want something from us; and at worst is trying to remove agricultural production as producers are just in the way of the present government's agenda.

I am in receipt of your "what we heard" paper. I doubt that "you heard" maybe we can "meld" the EFP and the ZND. If so it would have come from someone totally unfamiliar with the EFP funding sources, purpose, and processes. Funding is under the Growing Forward Program, federally and provincially funded for the good of agriculture while protecting environment. There has to be a benefit to agricultural production for producers to show interest in environmental projects. Planning advisors are always pointing out how opportunities to improve riparian environments and biodiversity can benefit the operation. This information is often better received from peer advisors rather than government staff, hence the fact that the administration of this program is by industry - through the program delivery branch of the BC Ag. Council (ARDCorp).

It is important to realize that any Beneficial Management funding to producers who apply under the EFP program is "cost share" . Producers put a lot of their own money into developments. This does not equate to the "significant incentives" required for producers to afforest any part of their titled lands. Any "melding", in my opinion, could damage the voluntary participation in the EFP program, unless a monetary commitment from the ZND program enabled 100% funding for any BMP that included tree planting and establishment care of those trees. Payment for carbon sequestration must also be considered to maintain these acres in forest once established. Use of the lands for agricultural purpose (non-damaging to trees) must not be curtailed. Our producers provide many environmental benefits to the general public for free now, many can no longer afford to continue this practice. It is not acceptable to hurt a functioning program trying to launch ZND.

I agree that the "northern ag. lands" maybe be the "cheapest to buy" (due to location) but not that they are the least productive. We may not grow berries but we have our commodities. The Peace River valley has some of the best Ag. lands in BC - something our present government refuses to recognize. Have you considered what the heck you're going to do about the deforestation of that valley if Site C goes in?? The government cannot promote landowners lessening deforestation and offering up lands to afforest on one hand...and then proceeding with its own agenda of deforesting the PR valley...possibly thinking they are clawing back Ag. leases to plant to trees!

Has anyone approached the municipalities asking that they plant trees (possibly in areas set aside for parks) for those they feel the need to remove? A simple by-law in any city would make it a requirement of developers.

And finally, a word of caution to proceed very carefully. Our area has a great number of non-resident landowners. Historically these agricultural lands have been rented to neighboring agricultural producers. Much of this land is integral to those neighboring farmers/ranchers' operations. If ZND takes off and non-residents see an opportunity to afforest these lands (some of which never had forest on them, but were natural grasslands) the negative impacts to those renting/leasing these lands could be insurmountable. If ZND program was considered responsible (even if it was done to capture payment for carbon credits) for these negative impacts the "buy-in" from resident producers will be nil.

Hope this does not sound too negative.

## **#27 – North Coast**

Forest Sustainability in the “working forest”, as currently envisioned by conventional forest experts in BC, consists of plans to manage forests in a continuous progression of “Harvest – Greenup – and Reharvest at a supposed ‘Culmination Age’ when the tree has theoretically passed its maximum growth rate.”

The central flaw in this program is that it does NOT assume that there is a VALUE difference between the young, still immature wood content of trees this age, and the Old Growth tree it is supposed to adequately replace. Nor do any variations on this system take into serious account retention of various species that live only in old growth systems – notably Orchids – and are part of a self-sustaining system that has evolved to keep forests healthy. As a general statement, forests CANNOT be sustainably “farmed” within time periods relevant only to the immediate benefit of current generations.

An example of this might be seen on Graham Island, one of the two main islands on the Queen Charlottes / Haida Gwaii. Approximately 160 years ago, a very large fire swept the Northern and North Eastern areas of Graham Island, from Masset to Skidegate. The results of this today are huge nearly-pure stands of pole-sized Red Cedar, averaging 140 years of age, which had grown very closely spaced, and had thus self-spaced, and self-pruned (because of the density). Red Cedar does not produce the oils that make it valuable for workability and rot-resistance until approx 100 years of age. And because of the early self-pruning, is currently accreting nearly 100% of “mature wood” volumes capable of producing clears and industrial clear lumber. Of course, the forest industry is aware of this, and is currently focussing all its efforts upon these stands, effectively “mining” them, just as they’ve done with the most valuable Old-growth in the past. It’s a display of pure greed, and a blatant mockery of so-called “Sustainability”, since these very healthy trees are currently growing at their maximum increment, producing huge volumes of our most expensive and saleable wood, all of which is rapidly coming to an end. The forests about which I now write are just about gone.

You and I both know what we would do with these stands if it was OUR wood, with the benefit to OUR descendants alone. We would instead focus upon the less valuable species, and realise that by harvesting these stands now, we are throwing away the investment-free hundred years of growth these trees represent, thus foregoing huge future profit.

This is the first “advice” I’ve offered Gov’t since the days in the late Seventies and Eighties when I spent many hours offering (in total futility) comment upon the so-called Management and Working Plans. I do so now just to get this particularly egregious example of such glaring stupidity and greed off my chest.

As all of you know, BC forest issues are still highly contentious, with little “science” having been properly scrutinized. In his Royal Commission on Tenure Policy (1967?), Peter Pearse noted this, and recommended that a subsequent Royal Commission on Silviculture be instituted. That was ignored by the incoming Socred gov’t of course, since NOTHING can be proven until there is an agreed-upon body of accepted forest practice to refer to, and that can be achieved only when the so-called “experts” can be forced to testify before their peers, and public, this time UNDER OATH.

Failing that event, your current exercise will be just more smoke and mirrors, and that’s a very moderate statement.

## ***#28 – South Coast***

I have to agree that this really sounds wonderful but....? The government didn't/doesn't have any problems mowing down trees for the South Fraser Perimeter Road, either in Delta or Surrey--and I don't hear anything about replacing these trees--not a sapling of a word.

## *#29 – South Interior*

Thank you for the presentation today. I appreciate you coming out to the Regions to let us know what is happening in Victoria.

I thought I would put in writing my concerns and suggestions for your program. They are as follows:

1. Although the Net Zero Deforestation effort was presented as a part of the Provincial Strategy, it is still a standalone process. It lacks funding, and integration with programs that could benefit its success, such as FFT. This will affect its success, and ability to claim results. This needs to be reconsidered.
2. I was concerned that some of the bigger hitters in terms of afforestation were not mentioned in the presentation. When I brought these up, they were systematically dismissed, either as not important, too expensive, or part of a different program. This did not improve my sense that you were actually seeking input, more like you were defending what you have, which is a completely different approach. My suggestions were as follows:
  - a. Reclamation of roads and landings can be a big benefit. In 1997, a study of 30 TSAs in the Province demonstrated that we could reduce NSR due to roads and landings from a net down of 12% in some TSAs, to 5%. This is a lot of afforestation.
  - b. The Agriculture leases of the 80's, especially in the north, can be reclaimed with large beneficial effects. There was another study done nailing down these numbers. Dana Hayden, who is still involved in policy evolution, would remember this report.
  - c. We need to take action on MPB and fire affected lands, or the effect of this source of deforestation will overwhelm the good you hope to do with your voluntary measures. I find it unconscionable that we have 700,000 hectares of NSR, and the number is increasing.
  - d. The definition of NSR (pre 1990) avoids the issue of recognizing what is developing now. It looks like the definitions are for the purpose of convenience.
  - e. There was a lack of integration with other concepts, such as carbon sequestering. I am not sure why the program has these blinders on.

Thank you for this opportunity to comment.

## *#30 – South Interior*

This legislation regarding Zero Net Deforestation is very forward thinking given the obvious challenges B.C. society faces with climate change, greenhouse gas emissions, carbon management, and protecting the forested landbase. It does offer some considerations that must be addressed if the legislation is to be successful:

- **It is critical to identify (particularly quantify) the areas which could be utilized to offset the deforestation.** Some places that come to mind are rehabilitation of mines sites,( particularly large open pit operations such as coal), non-harvested beetle and blowdown areas that will not regenerate naturally, afforestation of brush and deciduous dominated sites plus fume impacted sites (near Trail), reforesting wildfire areas, rehabilitation of sites no longer supporting a commercial purpose ie abandoned power and gas lines, etc.
- **In forestry operations the deforestation created by permanent roads must be accounted for somewhere in the appraisal system.** The current revenue system for forestry on crown land does not allow for additional drain on the forest industry. Our MPS accounts for all costs of operations and naturally this is simply one further added cost.
- **Other industries such as mining, power, gaslines, etc should provide a financial structure required to balance the level of deforestation.** Utility companies have the ability to finance this additional cost. It is quite apparent that the cost of this work is effectively born by the consumer.
- **Access into areas planned for afforestation or reforestation may be restricted.** There needs to be a strategy developed to handle this issue.

In closing I applaud the direction of this legislation but it is crucial the above concerns are addressed if it to be implemented with success.

### *#31 – South Interior*

There are plenty of places to plant trees if we so choose.

School yards, parks, playgrounds, streets, boulevards, malls, housing developments, golf courses. Trouble is with the legal ramifications involved should a tree fall at an awkward moment. The roots may also cause some infra structure damage. Leaves and needles have to be collected.

Net zero is probably best achieved by developing an industry that utilizes every bit of the wood logged. That way we could reduce the AAC and the government/industry would still receive adequate income.

Developing markets for standard dimensional is laudable but funding should be in place for research/production of innovative wood products.

### *#32 – South Coast*

I was a part of this "so called" consultation process. Please find my submission attached, which was requested prior to July 9th, 2010.

I am writing this short paper on the discussions that took place across the province on June 1,2,3,8,9 and 10th. I participated in the discussion by phone on June 10th, 2010,

At the outset, I am lodging a formal complaint to the Ministry. Nowhere on the call in information was there note made that for those calling from outside the Cranbrook area that they should have in fact called in at 12:00 noon versus the 1:00 p.m. that was shown. Obviously, the one hour difference in time was not taken into consideration, and I called in at 1:00 p.m. as instructed to discover the conversation had been already on the go for one hour.

I would also like you to be aware that the person who was leading the discussions was rude and did not encourage participation. When I asked to speak and when I had my say, his comments to me were that we were gathered to discuss climate change and not forestry issues! Clearly, the issues that I am going to raise were in your own Ministry's Discussion paper. Therefore, the facilitator's response was unquestionably an attempt to not have the conversation occur that I was of the opinion needed to occur.

Your discussion paper leaves much to be concerned about. The slides which were utilized during the presentation are as disconcerting. In everything I have read and what I heard from all of the participants, except one other, the idea is to have few or no regulations, push the afforestation onto the individual and as I was told during the telephone call, use a carrot and not a stick. I must say we are well beyond the time limits to save our planet using "carrots"!

Your document shows as one of its key points the following;

- *Deforestation , as reported in the B.C. and national inventory reports, occurs at a rate of about 6,200 hectares per year in B.C. An estimated 60% occurs on Crown land and 40% on private land. The main activities involved are agriculture (29%), urban expansion and settlement (23%), oil and gas (18%), forestry (13%), industry (3%), and transportation (2%).*

Mining accounts for 10% and was not included in your "key points". Why?

Urban expansion and settlement (23%), the oil and gas industry (18%), the forest industry (13%) and the mining industry (10%) equals 64% of the major deforestation in our province. The industries named in the 64% equal 41% of the problems associated with deforestation in our province and yet the government indicates in their key points;

- *There is no requirement that those who deforest have to be the ones who afforest, only that in the province as a whole the area of deforestation is offset by an equal area of afforestation.*

If there is a **real** concern about deforestation, why would there not be regulations in place to insist that industry and developers within municipalities and regional districts within this province to afforest what they deforest? Now, I understand completely this is called by those of you involved in this charade as "using a "stick" versus a "carrot"! Time is long past where carrots can be used...long past and

corporations which head up all of the industries noted above must be held to account. To continue down the path the government has taken, is foolhardy and a waste of time and effort. **Regulations must be created by government to control the devastation many communities across our province are facing within in our water sheds and within our very communities themselves. Voluntary, no restriction on deforestation and no requirement to restore forest by those who destroy it are absolutely unacceptable!**

Pages four and five of your discussion document give me the greatest amount of concern given some of the key points already mentioned. The huge areas of concern are:

- *Forest: A minimum area of one hectare, at least 20 metres wide, with tree crown cover (or equivalent stocking level) of more than 25% with trees having the potential to reach a minimum height of 5 metres at maturity. A forest may consist of closed forest formations (where trees of various storeys and undergrowth cover a high proportion of the ground) or open forest. Young natural stands and all plantations which have yet to reach a crown density of 25% or tree height of 5 metres are considered to be forest. As well, forest includes areas normally forming part of the forest area that are temporarily unstocked as a result of human intervention (such as harvesting) or natural causes, but which are expected to revert to forest.*
- *Deforestation: Permanent, human-induced land-use change from forest to non-forest land cover. Sustainable forest harvesting, including clearcutting, is not considered deforestation, as the land-use does not change and the land cover is expected to regenerate to forest.*

Five meter trees are considered to be forest? A community goes in and afforests their watershed. As soon as the trees reach 5 metres (15 feet) they can be cut down again by the corporation that originally deforested? Your own document says that it is years before there is any affect of the trees to reduce carbon. Are you joking here?? Ludicrous!

Clearcutting is also **not** considered deforestation? Clearcutting, by what is left of our forest industry, is literally destroying water sheds and water sources. It is devastating our wild life, it is killing off our wild fish and yet it is **not** considered deforestation? This is absolutely ludicrous as well and shows clearly whose pocket this government is in!

Sustainable forest harvesting? What is the definition of “sustainable harvesting”? The only sustainable harvesting that currently exists in this province is where wood lot owners take pride in the fact they have large forests that continually produce large wood. It exists nowhere else! Why is the government not providing incentives to groups who want a woodlot for sustainable harvesting? Why is the government not encouraging young people to take up this occupation?

In closing, I must say I was disgusted with the way this so called outreach to the population for input has occurred. The discussion paper and the slide presentation have left me more concerned than ever and I now fully understand why we are all in trouble on this planet. I am angry and if I can motivate others to action...I will do so!

Sincerely,

### **#33 – South Coast**

The important thing to realize when anyone is talking ZND targets is that forests are three-dimensional, four if you include time. The bulk of deforestation chatter relates to forests as mere abstract 2D polygons on a map, measured by area, not volume or mass, let alone timber quality or biological complexity.

While we may seem to be doing OK in those mapped two dimensions in some jurisdictions, the fact is that "managed" BC forests are rapidly becoming "shallower", as the age class averages shift towards more younger stands, and as the self-governing industry practices unscientific and pre-culminate "economic rotations" at more frequent intervals. Not only does this "new normality" mine down the ancient forest carbon sink and eliminate biodiversity, but the industrial output then contains so much immature sapwood as to make the task of sequestering carbon in short-lived junkwood products almost impossible.

I hope that other readers can elaborate further on these crucial points in any correspondence to ZND.

#### ***And a later submission:***

I am deeply concerned that the primary way ZND is being measured is by area, instead of volume or mass. Deforestation occurs in all three ways, and two of them aren't being mapped.

Our current forest cover in BC is the legacy of Sustained Yield Theory, where a constant flow by volume could be extracted from the forests, theoretically indefinitely, by ensuring that harvest did not surpass natural growth rates.

But ecological reality is always more complex. The simple SY concept did not foresee such catastrophes as the Mountain Pine Beetle, nor did it honestly account for the steady decline in wood quality as old growth cedar and fir was essentially being mined, and replaced with inferior younger growth. Now a much higher percentage of southern BC's forests are very young, and thus shorter in stature and volume, and lower in crucial carbon mass.

So I would propose that this ZND program also count net volume and carbon mass of forests, as these are more important measurements than mere area. This "triple bottom line" accounting is being done all over the world. In some of the tropical rainforests where clearcutting is now forbidden, large areas have still been severely degraded by commercial high-grading, leaving a forest that is fragmented, roaded, thinned out and missing various species. This practice of highgrading has occurred in BC as well, but in even more insidious ways. Most recently, it was actually encouraged by the Ministry of Forests' poorly-conceived "take or pay" stumpage system, in which the best "money trees" in many watersheds were "cherry-picked" while vast amounts of low grade timber were logged and merely burned or left on site to rot. This "non-market residue" may not be accurately accounted for in the District-level rate of

cut, and the high-quality clear old growth wood will never be replaced unless we plan for much longer rotations.

A similar irrational importance about net area over net volume is also applied in mainstream media to the measurements of Arctic ice as the climate warms up. The area of ice seemed to increase last year, making some people imagine that the climate crisis was politically exaggerated.

But we must understand the depths of long-range scientific analysis, and not forget that much of the sea ice in the Arctic Ocean this year is very thin and very young, and could all disappear again by September.

Likewise, our best laid plans for "sustainable forestry" can all disappear in a few short years as beetles, weevils, blights and fires whittle away at huge areas of BC's forests. Precautionary ZND would require a significant and measureable buildup of forest and carbon volume in BC forests to counteract these negative climatic trends.

### **#34 – South Coast**

I know this legislation was just introduced yesterday, and comes from the Ministry of Forests & Range - but is this something Local Governments need to be aware of? As far as legislation goes it is pretty vague, to say the least, but could potentially have impacts on LG's (RDs and/or municipalities) depending on how "forest land" is defined - which to this point it isn't.

From the new release:

"The three keys to achieving zero net deforestation are to avoid, minimize and mitigate deforestation. Sometimes the loss of forest land to other purposes, such as housing or highway development, is necessary. In these cases, the preferred option is to minimize the footprint and mitigate the impacts by creating new forests on previously non-forested land." It is the "such as housing" part that maybe needs some clarification.

### **#35 – South Coast**

A few ideas on raising awareness of ZND efforts

1/ The issue of site C came up at the Victoria meeting (and probably the others). While the reduction of deforestation is planned to be voluntary, it would be really helpful to identify some high-profile leading participants, and if the Site C project could be convinced to come on board it could result in positive (green) PR spin for them and a higher profile for ZND efforts. There may be other potential "leader" projects that could be identified. Making a big deal of success stories early on could raise awareness.

2/ Time-limited incentives? A sense of "urgency" (real or not) can sometimes impel affected parties to pay more attention to existence of a government program if they have a sense that a benefit to them may expire on a given date. (Limited-duration incentives would then be followed by next-generation incentives - you will always need them - but even setting an artificial deadline could draw attention.)

3/ Work with other interested groups to bring in grassroots connection, e.g. schools, environmental groups, etc. You know about CFS' project under development which will allow any public users to comment on the accuracy of deforestation polygons via a Google Earth interface - introduction of this

will probably be through community groups, schools, university classes, etc. to get young people involved. These are not ZND stakeholders but the effect can trickle up if enough volume is achieved.

4/ Charitable donations are tax-deductible at a certain rate, while political donations are tax-deductible at a higher rate. It is worth considering whether donations related to ZND efforts, eg to afforestation groups such as Tree Canada, could be made deductible at a higher rate - and possibly retroactive so as to encourage the donors who've already come forward.

### *#36 – South Coast*

In general I think BC does a pretty good of reforesting areas that that have been harvested. However here are a couple suggestions:

- Provide incentives to municipalities and cities to require planting trees in every new land development that requires the clearing of vegetation. Examples are trees around houses, along streets, parking lots and adjacent to stores. The exact species of tree may vary from fruit trees to trees that do well in urban areas or along busy streets. In summary, encourage urban forestry. Incidentally, businesses with trees close by encourage more customers.
- Require forest companies to have longer tree rotations
- Insure adequate stocking in all older cut-blocks
- Plan cut-blocks to have lots of edge so that harvested areas are easily re-seeded by neighbouring trees.

Thanks,