



Drax Independent Advisory Board
May 19th & 20th, 2021, Telcon Meeting
Timings: 14:00 – 17:00 BST

Attendees

IAB: Sir John Beddington – IAB Chair (JB), Lord John Krebs (JK), Professor Sam Fankhauser (SF), Professor Virginia Dale (VD), Forest Research represented by Robert Matthews (RM).

Drax: Rebecca Heaton – Head of Climate Change (RH), Laura O'Brien – Head of Biomass Sustainability Compliance (LOB), Emma Persson – Renewables Engagement Officer (EP), Matthew Rivers – Director of Alternative Fuels Origination (MR), Alan Knight – Director of Sustainability (AK), Jonathan Oates – Director of External Affairs (JO), Daphne Vlastari – Public Affairs Manager (DV).

Other: Professor Gary Bull (GB), Department of Forest Resources Management at the University of British Columbia, Canada, Jeremy Williams (JW), President at ArborVitae Environmental Services Ltd and Jim Thrower (JT), President at Westwood Fibre (attending from 15:00 – 17:00).

Introductory session:

1. JB opened the meeting, introduced the IAB panel and gave an update on the board's membership. Elena Schmidt is leaving the IAB to take up a new post on the Roundtable on Sustainable Biofuels.
2. RH updated the IAB on Drax activity and introduced Drax representatives on the call.
3. MR asked for IAB insights on how to develop the metrics for the Healthy Forest Landscapes (HFL) programme.

Pinnacle acquisition and Drax in Canada forests

4. MR introduced Pinnacle. He explained how the pine beetle infestation in Canada has been an opportunity for the pellet industry to utilise dead and dying trees and material that would have otherwise been burned at the roadside. MR explained that the wood attacked by pine beetle decays, making it unusable for sawmills.
5. MR explained the capacity of the Pinnacle plants in Canada and in the US and explained how most of the material that Pinnacle uses for pellets (around 80%) is derived from sawmill residues. The transport and shipping are also cost and carbon efficient.
6. The landscape and conditions of BC and western Canada are different to the US South. Differences include a history of wildfire, disease and pine beetle infestation. Drax recognises that there are protected areas of Old Growth and primary forest, specific biodiversity and wildlife considerations, e.g. fragmented Caribou habitat, and that it's vital to engage with First Nations, the Government, and all stakeholders.
7. Under Canada's harvesting regime, trees are processed at the roadside. This results in large volumes of low-grade roundwood, logs and treetops which are all unsuitable for sawmilling. To reduce the risk of wildfires, BC regulations require the operator to burn these piles and/or return some material back to the site. It's more efficient to send the material that is unsuitable for sawtimber to a pellet plant in log form than to pulverise at the roadside. It's



also better for the climate to use that material to make pellets to generate renewable electricity – displacing fossil fuels – than burning it at the roadside.

Presentation of Canada forests by Gary Bull, Jeremy Williams and Jim Thrower

8. GB introduced the team for a session on Canadian forests. He began by highlighting the importance of First Nations in Canada, in particular in BC.
9. Natural disturbances affect the way that forests are managed in Canada. Fire disturbance is one of the biggest sources of CO₂. While the soil needs to be heated up for seed germination so the forest can regenerate, wildfires remain a challenge. One way to mitigate the risk of fires is to burn “slash” piles at the roadside. There are studies that try to estimate the amount of CO₂ that is emitted in the wildfires.
10. The other major natural disturbance is mountain pine beetle. Climate change has accelerated the impact of these beetles in the last 20 years. The impact is even more severe than wildfires. The amount of forest that has been destroyed by the pine beetle is greater than the land size of England. Once attacked, these forests need to be cut and cleared to limit the spread and damage caused by the pine beetle. This explains why harvesting increased during the height of the beetle infestation.
11. JT outlined sawmill production and recent trends over the past 20 years. Harvesting increased in 2006 due to pine beetle kill and then fell as the BC government reduced the annual allowable cut, which reduced sawmill consumption.
12. JW set out the historical context of current policy frameworks in BC, including public protests and resulting policy and legislation, particularly around old growth and forestry practices. These policy changes also affected First Nations and land use plans.
13. GB explained that there was an effort to apply ‘ecosystem management’ in 2010 and that BC was the first province to have a comprehensive climate change policy. In 2008 it was recognised that there needs to be a bioenergy and forest residual strategy because of the increasing slash piles being burned at the roadside.
14. **Old growth:** GB explained that the majority of BC’s coastal timber is old growth. These forests have a lot of value as they are iconic to the BC image, and have a lot of biodiversity, tourism, spiritual and cultural values. The government states that a tree is considered to be old growth if it is 250 years old on the coast and 140 years old in the interior.
15. Most of BC forest has already been disturbed by human activity, with only some forest areas remaining intact in the northern parts. There is much human influence on the forest, and they are no longer the same as pre-industrial forests.
16. **Forest Certification** – there are third party certification systems in BC to assess the sustainability of harvesting and procurement of forests: the Sustainable Forestry Initiative (SFI), Forest Stewardship Council (FSC), and Programme for the Endorsement of Forest Certification (PEFC).
17. **Annual Allowable Cut (AAC)** – JW explained that the AAC is determined by the BC Chief Forester. It is a rigorous process involving analysis and modelling. Less than 40% of land base is available for timber harvesting and an even smaller amount is being harvested in the



interior. The full AAC is often not even met. JT added that every logging truck is weighed and has a tracking number enabling the government to track every load from source to market.

18. **Intact forest landscapes:** This is an area that has had no commercial forest activity in it and has no roads in it – i.e. an area that is inaccessible with little human presence. These areas are important as their ecology is different than in managed forests. Many of these intact forest landscapes have protected areas where logging isn't allowed.
19. To conclude, GB outlined the main points from the presentation.
20. JB thanked and closed the meeting.

Day 2

Introductory session:

21. JB opened the session and introduced the minutes and matters arising from the February meeting.

Update on IAB progress so far

22. RH and EP presented a summary of recommendations and actions from previous meetings and shared a summary of topics for further discussion.
23. RH outlined updates and improvements to the Healthy Forest Landscapes programme (HFL) and Catchment Area Analysis (CAA) that RP is working on.
24. The Board said that some of the metrics in HFL, such as biodiversity and socioeconomics, need further development and refinement.

Summary of opportunities and considerations in Canada, led by Gary Bull

25. JB welcomed GB, JW and JT who introduced this session's topic on Canada that highlighted First Nations, Biodiversity, Climate Change and Sustainability.
26. The Board asked what the opportunities in each of these four areas would be, and what the recommendations for Drax would be.
27. GB spoke about the opportunities and considerations for Drax regarding First Nations.
28. The Board asked about First Nations' view on forestry. GB explained that the land ethic of the First Nations is very powerful. They see the land as part of their identity and reconnecting with the land is a central goal for them.
29. The Board asked about Pinnacle's prior engagement with First Nations. JW explained that Pinnacle hadn't previously engaged extensively with First Nations because they only take the residuals and aren't involved in the primary harvest.
30. The Board asked about the pine beetle infestation in the BC Interior that caused significant damage over the last 20 years.

31. JT confirmed that the majority of deadwood has been salvaged in this pine beetle epidemic. Most of pine stands killed by pine beetle have been harvested and regenerated. Where it is economically feasible, these diseased pine stands are picked up off the ground and delivered to pulp or pellet mills. This opportunity still exists, and the highest and best use of this wood is to be used for pulp mills, and then bush grind for pellet mills.
 - a. The Board asked if climate change could drive more outbreaks and JW agreed that it could. Climate change increases the risk of drought in the interior, which is already typically dry. The increased dryness weakens the trees and makes them more susceptible to pests.
 - b. GB added that the best way to control the impact of pine beetle is to cut diseased trees early to prevent further spread of the beetle.
32. SF noted that it would be interesting to map the pest outbreaks and added that Oxford University are good at doing this type of analysis. SF also asked about the regulation and who regulates for sustainable timber. GB explained that foresters of BC and the government have been very conservative in how forests are managed. In the working forest, there are a myriad of issues including fires, pests, etc.
33. The Board asked what Drax should do in terms of biodiversity. GB explained how Drax can get involved in that area. His suggestions included working with academics to examine biodiversity in a particular area in more detail. GB and JK then suggested that Drax look to produce a study in western Canada similar to the literature review by Pilio¹ in SE USA (commissioned by the IAB), and the literature review by Petrokofsky et al (2021)² which also looks at the wood pellet industry's impact on biodiversity.
34. Regarding wildfires, GB explained there are already a number of ongoing preventative measures and activities in BC. He highlighted that there's an opportunity for Drax to engage directly with communities to help make them more resilient to wildfire outbreaks.
35. JB summarised the meeting and noted that there were many opportunities and considerations for these key areas, and that the IAB will need to discuss these with the Drax team when moving forward with the IAB's work programme.
36. JB thanked and closed the meeting.

¹ <https://www.piliogroup.com/>

² <https://www.sciencedirect.com/science/article/abs/pii/S0378112720315425>