

**Drax Independent Advisory Board
November and December 2020**

Due to the Covid crisis, the planned whole day face-to-face meeting in November was replaced with two half-day Teams meetings.

**Drax Independent Advisory Board
November 25th, 2020, Telcon Meeting**

Invited Attendees

IAB: Sir John Beddington, Lord John Krebs, Professor Sam Fankhauser, Professor Virginia Dale, Elena Schmidt, Forest Research represented by Robert Matthews.

Drax: Laura O'Brien, Rebecca Heaton, Selina Williams, Kyla Cheynet, Emma Persson

Other: Catherine Bottrill, Cécile Girardin, Russell Layberry (Pilio)

Agenda:

- 1. 13:00 – 13:30: Introductory session**
 - 1.1. Welcome (John Beddington)
 - 1.2. Minutes and actions arising from September meeting
 - 1.3. Letter from Drax CEO Will Gardiner to IAB
 - 1.4. Brief introduction to the meeting and Drax representatives (Rebecca Heaton)

- 2. 13:30 – 15:30 Bioenergy and biodiversity: a literature review of Drax's direct impact on biodiversity in SE US forests**
 - 2.1. Introduction to Drax's presentation (Laura O'Brien, Drax)
 - 2.2. Presentation on 'Drax biomass: approach to biodiversity conservation' (Kyla Cheynet, Drax)
 - 2.3. Presentation of literature review on the biodiversity impacts of biomass from Southeast US forests by Pilio (commissioned by the IAB)
 - 2.4. Discussion – focusing on:
 - 2.4.1. What are the challenges and how can Drax meet these?
 - 2.4.2. What are the opportunities and how can Drax meet these?
 - 2.4.3. Recommendations for Drax

- 3. 15:30-16:00: Update on next meeting**
 - 3.1. Independent review of Carbon Accounting commissioned by IAB

- 4. 16:30 – 16:30: Conclusions and wrap up**

Drax Independent Advisory Board
Monday, November 25th 2020 Teams / Telcon

Attendees

IAB: Sir John Beddington (JB), Lord John Krebs (JK), Professor Sam Fankhauser (SF), Professor Virginia Dale (VD), Forest Research, represented by Robert Matthews (RM). Apologies were received from Elena Schmidt.

Drax: Rebecca Heaton (RH), Laura O'Brien (LOB), Kyla Cheynet (KC), Selina Williams (SW), Emma Persson (EP).

Other: Catherine Bottrill (CB), Cécile Girardin (CG) (Pilio¹).

Introductory session

1. JB opened the meeting.
2. JB said he had received a letter from Drax CEO Will Gardiner saying that he was happy with the work of the IAB and committing to a study on the physical impacts of climate change on Drax supply chains, which had been raised by the IAB.
3. RH introduced the meeting and explained that the IAB had commissioned Pilio to undertake a literature review of the impact of biomass on biodiversity in the US South. This meeting is to discuss that review in the context of the overall Drax approach to biodiversity.

Drax: Approach to biodiversity conservation

4. LOB explained that the current legislation on biodiversity was included in the UK Renewables Obligation.² Drax demonstrates compliance with this through the Sustainable Biomass Programme (SBP³) risk assessment and stakeholder consultation. A discussion followed where LOB clarified that:
 - a. Audits were conducted in the field as well as on paper.
 - b. There is a defined process to follow-up on any issues that also includes a stakeholder consultation process. LOB added that all Drax's wood pellet suppliers are now certified by the SBP.
 - c. In the last two years, the SBP has moved to full multi-stakeholder governance. In addition, all certificates are issued by independent certification bodies.

Drax-owned biomass pellet mills in the US southeast: Approach to biodiversity

5. KC presented Drax's approach to biodiversity conservation for Drax's pellet mills. She explained that the landscape is highly biodiverse and has been managed for generations. KC explained that most of the forest is managed by private landowners. Pine and hardwood are evident across all ownerships as much of the US southeast was originally a pine landscape.

¹ <https://www.piliogroup.com/>

² <https://www.legislation.gov.uk/ukdsi/2015/9780111138359/contents>

³ <https://sbp-cert.org/>

6. Drax uses a range of different certification schemes – the Sustainable Forestry Initiative⁴, Forest Stewardship Council⁵, Program for the Endorsement of Forest Certification⁶ and American Forest Foundation⁷. These certifications help evidence the SBP standard, and the SBP standard includes carbon assessments that are not considered in these other existing forest standards. Drax uses several standards to ensure all aspects are covered. JK asked how these different schemes are related and asked for clarification on what each did and what they cover.
7. KC explained how areas of known high biodiversity were identified and protected, using various tools, such as NatureServe, to identify areas of known occurrences of species, and working with state and federal biologists. NatureServe looks at quantities and health of species/populations to determine their ranking and mapping. This process is for Drax-owned mills, but other pellet mills are also required to do the same level of species protection.
8. KC explained forest structure and composition, and that the main forest operations were thinning and clearcutting. Drax encourages best practice – such as maintenance of streamside management zones, snag and mast tree retention, proper stream crossings and protection of special features. Drax works with a range of landowners and partners including the American Forest Foundation to achieve conservation and research objectives.
9. Following a discussion, IAB is considering exploring in more detail the species distribution modeling that NatureServe is undertaking. IAB also asked for clarification on the financial and geographical scale of Drax's partnership programmes on conservation and what other key players in the biomass industry are doing.

Literature review of the impact of biomass sourcing on biodiversity in US southeast forests - presentation by Pilio

10. The IAB commissioned the review to examine the evidence of biodiversity impacts in the US southeast forests where Drax sources its fibre for bioenergy.
11. CB and CG defined biodiversity as the diversity of species, which is a function of species richness (the number of different species in an area) and abundance (population density of each species). Taxonomic groups included all found in the literature from microorganisms to plants, insects, reptiles, mammals and birds.
12. Most primary forest in the US southeast has already been logged and converted to either agriculture (e.g. cotton), plantation pine forestry, and suburban development. The forests in this region are mainly privately owned, managed secondary forests.
13. More than 40% of Drax's biomass pellets is sourced from sawmill residues. The rest comes from low-grade material such as treetops, limbs, misshapen and diseased trees and thinnings.
14. The review focused on the impact of biomass sourcing in managed plantation forests in the US southeast. The main impacts of Drax's operations on plantation forests are to maintain managed forests in a managed state, specifically by supporting the thinning regime. As

⁴ <https://sfidatabase.org/>

⁵ <https://fsc.org/en>

⁶ <https://pefc.org/>

⁷ <https://www.forestfoundation.org/>

Drax's operations do not directly affect the clearcutting regime, clearcutting was not the focus of review. While Drax do not intentionally target previously dead material for feedstock, all harvests remove some potential coarse woody debris (CWD) as well as create some CWD. The review highlighted the importance of understanding the impact of Drax's operations on the dead wood material composition of the forest floor.

15. The discussion noted that Drax's operations positively impact biodiversity by ensuring the economic viability of owning and managing forest land. Examining the evidence on the impact biomass revenue has on land use change was highlighted as a key consideration for biodiversity. We know that land use change is the number one driver of biodiversity loss on the planet. As such, the question *what is the counterfactual for Drax's operations in these forests?* is central to understanding the impacts of Drax's operations on biodiversity at the landscape scale.

16. Key findings

a. Thinning:

- In plantation forests, thinning generally benefits biodiversity.
- Thinning improves biodiversity by protecting the forest stand.
- Thinning increases the populations of most species.
- The timing and proximity of pine harvests affect biodiversity.
- More evidence is needed on critical thresholds of thinning for biodiversity.

b. Regeneration harvest:

- Clearcutting has mixed effects on wildlife depending on the species.

c. Coarse woody debris:

- Dead wood material refers to fallen or standing dead trees and the remains of large branches on the ground in forests: coarse woody debris, fine woody debris (FWD), and standing dead trees (snag)
- There is clear evidence in the literature that CWD is good for biodiversity.
- The majority of studies report that the effect of CWD harvesting is marginal.
- Most studies investigated the effects of CWD on one or two species populations.
- It is clear that leaving snags provides important ecological functions.

How much dead wood material should remain in the forest floor?

- Pilio found clear evidence that some CWD is good for biodiversity. However, evidence on the amount of woody debris required to establish critical thresholds for biomass harvesting is not available.

17. Evidence gaps

- Lack of dead woody material quantities and heterogeneity studies.
- Lack of use of control group studies.

18. Recommendations to Drax:

- Continue to source bioenergy feedstock from thinnings.
- Develop evidence-based thresholds for thinning practices.
- Leave sufficient CWD in the forest.
- Design forest stewardship initiatives with biodiversity outcomes.

19. Recommendations for further research and collaboration:

- Quantify the changes to forest biomass resulting from Drax's purchase of bioenergy feedstock.
- Continue exploring the impact of Drax's sourcing through the Healthy Forest Landscape initiative.
- Collaborate with forestry research community and other bioenergy companies to address evidence gaps.
- Expand the insights of this review and undertake specific research of forests in other geographic regions around the world Drax sources biomass feedstock.
- Engage with the Science-based Targets for Nature framework development.

JB opens discussion:

20. Brash removal and retaining brash on site: Looking at other countries' guidelines – eg the UK is one such, would be useful.
21. Clearfelling: Harvest unit size and proximity to one another are important for forest design and planning and biodiversity. The SFI forest management standard looks at size of a clearcut unit as well as adjacency.
22. Land use change was not in the scope of the Pilio study. The IAB noted that a change of management or use in forest areas may need to be considered in a separate study.
23. This study looked at the literature on the impact of forest management on biodiversity. The next step is to consider the impact of Drax on forest management.
24. Drax goes beyond regulations for carbon by adopting RM's principles in its responsible sourcing policy. Discussion on how Drax could set policies that go beyond regulation for biodiversity
25. The next IAB meeting will look at carbon accounting. The IAB commissioned a review on the different processes to account for carbon.

JB: Thanks and closes meeting.