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22nd February 2022

Shared Vision, Forest Strategy and Forestry Programme

Dear Colin,

Further to our meeting on 2nd February 2022 with new Shared Vision, Forest Strategy and Forestry Programme. The Environmental Protection Agency (EPA) welcomes this opportunity to provide input at this early stage of strategy development and we set out some initial observations below. We look forward to participating and inputting further when the wider consultation process commences.

The proposed draft vision

The vision seems logical and highly ambitious. However, it would benefit from a clear recognition of the role of forestry in carbon sinks. The 2021 published Fit for '55 package of the EU proposes that land and land-based activities such as forestry will be needed to offset residual greenhouse gas emissions as we move towards 2050. Forestry will be key in this respect.

It may also be worth reflecting the contribution of increased afforestation rates in the 2020's, post Project Woodland, to a healthy productive forest in 2050. Without these actions the benefits in 2050 could not have been fulfilled.

What is your vision for forests now and in the future?

Climate

The forest sector constitutes an important source of CO2 removal from the atmosphere and these removals are reported by the agency on an annual basis as part of the overall Land Use, Land Use Change and Forestry (LULUCF) sector emission and removals estimates submitted to the EU and the United Nations Framework Convention on Climate Change (UNFCCC). However, there has been a noticeable reduction in the absolute value of this sink or removal activity due to the current age profile of our national forest stock. This has been driven by two factors. Firstly, a significant reduction in the areas afforested in comparison to that in the 1990's and early 2000's. Furthermore, the agency notes the vision as being the right trees in the right place. This is particularly apt given that in past years significant afforestation occurred on peat (organic soils)

from which there can be large emission of greenhouse gases to the atmosphere. Recent national research has shown these emission levels to be higher than originally thought.

Current low afforestation rates (c.2000 ha) are well below the planned 8,000 ha foreseen annually. This combined with increased timber harvest will lead to further reductions in the ability of our national forests to contribute to CO2 emissions removals going forward. Indeed it is foreseen that by 2025 the forest sector in Ireland will be a source of greenhouse gas emissions to the atmosphere.

The policy position of carbon neutrality by 2050 will depend on the forest sector to act as a carbon sink to offset residual emissions. Without action now and in the short to medium term to increase afforestation rates, this policy position is on doubt. The EPA is of the view that every effort should be made to address this and will continue to provide whatever input is necessary.

Water quality

Approximately 11 % (770,000 hectares) of the land area of Ireland is under forest cover with conifer species accounting for 71% of this area (National Forest Inventory; 2017).

The Draft Third Cycle River Basin Management Plan (2022-2027) identified forestry as the third most prevalent significant pressure, impacting 229 waterbodies or 14% of the 1604 At Risk water bodies. High status objective water bodies are of particular concern given they are particularly sensitive to the impacts which can arise from forestry operations.

The impacts are caused by loss of sediment, nutrients and chemicals, and by alteration of the physical habitat conditions (hydromorphology) of streams. These impacts occur during afforestation, deforestation and thinning, and when ground conditions are disturbed, especially when the soils are organic as they are typically less stable than mineral soils.

In the past, the wrong trees have been planted in the wrong places (e.g. conifers on organic soils in upland areas) which has given rise to a significant legacy issue that needs to be managed as these trees mature and are harvested.

Inappropriately-sited forests and poorly-managed forest operations can negatively impact on water quality and aquatic habitats and species. The main issues, impacts and associated activities arising from forestry operations are summarised below:

Key issue	Water quality/environmental impact	Associated activities
Excessive fine sediment	– Clogging of gravels – Choking of river channel – Transport of chemicals & nutrients downstream – Landslides	– Thinning & clearfelling – Machinery rutting – Site clearance/preparation – Road construction – Forest drainage
Nutrients	– Eutrophication (phosphorus loss) – Toxic ammonium releases	– Fertilisation – Decomposition of brash matter
Hydromorphology	– Physical damage to habitat – Alteration of natural river flow regime and function – Bank erosion	– Land drainage works – Interception losses (mature canopy)
Pesticides	– Toxic impact to aquatic ecology	– Herbicides – Pesticides

Acidification	– Increased acidic runoff due to airborne pollutant capture – DOC runoff lowering pH and increasing acidity	– Planting conifer species on acidic soils – Forestry land drainage
Carbon	– Loss of carbon from forestry on peatlands (DOC to water and CO_2 to the atmosphere)	– Forestry land drainage
Biodiversity	– Reduced biodiversity & abundance of bird species	– Planting mainly conifer species

How can your organisation help deliver the vision and strategy?

- The EPA will continue to support Project Woodland and is in regular contact with the Forest Service, which will be maintained.
- The EPA has long supported and funded research relevant to emissions and removals from land use activity. This includes the University of Limerick SeQuester project that is currently being funded by the agency and that is assessing the potential role of forestry greenhouse gas removals in helping meet future climate targets.
- The EPA's regulatory expertise may be of assistance, as licensing issues are currently a significant problem in meeting afforestation targets a formal discussion on how the EPA may be able to assist on licensing issues may be appropriate.
- The EPA will also input any expertise at its disposal to discussions of the COFORD council and ensure key concerns are also raised there.
- The EPA will continue to compile statistics on emissions and removals from Forestry as part of its greenhouse gas Inventory reporting. The EPA is also planning to expand its greenhouse gas emission reporting to include forestry and wider land use emissions/removals in its summary reports.
- The EPA will continue to assess and report on the associated impacts of forestry on water quality.
- The EPA is willing to engage from a water quality perspective as it is important that the strategy avoid negatively impacting water quality with any forestry expansion.

Your priorities for the next Forestry Programme 2023-2027

Priorities as outlined in the draft shared vision are appropriate. However, we would like to stress the importance of increasing annual afforestation rates immediately so that the 2050 policy position of a carbon neutral economy can be reached. Furthermore, having learnt from past mistakes every effort should be brought to bear to have "***THE RIGHT TREES IN THE RIGHT PLACES FOR THE RIGHT REASONS WITH THE RIGHT MANAGEMENT SUPPORTING A SUSTAINABLE AND THRIVING ECONOMY AND SOCIETY AND A HEALTHY ENVIRONMENT"*.**

Climate

- It will be important to quantify the extent of forestry that will be needed, consistent with Ireland's climate commitments, and work backwards from there to determine the level of annual afforestation necessary to achieve that target. Whilst there will be significant uncertainty in such calculations, a range can reasonably be estimated (e.g. as a starting point using the work done for the EPA funded SeQuester project that supported the Climate Council's carbon budget deliberations). This quantification should then be refined and

improved on an ongoing basis (e.g. incorporating newer research or more accurate models) as evidential support for the activity being proposed in the Vision.

- In order to accurately reflect the impact of forestry actions in GHG Inventory reporting, detailed information on the environment (e.g. soil types) and nature of forestry activity and management will be required. The EPA is happy to engage with DAFM to discuss in detail what exact information will be required.
- For forestry to deliver the contribution expected in meeting Ireland's climate targets it is important that forests are "well managed", both from a commercial perspective and to maximise the carbon sink potential. Ensuring this will require regulatory oversight that can feasibly also produce the detailed information needed to accurately reflect activities in the greenhouse gas Inventory.
- As set out in the Vision ("…in the right place") it is important that forestry does not take place in areas and on soils where significant emissions from soils will occur as a result of afforestation, e.g. on organic soils such as former peatland.

Water Quality

- Legislation and best practice guidance for forestry activities are in place that should prevent impacts to water quality. EPA evidence shows however, that water quality impacts are still occurring. The strategy should address these ongoing issues, puts a process in place to figure out why these impacts are still occurring despite the tools that are in place, and then takes steps to address the issues.
- Our evidence shows that the presence of long-term stable forests can improve water quality. Well designed, sited and managed diverse forests can also provide significant multiple environmental benefits for carbon capture, flood mitigation, water quality and biodiversity.
- The EPA supports the principle of the right tree in the right place. For example, native woodland planted in low-lying poorly draining riparian zones can provide these multiple environmental benefits.
- The Coillte landbank is relatively fixed, 50% of forestry activity in on private lands. This limits the scope to drive forestry measures into the areas where they would have the most environmental benefits. The strategy should reflect a commitment to engage with, and further incentivise, those landowners that have the greatest opportunity to drive multiple environmental benefits from forestry in the right places.
- It is important that forestry is managed within a catchment management framework, and not just at coupe scale, so that the cumulative impacts of multiple activities in the same catchment are managed together.
- Conversely, when appropriate trees are planted in appropriate locations (e.g. along watercourses as Riparian margins) there is potential for forestry/woodland to play a role in reducing pollution from agricultural activity. Maximising this potential could be incentivised as part of the strategy.
- Forestry plays a key role in mitigation
    - The Forest Service are actively engaged with developing polices to achieve improved water quality outcomes and are now heavily engaged in the Areas for Action with LAWPRO.

- Increased water setback widths, the creation of native woodland buffers, the installation of silt fences and silt traps, and the slow-water damming of drains can reduce sediment & nutrient impacts.
- Careful application and management of herbicides and nutrients including appropriate setbacks can be effective in reducing impacts on water quality.
- The EPA is currently developing the evidence base for hydromorphological and acidification impacts which will support the identification of the best mitigation measures required.

Biodiversity

- It is important that planned afforestation and forest management is done in a way that improves biodiversity outcomes rather than causes negative impact. Some of the relevant factors are tree species selection, planting location and size. 'Win-wins' in relation to improving biodiversity are very possible if the right approaches are incentivised.
- In relation to tree species, research has shown native types are likely to benefit biodiversity most. Non-native coniferous monoculture conversely is unlikely to improve biodiversity and may even have a negative impact.
- Beyond species selection, the location and extent of afforestation plays a very important role with the greatest biodiversity benefits likely to be realised where the "bigger, better, more joined up" principles from the Lawton report are incentivised.

Yours sincerely,

Mary Frances Rochford

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