

# SUBMISSION ON DISCUSSION DOCUMENT “MANAGING EXOTIC FORESTRY INCENTIVES”

## SUBMITTER DETAILS

**FULL NAME:** Environmental Defence Society Incorporated  
**ADDRESS FOR SERVICE:** PO Box 91736, Victoria Street West, Auckland 1142  
**CONTACT:** Cordelia Woodhouse  
**TELEPHONE:** 09 302 2972  
**EMAIL:** [cordelia@eds.org.nz](mailto:cordelia@eds.org.nz)  
**DATE:** 22 April 2022

## 1. Introduction

- 1.1. This is a submission on “Managing exotic afforestation incentives: a discussion document on proposals to change forestry settings in the New Zealand Emissions Trading Scheme”, Ministry for Primary Industries (**MPI**) Discussion Paper No. 2022/02 (**Discussion Document**).
- 1.2. Environmental Defence Society (**EDS**) is a not-for-profit, non-government national environmental organisation. It was established in 1971 with the objective of bringing together the disciplines of law, science, and planning in order to promote better environmental outcomes in resource management.
- 1.3. EDS has a growing involvement in forestry matters. Following the gazettal of the National Environmental Standards on Plantation Forestry (**NESPF**) it published a review of the regulations, highlighting its deficiencies.<sup>1</sup> Since then it has held positions on various forestry working groups, such as the one-year review of the NESPF, seeking to make improvements to plantation forestry practices in Aotearoa New Zealand. In late 2021 it combined forces with other scholars in the native forestry industry to form the Native Forest Coalition: a coalition advocating for increased investment and prioritisation of native afforestation.

## 2. Summary of submission

- 2.1. EDS fully supports MPI’s proposal to remove the ability to register exotic species within the permanent forest category of the New Zealand Emissions Trading Scheme (**ETS**), without exception.<sup>2</sup> This is an overdue intervention in the ETS that will curb, to some extent, the acceleration of land use change from productive land into exotic afforestation. It also recognises the vast range of ecological, socio-cultural, landscape, and economic values that permanent indigenous forests have, and which exotics do not.

---

<sup>1</sup> Wright, Gepp and Hall, 2019, ‘A Review of the Resource Management (National Environmental Standards for Plantation Forestry) Regulations 2017, Environmental Defence Society, Auckland.

<sup>2</sup> Discussion Document, at 6.

- 2.2. The opportunity to leverage these co-benefits and address the climate and biodiversity crises simultaneously and synergistically will provide far superior outcomes for future generations and cannot be overstated. The latest cycle of Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Reports (AR6) underscores the mutual and reinforcing nature of biodiversity and climate change, and in particular cautions against focusing on mitigation without considering adaptation and long-term resilience.
- 2.3. From a purely ETS perspective, restricting the post-1989 permanent forest category will preserve the integrity of the system as an effective pricing mechanism that will drive gross emission reductions at a rate consistent with our emissions budgets and Nationally Determined Contributions (NDC) targets.<sup>3</sup> However, for reasons we set out below, the time horizons within which to assess policy interventions regarding such long-lived forestry assets should look well beyond budget periods and target dates. A long term and transformative lens is essential.

### 3. Long term, holistic thinking is critical to achieving the best outcomes for future generations

- 3.1. As signaled above, we think it is crucial to address the issue of (re-)designing ETS incentives through a long term, holistic lens in order to ensure the system delivers the best outcomes for Aotearoa New Zealand. This calls for visionary thinking and action beyond 2030; beyond 2050.
- 3.2. It also calls for an approach that acknowledges and addresses the crisis of biodiversity decline alongside climate change. They can and should be addressed in a joined-up way, as afforestation decisions taken now will have long-term impacts for both. They also present an opportunity to build climate resilience into the system. As stated in our response to the Climate Change Commission's 2021 Draft Advice for Consultation, "framing co-benefits and resiliency as part of the policy equation shifts the calculation of trade-offs, changes time horizons, and aligns with a Te Ao Maori view."<sup>4</sup>
- 3.3. The focus on building resilience aligns with IPCC reports, and most notably the Climate Change 2022: Impacts, Adaptation and Vulnerability report. That report is explicit in outlining how adaptation practices should include restoring and expanding natural species and structural diversity. In contrast, "planting large scale non-native monocultures, which would lead to loss of biodiversity and poor climate change resilience" should be avoided.<sup>5</sup>

---

<sup>3</sup> The cumulative effect of NDCs (assuming implemented) on global greenhouse gas emissions in 2030 would in any case "make it *likely* that warming will **exceed** 1.5 degrees Celsius during the 21<sup>st</sup> Century" according to IPCC AR6 WG III, Mitigation of Climate Change – Summary for Policymakers, at B.6. Further, B.6.1 notes that "Policies implemented by the end of 2020 are projected to result in higher global GHG emissions than those implied by NDCs, indicating an implementation gap.

<sup>4</sup> EDS Submission on Climate Change Commission's 2021 Draft Advice for Consultation at [3.8].

<sup>5</sup> IPCC AR6 WGII, Climate Change 2022: Impacts, Adaptation and Vulnerability, at 138.

- 3.4. The Discussion Document acknowledges that the introduction into the ETS of a new permanent post-1989 forest category, that is agnostic as to species, would incentivise widespread land use change to permanent exotic forestry due to:
- a) exotic species being cheaper and quicker to establish;
  - b) exotic species having a faster sequestration rate and therefore higher return on investment through their relative generation of New Zealand Units (NZUs); and
  - c) 'permanent' forests offering a longer period of time over which to enjoy such returns.
- 3.5. This is particularly relevant, as the broader ETS settings already favour exotic species due to factors (a) and (b) above. The result has been an acceleration of land use change to afforestation and a proliferation of pine plantations.<sup>6</sup> Consequently, we are now dealing with a range of problems associated with this, including significant erosion and sediment pollution; increasing spread of wilding conifers;<sup>7</sup> limited climate resilience in the face of increasing fire risk, drought, flooding, and the threats of pest incursions and disease; more limited temperature management due to the albedo effect, and other downstream effects of exotic plantings that become unstable on steep, erodible land.
- 3.6. These outcomes are not the product of an intentional policy strategy to favour exotics. They are simply a reductive function of a blunt economic instrument that monetises a forest's ability to sequester carbon at the expense of biodiversity values, and buys time to – or, more accurately, *delays* – transition to a low emissions economy.
- 3.7. The latest IPCC report notes that “AFOLU [Agriculture, Forestry and Other Land Uses] mitigation options, when sustainably implemented, can deliver large scale GHG [greenhouse gas] emission reductions and enhanced removals, but cannot fully compensate for delayed action in other sectors”.<sup>8</sup> There is a real danger that an oversupply of exotics will lead to a slower transition.
- 3.8. Limiting the permanent forest category to indigenous species presents an opportunity to correct these unintended consequences of the ETS, to counterbalance the incentives in support of indigenous afforestation, and to create a legacy of biodiverse permanent indigenous forest cover to secure the survival of New Zealand's unique flora and fauna, for the benefit of future New Zealanders. In short, this is an opportunity to encourage investment in the forests we need and want, and to discourage investments in those we have enough of.

---

<sup>6</sup> There are 2.1million hectares of exotic plantation forestry in Aotearoa New Zealand, of this 1.7 million is productive. See: <https://www.mpi.govt.nz/forestry/new-zealand-forests-forest-industry/new-zealands-forests/>

<sup>7</sup> There are already 1.8 million hectares covered by wildings and this is expected to increase 20% by 2030: see <https://www.mpi.govt.nz/biosecurity/long-term-biosecurity-management-programmes/wilding-conifers/>. The cost of weed management will increase as the planting of pines continues.

<sup>8</sup> IPCC AR6 WGII, Climate Change 2022: Mitigation of Climate Change - Summary for Policymakers, at C.9.

#### 4. Risk of reliance on emissions *removals* in lieu of emissions *reductions*

- 4.1. The ETS was designed as a tool to drive gross emissions reductions by putting a price on carbon and a cap on emissions. With a cap now in place, together with an emissions budget, the price of NZUs from afforestation is rising and afforestation is becoming increasingly profitable. *Exotic* forests sequester carbon quicker than indigenous species and are both easier and cheaper to establish than indigenous. *Permanent* exotic forests also earn NZUs for longer than production forests. As such, MPI has estimated “that the ETS could drive upwards of 645,000 hectares of exotic afforestation over this decade” – over a 30% increase on current production forestry coverage.<sup>9</sup>
- 4.2. The effectiveness of the ETS as a tool to drive gross emissions reductions relies on a continually increasing carbon price, and at a rate that will discourage delayed action (or worse, encourage inaction). But that cost trajectory – and its influence on emissions - could be compromised, or indeed materially undermined, by an over-supply of NZUs resulting from unconstrained permanent exotic afforestation over the next few years.
- 4.3. The risk of such perverse incentives and consequences (such that the economics favour reliance on removals rather than deep, rapid and sustained gross emissions reductions) simply cannot be tolerated. It is unconscionable to transfer the burden of climate action to future generations in this way. As the IPCC report on physical science makes clear, we need to be *strengthening* policies that will deliver rapid and deep emissions reductions and implement them without delay.
- 4.4. On the contrary, a permanent forest category that is restricted to indigenous species does not present such a risk. The time, difficulty, and costs involved in establishing indigenous forests (and thus return on investment) is unlikely to result in land-use change at the same scale and speed as exotics. The slower but sustained sequestration by indigenous species, will also ensure that the quantum of NZUs generated is consistent with a cost trajectory expected to encourage genuine decarbonisation efforts. Limiting the permanent forestry category to indigenous species therefore supports the underlying policy intent of the ETS.
- 4.5. It also enhances indigenous biodiversity outcomes. Limiting permanent forests to indigenous species will result in a climate-resilient, biodiverse, and culturally significant legacy for future generations. It will better align with the policy intent of the proposed National Policy Statement on Indigenous Biodiversity and Aotearoa New Zealand Biodiversity Strategy. Given the staggering rate of New Zealand’s biodiversity loss,<sup>10</sup> this cannot be overlooked.

---

<sup>9</sup> Discussion Document, at 12.

<sup>10</sup> As depicted in the recently released *Environment Aotearoa 2022* report, see Figure 1, at p 18.

*Prevent exotic forestry from registering in the permanent post-1989 category: No exceptions*

- 4.6. The position set out above also justifies the adoption of a clear and robust policy position on any future prospects for managing ‘permanent’ exotic afforestation under the ETS and removes market uncertainty: exotic species should be excluded from the permanent forests category, without exception (Section 8, Option 2).
- 4.7. This is consistent with the Climate Change Commission’s Recommendation 25 to design a package of policies to **reduce reliance on forestry removals** and **manage the impacts of afforestation** including:
- a) amendments to the ETS to manage the amount of exotic forest planting driven by the scheme; and
  - b) **a clear position** on the role and desirability ... of permanent exotic forests as carbon sinks and amending the ETS and other policies accordingly.

It is instructive that “[t]o provide a long-term carbon sink beyond 2050, the Climate Change Commission’s assumption was such forests would have **long-lived tree species that grow and sequester carbon for hundreds of years**”<sup>11</sup> and that “in general, **permanent forests established as carbon sinks should be indigenous species and support biodiversity gains.**”<sup>12</sup>

- 4.8. Further arguments for this position include the fact that exotic species are already well catered for under the ETS, and restricting such species to production forests:
- a) better reflects their lifespan relative to indigenous species (see comments regarding the question of permanence vis-à-vis exotics below);
  - b) aligns with the assessment criteria of producing substitutes for emissions intensive products and energy sources (Assessment criteria 3);<sup>13</sup> and
  - c) is more consistent with Assessment criteria 8’s concern with operational feasibility, resilience to future changes, the avoidance of unintended consequences, minimisation of administration and compliance costs, maintenance of regulatory certainty, and support for the purpose and integrity of the ETS.<sup>14</sup>
- 4.9. Assessment Criteria 8 is particularly relevant to assessing the idea of opening up the permanent forest category to ‘transitional’ exotic forests. As noted in “Transitioning Exotic Plantations to Native Forest: A Report on the State of Knowledge”,<sup>15</sup> there is simply insufficient empirical evidence available to support their inclusion in the permanent category. Given the approach is unproven, and objectively risky for the reasons set out in the publication cited above, EDS does not support transitional exotic forests coming within the permanent forestry category.

---

<sup>11</sup> As noted in the Discussion Document, at 26.

<sup>12</sup> Ibid.

<sup>13</sup> Discussion Document, at 14.

<sup>14</sup> Discussion Document, at 14.

<sup>15</sup> MPI Technical Paper No: 2021/22.

4.10. While EDS cautions against the inclusion of transitional exotic forests in the permanent forest category, this would not preclude the subsequent registration of transitional forests in the permanent indigenous forest category post-transition (ie. once fully indigenous).

*Good reason to question the permanence of 'permanent' exotic forests*

4.11. The Discussion Document variously acknowledges “the short lifespan of most exotics (especially *Pinus radiata*)”, noting that “[u]nlike many indigenous trees, few exotic species are long-lived in New Zealand (for example, *Pinus radiata* has an average lifespan of 80-90 years) and without ongoing management there is no certainty that a self-sustaining forest will develop or provide biodiversity or other benefits.”<sup>16</sup> These factors suggest that the reference to ‘permanent’ exotic forests, at least with respect to pines, may be something of a misnomer and call into question the permanency of removals beyond the NDC target dates.

*Compliance and enforcement*

4.12. The issue of monitoring compliance need not be over-complicated. Stock composition can (and indeed should) be maintained through active forest management pursuant to a forest management plan, which would cover animal and insect pest control, and should be a prerequisite to registering in the permanent forest category.

4.13. EDS understands that the NESPF is set to be reviewed later in 2022, with the possibility it will be extended to regulate all forestry types (i.e not limited to production forestry). If so, and the environmental effects of permanent forestry are to be regulated by the NESPF in future, this would be the logical place for forest management plan requirements to be mandated.

## **5. Wider benefits of permanent indigenous afforestation should not be understated**

5.1. The Discussion Document canvasses some of the long-term environmental risks associated with exotic forests,<sup>17</sup> and concludes that:

*“Acknowledging these risks, the Government **does not consider it appropriate to provide incentives that could lead to a legacy of large areas of concentrated and permanent exotic forests. This will not provide a prosperous and sustainable footing for New Zealand in the long-term.**”<sup>18</sup>*

We strongly agree with this conclusion.

---

<sup>16</sup> Discussion Document, at 6.

<sup>17</sup> See pages 6, 14-15.

<sup>18</sup> Discussion Document, at 6.

5.2. Other environmental issues associated with exotic forests include:

- **impact on the water cycle:** conifer forests reduce water yields for aquifers, streams and rivers significantly more than pasture, putting at risk water supplies for other land uses and amplifying drought conditions;
- **the albedo effect:** conifer plantations are darker than either pasture or native forest, and thus absorb more solar radiation, amplifying the effects of climate change and leading to higher temperatures;
- the **risk of pest attack** is amplified in monocultures (and in New Zealand, our exotic plantations are often also monoclonal (i.e. even less genetically diverse), making them more vulnerable to pest incursions);
- the **risk of extraordinary landscape fires** fueled by large areas of conifer plantations, which are highly flammable, particularly if the trees are aging and dying. Lock up and leave carbon plantations, which are very densely planted, provide very high loads for such fires, and many such plantations are not managed to reduce fire risks (through the inclusion of fire breaks, fire fighting ponds, etc);
- **pests and weeds threats to adjacent landscapes and ecosystems;** and
- severe **loss of habitat** for other plants, animals and insects which are vital to other ecological cycles, thereby accelerating biodiversity decline.

5.3. The Discussion Document also references the comparative long-term ecological and climate resilience attributes associated with permanent indigenous afforestation.<sup>19</sup> However we think these are given fairly cursory attention relative to their critical importance.

5.4. It should be emphasised that indigenous forests provide:

- greater capacity to adapt and expand niches in the face of changing climatic conditions;
- better fire resilience;
- habitat for a much wider range of plant, animal and insect species, thereby preserving and restoring biodiversity and facilitating conservation protection for vulnerable species;
- superior erosion and flood regulation;
- nutrient supply and water quality improvements;
- pollination services;
- improved biosecurity and soil health; and
- broader socio-cultural, spiritual / wellbeing, recreational, landscape / aesthetic,<sup>20</sup> ecological, and economic<sup>21</sup> benefits than exotic forests.

---

<sup>19</sup> See page 14.

<sup>20</sup> Indigenous forests comprise a variety of vegetation with a range of sizes, colours, and ages, contributing to the naturalness of an area. Exotic plantation forests, by contrast, are typically a single-year class monoculture planted in linear form.

<sup>21</sup> Particularly through tourism.

5.5. In this regard, the assessment criteria should be calibrated so as to:

- a) require a long-term future generations approach to be taken (i.e. beyond current carbon budgets and NDC target periods);
- b) clearly prioritise deep and rapid gross emissions reductions (criteria 2) over the availability of (and therefore reliance on) removals (criteria 1);
- c) give greater weighting to options that will support indigenous biodiversity; ecological integrity; and climate, pest and disease resilience (criteria 5 and 6); and
- d) include consideration of the socio-cultural,<sup>22</sup> spiritual, landscape values, and economic benefits associated with the establishment and regeneration of biodiverse indigenous forests.

## 6. Clear need for more incentives in support of biodiverse indigenous afforestation

6.1. EDS acknowledges that restricting the permanent forestry category to indigenous species alone will not incentivise indigenous afforestation. We strongly support the need to address the high costs of establishing and maintaining indigenous forests, especially on marginal land, and the currently limited commercial return on investment. We acknowledge that the Government is progressing work to consider how to overcome these barriers, and hope that proposals for this will be available soon.

6.2. Addressing cost barriers and improving economic returns should be part of a broader industry model designed to incentivise permanent indigenous afforestation as well as to explore export and domestic market opportunities for the sustainable / selective harvesting of indigenous timber with a view to accelerating the establishment of a viable sustainably-harvested indigenous timber industry.<sup>23</sup>

6.3. In our submission response on the Emissions Reduction Plan, we also recommended the following complementary actions:

- **reviewing the Overseas Investment Act** criteria to encourage investment in, and active management of, indigenous forestry;
- **increasing funding for strategic animal and plant pest management** to safeguard native regeneration, and **the development and implementation of biocontrol agents** to address currently insurmountable plant pest issues which seriously hamper indigenous forestry;
- **introduction of a biodiversity payment or credit** that places a value on biodiversity outcomes;<sup>24</sup>

---

<sup>22</sup> Indigenous forests better preserve and safeguard socio-cultural values from a Te Ao Maori perspective and as a part of Aotearoa New Zealand's national identity.

<sup>23</sup> EDS Submission on Emissions Reduction Plan Discussion Document 2021 refers, at 6, para 10.3

<sup>24</sup> EDS specifically notes the work underway by the Ministry for the Environment on complementary measures to the proposed National Policy Statement for Indigenous Biodiversity and the establishment of a biodiversity incentive pilot.

- creating a work programme on how to maintain and enhance sequestration and/or avoid carbon loss in pre-1990 forests, as well as the management of existing regeneration to accelerate succession to forest and increase carbon stocks; and
- ensuring **new planning tools restrict where exotic species are permitted** and safeguard appropriate and sufficient land for indigenous forestry.

6.4. With regard to ETS incentives for biodiverse indigenous forestry, we have also previously made the following recommendations:<sup>25</sup>

- reviewing and **removing policy and processing obstacles to determining eligibility and registering indigenous forests in the ETS;**
- **subsidising field measurements for natives** and catalysing rapid investment and uptake of improved field survey technology;
- **updating the MPI Carbon Look-up Tables** with regional sequestration rates by forest type well beyond 50 years;
- **requiring forestry management plans** (analogous to Freshwater Farm Plans) for registration in the permanent forests category (covering freshwater management, biodiversity, animal and plant pest control, sediment controls, slope stability, and fire risk management);
- ensuring ETS participants buy a **minimum proportion of NZUs from the permanent NZU category;**
- **creating an accounting system for non-ETS eligible carbon sinks**, such as native vegetation and other ecosystem types (e.g. wetlands); and
- **recycling ETS revenue to significantly upscale the indigenous forestry industry** via the government's Climate Response Fund. This will involve investment in R&D, infrastructure, technology, capacity-building and market opportunities.

6.5. We would welcome the opportunity to participate further in the discussion and design of incentives for indigenous afforestation.

## 7. Concluding remarks

7.1. EDS strongly supports the Discussion Document's proposal to limit the post-1989 permanent forestry category to indigenous species and we encourage MPI to implement such restriction without exception.

7.2. The proposal provides a unique opportunity to define the shape of Aotearoa New Zealand's forests for generations to come. By adopting a clear policy position regarding permanent afforestation, MPI will preserve the integrity of the ETS as a price signal to drive transformative climate action, create market certainty, leverage a range of co-benefits not available with exotics (and avoid a range of problems that are), and ensure that climate action and biodiversity decline are addressed synergistically and for the benefit of future

---

<sup>25</sup> EDS Submission on Emissions Reduction Plan Discussion Document 2021 refers, at 3-4.

generations. It will also provide a disincentive, or at least a counterbalance, to the further proliferation of exotic monocultures.

- 7.3. Addressing the barriers to indigenous afforestation will be critical to realising the full potential of the proposed policy intervention and should be urgently prioritised. EDS is keen to contribute to these efforts.