Parliamentary Commissioner for the Environment
Te Kaitiaki Taiao a Te Whare Pāremata

Submission on the draft of the Climate Change Commission's first package of advice to Government

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Submitter details

This submission is from the Parliamentary Commissioner for the Environment, Simon Upton.

The Parliamentary Commissioner for the Environment is an independent Officer of Parliament established under the Environment Act 1986. The Commissioner has broad powers to investigate environmental concerns and is wholly independent of the government of the day.

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Introduction

Thank you for the opportunity to comment on the draft of the Climate Change Commission's first package of advice to Government. I would like to commend the Commission for putting together a comprehensive and thoughtful package of draft advice in a relatively short period of time.

My submission is confined to aspects of the Commission's draft advice concerning agriculture and forestry.

Agriculture

I agree with the Commission that we cannot wait for new technologies to arrive before taking action to reduce biogenic methane and nitrous oxide emissions. Changing on-farm land management practices can help to reduce biogenic emissions. But there is a limit to how far changes to management practices alone can get us. In some places, fewer livestock and land use change away from intensive farming systems to less emissions-intensive land uses are also likely to be part of the solution.

The Climate Change Response Act limits the scope of the Commission's draft advice on policy to the "direction of the policy required in the emissions reduction plan". The Commission therefore does not have a mandate to develop detailed policy recommendations, which is the Government's role. As a result, the Commission's draft advice focusses mainly on outcomes with little guidance offered on the types of policies that might be needed to drive changes in behaviours or uptake of new technologies in the agriculture sector.

Regarding biological emissions pricing, the Commission's draft advice amounts to waiting to see what He Waka Eke Noa proposes. I believe it would help to move the debate forward and provide valuable input to the work of He Waka Eke Noa if the Commission were to offer its view on the direction of

policy with respect to pricing biogenic methane and nitrous oxide emissions. Does it, for example, agree with the Interim Climate Change Committee that the best option for pricing biogenic emissions would be a levy/rebate scheme with the levy revenue recycled via a dedicated Agricultural Emissions Fund?

The Commission suggests many of the changes to on-farm management practices that are needed to meet the 2030 biogenic methane target will be driven by freshwater policy. The Commission's Current Policy Reference case assumes that strengthened freshwater policy will lead to an 8–10 per cent reduction in stock numbers by 2030.

I am wary of relying on freshwater policy to drive the changes needed to meet our greenhouse gas targets. Many of the changes to on-farm management practices that are made to improve freshwater quality are likely to reduce greenhouse gas emissions. But some of the changes may have no impact or could even increase greenhouse gas emissions. For example, increased use of stand-off pads, wintering barns and other off-paddock facilities could reduce nitrate leaching but increase greenhouse gas emissions in some cases. Care will be needed to ensure that interventions aimed at improving freshwater quality do not have unintended negative consequences for greenhouse gas emissions.

In the Commission's proposed pathway, stock numbers are reduced by around 15 per cent by 2030. It would be helpful if the Commission could spell out how this figure was arrived at, and what measures, beyond freshwater policy initiatives, might drive such a reduction.

Forestry

I welcome the limited recourse to offsets from exotic plantation forests in the Commission's proposed pathway. I agree with the Commission that we must focus on decarbonising and reducing emissions at source, and we can no longer rely so heavily on forest offsets to meet our emissions reduction targets. New Zealand's climate policies to date have treated gross emissions reductions and forestry offsets as perfectly substitutable. As I outlined in my *Farms, forests and fossil fuels* report,[1] relying heavily on forestry to offset our emissions is a risky strategy.

To be clear, I do not have a problem with planting forests for the purpose of producing timber or contributing to the bioeconomy. Substituting emissions-intensive materials with wood-based products and fossil fuels with bioenergy can reduce gross emissions from fossil fuel use. My concern is with planting forests for the purpose of offsetting fossil carbon dioxide emissions.

Afforestation is a relatively cheap mitigation option. Analysis released by the Ministry for the Environment in 2020 found that central estimates for conversion to production forestry range between \$0–70 per tonne of CO_2 equivalent (tCO_2e) for sheep and beef farms and \$50–150 per tCO_2e for dairy farms.[2] Forestry provides a means of reducing the cost of transition, but it also risks delaying that transition. Conversely, any restriction on forest offsets, all else being equal, implies a more costly mitigation pathway for the economy but one in which there are clearer incentives to decarbonise.

[1] Parliamentary Commissioner for the Environment, 2019. Farms, forests and fossil fuels: The next great landscape transformation? Wellington: Parliamentary Commissioner for the Environment.

[2] Ministry for the Environment, 2020. Marginal abatement cost curves analysis for New Zealand. https://www.mfe.govt.nz/publications/climate-change/marginal-abatement-cost-curves-analysis-new-zealand-potential-greenhouse [accessed 26 March 2021].

As laid out in *Farms, forests and fossil fuels*, my preferred option would be to remove forestry from the New Zealand Emissions Trading Scheme (NZ ETS) altogether and only allow forestry to be used as an offset for emissions of biogenic methane and nitrous oxide. I also suggested establishing a farm-level levy on biological emissions and using the revenue to support tree planting and other environmentally related activities.

But if extracting forestry from the NZ ETS proves too politically challenging, a range of options for limiting incentives for plantation forestry within the NZ ETS could be considered. These would, ideally, see our reliance on forest offsets steadily shrink, and both emitters and foresters provided with a clear idea of the extent of the transitional assistance forestry is expected to provide.

As I see it there are at least four approaches that could be used to modify the incentives for afforestation through the NZ ETS:

1. **Restrict the amount of new forest land eligible to enter the NZ ETS**

   This method would tighten eligibility criteria for registering new forest by spatially designating eligible forest land, based on minimum environmental benchmarks. For example, forest land could be assessed on suitability of site location, sedimentation control, forest management practices and other environmental factors. Once an area of new forest land was deemed eligible for registration in the NZ ETS, the owner would have the right to register the forest and subsequently receive New Zealand Units (NZUs).

   A variation on this approach would be to set an annual national quota for the area of new forest land that can be registered in the NZ ETS. Rights would then be auctioned annually subject, again, to meeting minimum environmental benchmarks. Registered forests would still receive one NZU for each tonne of carbon dioxide sequestered, but the total area of new forest land would be restricted by the quota. Because forest land would be restricted it would reduce afforestation and maintain upward pressure on the carbon price. It would also generate a new revenue stream which could be used for other environmental purposes.

2. **Reduce the quantity of NZUs issued for carbon sequestration by post-1989 forests**

   At present, owners of post-1989 forest land are entitled to receive one NZU for each tonne of carbon dioxide sequestered. If an annual cap were placed on the total quantity of forestry units issued, this would restrict the overall supply of NZUs and thereby discount the notional value of carbon sequestration allowed by forests. For example, a ten per cent discount would mean a forester would need to sequester 1.1 tonnes of carbon dioxide to earn one NZU. This exchange rate could then be scaled up and down depending on progress being made to reduce gross emissions or meet emissions reduction targets. Although foresters would receive a lower quantity of NZUs overall, the price of each NZU would be expected to increase because NZUs would become scarcer, therefore offsetting some of the financial losses to foresters. An alternative method of allocating units would be to prorate the NZUs based on the total number of units requested in voluntary emissions returns for that year. In this approach, the exchange rate would vary depending on the quantity of units requested each year.

   A third variation on this idea would be to establish an auction for forestry NZUs, similar to the auction that is now operating for emissions based NZUs. In this auction approach, a fixed quantity of forestry NZUs would be auctioned each year and bids would represent the tonnes of carbon dioxide a forester was willing to offer for each NZU issued. The benefit of this quantity-based approach is that it would maintain upward pressure on the NZ ETS price, further incentivizing

reductions in gross emissions. The establishment of an auction would also ensure that the most efficient and competitive forests were being used for carbon sequestration.

3. **Charge NZ ETS participants a premium or levy for surrendering forestry units**

   In this approach, a levy or premium would be charged when forestry units are surrendered by NZ ETS participants (excluding forestry participants). This approach would have the effect of making forestry units relatively more expensive for emitters and thus less desirable on the secondary ETS market for purchase. This approach would force the market to discount forestry NZUs, thus making forestry less desirable. The disadvantage of this approach is that it would rely on choosing the right levy to bring about the target level of afforestation.

4. **Limit the proportion of forestry units that fossil emitters can surrender**

   At present there is no limit on the proportion of forestry units that can be surrendered by fossil emitters. Under this approach, the proportion of forestry units that could be surrendered would be limited to a pre-specified value, such as ten per cent. Such a restriction would reduce demand for forestry units leading to a lower price on secondary ETS markets for forestry units and therefore reduce the incentive to plant new forests. This approach could be expected to create two diverging emissions prices – a lower price for forestry NZUs and a higher one for non-forestry NZUs. Since there are complex market dynamics at play, it would be difficult to predict the overall effect that this mechanism would have on the NZ ETS market overall.

This is not an exhaustive list of possibilities. Each approach has strengths and weaknesses and winners and losers associated with it. History shows that even small changes to the NZ ETS can have large and long-lasting effects. It is therefore essential that we understand the full effects of any attempts to limit forest offsetting. Ideally, the chosen mechanism will be easy to implement, prevent large fluctuations in the emission price and avoid, as far as possible, any unintended consequences, particularly during any transition period. A government work programme looking at the advantages and disadvantages of the different approaches should be started as soon as possible.

The Commission has recommended a very rapid increase in planting rates for permanent native forests. In the Commission's proposed pathway, the annual planting rate for natives increases from 1,300 hectares per year in 2018 to 25,000 hectares per year by 2031. These planting rates for natives would be unprecedented – the highest planting rate achieved to date was less than 4,400 hectares per year in 2007.

Thought will need to be given to the long-run fate of all forests within the NZ ETS. It seems to be assumed that native forests are permanent forests on which the gate is closed. But it is equally plausible that native forests could be subject to silvicultural management and sustainable harvest. This serves to make the point that even a native forest may not be a permanent forest. As with exotic forests, if it has been planted to offset emissions it has to be maintained in perpetuity unless an equivalent amount of carbon is sequestered elsewhere. In planting any forest – exotic or native – attention has to be given to future option values.

I am supportive of planting native forests for the right reasons. Exotic and native forests can play different roles in the transition. Though their short-term carbon sequestration rates are typically lower than those of exotic species, native forests can provide an enduring carbon sink to help offset emissions from hard-to-abate sectors over the long term.

Planting natives is both difficult and expensive. Our silvicultural skills in native forestry are far more limited than those that have been developed over decades in exotic forestry. Achieving the very rapid ramping up of native planting rates proposed by the Commission would require a concerted effort across all levels of government to incentivise investment in new native forests and bring down their establishment costs. The scale of such a programme would need to be several times larger than the One Billion Trees programme. How realistic this may be remains to be seen.

Native forests could be given a boost through the NZ ETS. Permanent native forests could be excluded from the options for quotas or restrictions I have outlined above. These options would require modifying the way NZUs are tagged in the registry so that market participants can view the provenance of forest units in terms of both the species type (native or exotic) and permanence of the forest (permanent or intended for harvest).

However, given the slow sequestration rates and low corresponding volumes of NZUs generated by native species, the NZ ETS alone is unlikely to drive the high levels of native planting envisaged by the Commission. A range of complementary policy tools is therefore likely to be required. Further evidence from the Commission on the costs of planting natives would be helpful for designing such a policy package.