LAWYERS FOR CLIMATE ACTION NZ INC.

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Ministry for the Environment
Wellington

18 November 2022

SUBMISSION BY LAWYERS FOR CLIMATE ACTION NZ INC ON PRICING AGRICULTURAL EMISSIONS

Introduction and summary

1. Thank you for the opportunity to comment on *Te tātai utu o ngā tukunga ahuwhenua / Pricing agricultural emissions* released in October 2022 (**Consultation Paper**).

2. Our submission focusses on the need to reduce agricultural emissions by far more than the current levels proposed. Given the failure to take meaningful action in other sectors, in order for our overall gross emissions to fall by even a modest 30% between 2010 and 2030, methane emissions must be cut from 33.3 Mt CO_2e in 2010 to around 17.9 Mt CO_2e in 2030. The proposals in the Consultation Paper need to be revised accordingly to bring about a reduction of this scale. By comparison, the presently proposed parameters would see methane emissions of around 29 Mt CO_2e in 2030. This would make our total gross emissions around 66.1 Mt CO_2e in 2030, or only about 16% lower than they were in 2010. We see such a low level of ambition as unconscionable in the face of the climate crisis.

3. In this submission we comment on:

    a. The context in which this consultation arises: a global climate crisis, a pivotal decade, and an absence of any ambition to reduce our emissions in other sectors of the economy.

    b. The ability to utilise methane reductions as an effective brake on global warming.

    c. The implicit subsidy to agriculture from not properly pricing methane emissions.

    d. Our position on specific issues raised in the Consultation Paper.

About Lawyers for Climate Action NZ Inc

4. Lawyers for Climate Action NZ Inc (**LCANZI**) is a not-for-profit incorporated society and registered charity made up of almost 500 lawyers and associate members. Our goals are to:

    a. Raise public awareness and understanding of the threat of climate change;

    b. Advocate for legislation and policies to ensure New Zealand meets or exceeds its commitment under the Paris Agreement and achieves net zero carbon emissions as soon as possible; and

    c. Facilitate free or reduced cost legal assistance to community groups working to fight climate change.

5. More information about LCANZI can be found on our website.

Context

6. As a rule of thumb, global emissions must halve by 2030 from 2010 levels to limit warming to within 1.5°C.[1] As a developed country, our common but differentiated responsibility means that our reductions must be even higher.[2]

7. Against this background, the demonstration path used by the Climate Change Commission in recommending the first three emissions budgets looks like a dismal failure of ambition with only a 15% reduction in overall gross emissions between 2010 and 2030.[3, 4]

Emissions by gas/sector (mt CO_2e)	**2010**	**CCC projection for 2030**	**% change**
Long lived gases (mainly carbon dioxide, but also nitrous oxide)			
Transport	14.3	14.0	-1.89%
Energy, industry & buildings	21.3	13.5	-36.61%
Other	9.6	9.6	0.23%
Methane from agriculture & waste	33.3	29.3	-12.03%
Total	78.5	66.4	-15.36%

Source: Climate Change Commission, *Ināia tonu nei: a low emissions future for Aotearoa* (May 2021): figs 5.4 and 6.2. Forestry not included.

1 Climate Change Commission, *Ināia tonu nei: a low emissions future for Aotearoa* (May 2021), p 191.

[2] New Zealand has committed to "take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects" (United Nations Framework Convention on Climate Change, Art 3(2)). Under the Paris Agreement New Zealand is legally committed to hold "the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue … efforts to limit the temperature increase to 1.5°" (Art 2). Each country's nationally determined contributions (NDC) under the Paris Agreement must "reflect [the party's] highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in light of national circumstances" (Art 4(3)).

[3] The Commission's advice appears more ambitious as a result of using gross:net comparisons; adopting modified-activity based accounting instead of UNFCCC inventory accounting; and using 2019 as a base year. Because of the importance of reducing gross emissions (and because of the controversy over the use of modified-activity based accounting which disregards emissions associated with forests being harvested) we focus on gross emissions. We focus on the change between 2010 and 2030 to align with the IPCC 2018 Special Report.

[4] Ideally we would use an updated set of projections following the launch of the Emissions Reduction Plan (**ERP**) in May 2022. However, the ERP does not provide annual projected gross emissions, but rather provides percentage reductions aggregated into budget periods. This makes it extremely difficult to track progress against the ERP.

8. The only two areas where any reductions are proposed are "Energy, industry & buildings"[5] and "Methane from agriculture & waste".[6]

9. Although other developed countries have done much better than New Zealand in responding to climate change,[7] globally the position is still dire. The recent UNEP Emissions Gap Report (October 2022) notes that the policies currently in place with no additional action are projected to result in global warming of 2.8°C over the twenty-first century. Even if NDC commitments are met, this would still produce warming of between 2.4°C and 2.6°C.

10. The horror of a world with 2.8°C degrees warming cannot be understated. As UN Secretary General António Guterres told world leaders at the opening of the Cop27 UN climate summit in Egypt on 7 November 2022, humanity is on a "highway to climate hell". He warned that the fight for a liveable planet will be won or lost in this decade: "We are in the fight of our lives and we are losing … And our planet is fast approaching tipping points that will make climate chaos irreversible."

11. It is important to approach agricultural methane in that context. That is, the context of a global climate crisis, a pivotal decade, and an absence of any ambition to reduce our emissions in other sectors of the economy.

Methane reductions would be an effective brake on global warming

12. Different greenhouse gases have different effects on the Earth's warming. Methane, in comparison with CO_2, has a much greater effect per tonne in the atmosphere, but it remains in the atmosphere for a much shorter period.[8] The relative global warming potential of a gas measured over a hundred years and compared with the warming potential of the same amount of CO_2 (GWP100) is typically used to make the effect of different gases comparable.[9, 10] Methane

[5] In the case of "Energy, industry & buildings", the forecast reduction (-37%) was based on a number of assumptions that now look extremely unlikely to be met including: no new gas connections from 2025 (not included in the Emissions Reduction Plan); coal use in commercial and public buildings stops by 2030 (Emissions Reduction Plan provides for stop by 2037); and Tiwai Point smelter closes 31 Dec 2024 and the renewably sourced electricity becomes available to displace coal/gas (unlikely).

[6] Despite transportation being widely recognised as an area where reductions are possible (through electrification and modality shift), the Commission has set a reduction target of less than 2%.

[7] New Zealand is one of the worst performing developed countries. Since 1990 our net emissions per annum have *increased* by 26%. The emissions of almost all other developed countries have significantly decreased over this period.

[8] Methane emitted today lasts about a decade on average, which is much less time than CO_2. But methane also absorbs much more energy than CO_2. The net effect of the shorter lifetime and higher energy absorption is reflected in the GWP.

[9] The Global Warming Potential (GWP) was developed to allow comparisons of the global warming impacts of different gases. Specifically, it is a measure of how much energy the emissions of 1 tonne of a gas will absorb over a given period of time, relative to the emissions of 1 tonne of carbon dioxide (CO2). The larger the GWP, the more that a given gas warms the Earth compared to CO_2 over that time period. The time period usually used for GWPs is 100 years. GWPs provide a common unit of measure, which allows analysts to add up emissions estimates of different gases (e.g., to compile a national GHG inventory), and allows policymakers to compare emissions reduction opportunities across sectors and gases.

[10] Some groups such as Beef and Lamb NZ have advocated for the use of a measure known as GWP* to compare methane against CO_2 (see https://beeflambnz.com/sites/default/files/news-docs/Beef%20%2B%20Lamb%20NZ%20COP26%20NZ%20Mandate.pdf). In simple terms, GWP* treats a constant flow of methane as having an neutral effect on warming so that the continuation of farming at

is estimated to have a GWP of 27–30 over 100 years. But over 20 years, the GWP of methane is much higher, around 81–83.

13. Recognising this, the UNEP *Global Methane Assessment Report* (May 2021) notes that "[r]educing human-caused methane emissions is one of the most cost-effective strategies to rapidly reduce the rate of warming and contribute significantly to global efforts to limit temperature rise to 1.5°C." It is estimated that a 45% reduction in methane emissions by 2030 would avoid nearly 0.3°C of global warming by the 2040s. In this context, New Zealand has also committed to collectively reduce methane emissions by at least 30% below 2020 levels by 2030 pursuant to the Global Methane Pledge.[11]

14. We have strongly urged the Climate Change Commission and the Government to take meaningful steps to reduce our emissions and decarbonise the economy.[12]

15. Having failed to do so, agricultural methane must be tackled as the last policy lever left to meaningfully reduce our emissions before 2030.[13]

16. Methane reductions are also easy to achieve from a technical perspective. A reduction in livestock numbers has a proportionate reduction in agricultural methane. No new infrastructure is required in contrast to decarbonisation of transport or energy for example.

17. Given lack of action anywhere else, we need to tackle methane in order to bring our gross emissions down by a meaningful amount before 2030. Our current policy settings would see a 15% reduction relative to 2010. This is grossly insufficient relative to what the science is telling us is required for a habitable planet. While a 50% target would be more appropriate, say we sought to reduce overall gross emissions between 2010 and 2030 by 30%, then methane emissions would have to reduce from 33.3 Mt CO_2e in 2010 to around 17.9 Mt CO_2e in 2030.[14]

18. We are not naive as to economic and social consequences of this scale of reduction. But, the difficulty is that the Climate Change Commission and the Government have not taken any of the other available options to accomplish meaningful reductions. Given that the stakes (a habitable

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current rates does not contribute to global warming. The implicit assumption is that farmers (or countries) are entitled to treat the current level of methane emissions as an appropriate baseline. In our view this is not an appropriate perspective and the question is how much farming will contribute to global warming compared with that farming activity not occurring at all. It would be perverse if past emissions (which contribute to global warming today) give rise to an entitlement to continue that warming activity. As such, GWP* can be seen as a sophisticated form of climate change denialism where existing emitters of methane deny responsibility for climatic effects of continuing to emit methane.

[11] The Global Methane Pledge was launched at COP26 in November 2021 to catalyse action to reduce methane emissions. Led by the United States and the European Union, the Pledge now has 111 country participants who together are responsible for 45% of global human-caused methane emissions. By joining the Pledge, countries commit to work together in order to collectively reduce methane emissions by at least 30% below 2020 levels by 2030.

[12] The Commission appears to have prioritised achieving broad-based public and political support for its initial budgets ahead of recommending meaningful action that is commensurate with the climate crisis. LCANZI has brought judicial review proceedings against the Commission including on the grounds that the Commission failed to recommend budgets which contribute to the goals of the Paris Agreement.

[13] We would also encourage the Government to investigate purchasing existing plantation forests to prevent harvesting at least in the short term.

[14] Total emissions in 2030 would then be 14.0 (transport) + 13.5 (energy, industry and buildings) + 9.6 (other) + 17.9 (methane) = 55 Mt CO2e, or 30% below the 2010 level of 78.5 Mt CO2e.

planet and the avoidance of social and political upheaval on an unimaginable scale), this simply reflects what is required.[15]

The implicit subsidy to agriculture from not properly pricing methane emissions

19. It is instructive to ask what is the size of the implicit subsidy currently being received by agriculture from not paying any price for its emissions.

20. One way to approach this is to ask what the cost would be to plant new forests that were hypothecated for the offsetting of our agricultural emissions. The Parliamentary Commissioner for the Environment has estimated that this would require a one-off upfront planting of 0.6 hectares per animal for dairy cattle, 0.4 hectares per animal for beef cattle, 0.2 hectares per animal for deer, and 0.08 hectares per animal for sheep.[16]

21. At the national level, the Commissioner notes that planting around 770,000 hectares of pine plantation forest between now and 2050 achieves a similar change in temperature as reducing methane emissions from the national dairy, sheep, beef and deer herds by 10% over the same time period. This suggests that a full offset would require 7.7 million hectares of new forests. To put this into perspective, there is currently around 9 million hectares of land being used for pastoral farming in New Zealand and around 1.7 million hectares of production forest. The cost of purchasing, planting and maintaining the 7.7 million hectares of forest is therefore one estimate of the subsidy enjoyed by the agricultural sector and the expense of the environment.

22. A second approach is to note that our current NDC anticipates that New Zealand will need to purchase around 100m tonnes worth of offshore mitigation for the period 2021-30.[17] Treasury has estimated the cost of that offshore mitigation to be between $7.9 and $13.8 billion.[18] If New Zealand was to cease agricultural production between now and 2030 then we would meet our NDC without needing to purchase offshore mitigation. Accordingly, agricultural emissions can be seen as costing New Zealand taxpayers $14 billion between now and 2030.

Our position on specific issues

23. Our position on specific issues is as follow:

    a. We support a farm-based levy for agricultural emissions.

    b. We consider that methane emissions must be cut drastically, from 33.3 Mt CO_2e in 2010 to around 17.9 Mt CO_2e in 2030 to achieve an overall reduction in New Zealand's gross emissions between 2010 and 2030 of around 30%.

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[15] In many ways the agricultural sector finds itself in the wrong place at the wrong time, and will be left carrying the can for the failure to make progress in other sectors. With the benefit of hindsight, the farming lobby should have been advocating for strong climate action to decarbonise the economy in order to *protect* farming from the methane reductions which are now essential.

[16] See https://www.pce.parliament.nz/publications/how-much-forestry-would-be-needed-to-offset-warming-from-agricultural-methane. These numbers are for pine plantation forest with a 30-year rotation.

[17] Our current NDC is expressed as a commitment to a 50% reduction in emissions between 2005 and 2030. However, it is much less ambitious than it sounds since the starting figure is gross and the finishing figure is net, and progress is assessed using the "modified activity-based" measure. Despite being a modest target, the NDC will still require the purchase of approximately 100m tonnes worth of offshore mitigation.

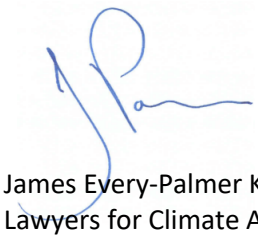
[18] See p3 of the Cabinet Paper at https://environment.govt.nz/assets/publications/2-Cabinet-Paper-Agreement-to-Update-New-Zealands-First-Nationally-Determined-Contribution-NDC1-under-the-Paris-Agreement.pdf

c. We would support methane emissions being subject to a cap and trade mechanism, but with a genuine and meaningful cap (unlike the ETS).

d. We do not consider that bespoke sequestration rules should be developed for farming.

e. We consider that synthetic nitrogen emissions should be fully priced at import/manufacture.

24. Please let us know if we can provide any further information.



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