TO THE:

Climate Change Commission

ON THE:

2021 DRAFT ADVICE FOR CONSULTATION

BY:

Beef + Lamb New Zealand Ltd

SUBMISSION TO CLIMATE CHANGE COMMISSION ON THE 2021 DRAFT ADVICE FOR CONSULTATION

Submission on consultation material

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Beef + Lamb New Zealand Ltd wishes to be heard in support of its submission. Beef + Lamb New Zealand reserves the right to provide further technical information and data to underpin its position in further discussions with the Climate Change Commission.

EXECUTIVE SUMMARY

1. Beef + Lamb New Zealand (B+LNZ) welcomes the opportunity to submit its views to the Climate Change Commission (the Commission) on its draft advice to the Government, contained in the *2021 Draft Advice for Consultation* document and supporting evidence.

2. Sheep and beef farmers are committed to playing their part in the actions needed to achieve New Zealand's climate change objectives. This is why B+LNZ has, through its Environment Strategy, committed to leading the sheep and beef sector to working towards being carbon neutral by 2050.

3. B+LNZ is also fully committed to He Waka Eke Noa – the Primary Sector Climate Action Partnership, to implement a framework by 2025 to reduce agricultural greenhouse gas emissions and build the agriculture sector's resilience to climate change. Its commitment includes the employment and hosting of He Waka Eke Noa staff.

4. B+LNZ wishes to acknowledge the Commission's work in providing its first set of draft advice to the Government for consultation with New Zealanders. The draft proposals contained in the consultation document are broad and cover all sectors of the economy. If implemented as proposed, the Commission's recommendations will have far-reaching impacts on all aspects of New Zealand life – how we live, work, travel and play.

5. B+LNZ's submission focuses on the proposals that are most pertinent to the land sector. B+LNZ trusts that this submission will be read in full, however there are important key points for the Commission to be aware of that are summarised below.

6. B+LNZ **supports**:

    - The Commission's focus on the need for New Zealand to **decarbonise its economy by making actual real reductions of gross carbon dioxide emissions**.

    - The high-level messaging and direction of travel that **New Zealand must significantly decrease its reliance on exotic forestry to offset its gross emissions and meet its climate change targets**.

    - The recognition of the important role of indigenous vegetation and in particular that which is integrated within productive farming systems. **Farmers must be recognised for the sequestration and broader environmental benefits they**

provide. Our landscapes must be biodiverse and resilient to the impacts of climate change.

- The Commission's recommendations that **the Government's environmental policy development must be more integrated across all environmental domains**, and in particular freshwater, biodiversity, soils and climate change.

- **The Commission's endorsement of the 'split-gas' approach** taken by New Zealand to treat short-lived and long-lived greenhouse gases differently to appropriately reflect the fact that different gases have different warming impacts on the atmosphere.

- Calls for the Government to develop a **long-term, sustained, research and development plan to deliver on future technologies and help different sectors adapt to a changing climate and policy environment**. B+LNZ calls for this plan to be ready by December 2021.

7. B+LNZ **disagrees** with a number of recommendations in the draft advice. B+LNZ requests the Commission makes changes to its final advice to the Government to reflect this feedback. The key proposals B+LNZ disagrees with are summarised below:

- The recommendation for the Government to implement measures that would lead to a 13.2% reduction of biogenic methane emissions on 2017 levels. This represents a 32% increase in the level of ambition compared to the 2030 biogenic methane target contained in the Zero Carbon Act, which is to reduce methane emissions to 10% below 2017 levels by 2030. While B+LNZ disagrees with the 10% target because it is not supported by science, **this proposed shift in the goal posts is not acceptable, particularly at a time when the agriculture sector is consolidating its actions to reduce emissions through processes such as He Waka Eke Noa**.

- The very high levels of carbon removals (ie, offsetting) proposed by the Commission in its budgets to be made through exotic forestry. While the Commission suggests that New Zealand must reduce its reliance on forestry offsets, in particular from *pinus radiata*, the levels of budgeted removals are still very high and will lead to swathes of New Zealand sheep and beef farmland being converted to pine trees. This will likely have significant negative impacts for sheep and beef farming, for rural communities with knock-on effects for every New Zealand household. **The Commission must propose clear limits on the amount of offsetting New Zealand should rely on and provide policy guidance to the**

Government that will deliver on these limits (for example, changes to the Emissions Trading Scheme).

- **The lack of analysis of the socio-economic and distributional impacts of the proposals made by the Commission—in particular the impacts of land-use changes on rural communities—is concerning**. It is critical to understand these impacts to make an informed submission. Given the profound emissions reductions and land-use changes the Commission is recommending, the Commission has a legal and moral duty to provide a robust assessment of the socio-economic impacts that these proposals will have for New Zealanders. However, this evidence is lacking in the consultation material. It must be provided with the final advice to the Government.

- The key aim of the Paris Agreement of *"Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development**, in a manner that does not threaten food production**"* is not reflected in the guiding principles used by the Commission in determining the level of the proposed budgets for the primary sector. **It is critical that this key consideration in the main international agreement on climate change flows through into the way New Zealand develops its domestic pathways in responding to climate change**.

- The lack of recognition of **the marginal impact methane-emitting sectors have had on the atmosphere for the past 20 years** – methane-emitting sectors have contributed little additional warming since the early 2000s. Furthermore, methane emissions from sheep and beef cattle have decreased by 31% since 1990.

- In addition, a significant amount of carbon sequestration is happening on pastoral farmland, including land used for dairying. **Farmers must be recognised where they can demonstrate they have had a positive impact on the climate** (e.g, a sustained decrease in emissions and/or an increase in their carbon sequestration).

- Methane-emitting sectors are asked to continue to do more, and faster, in the short-term to compensate for other sectors who have not acted – **that is inequitable**. Especially considering that sheep and beef farmers have already achieved already significant reductions.

- The recommendation to keep the form of the Nationally Determined Contribution (NDC) aggregated into one number encompassing all gases, using the GWP100 metric is disappointing. **Splitting gases out in the NDC would meet the**

requirements of the Paris Agreement, and more importantly demonstrate global leadership.

- **The NDC should be set at a level that protects our national interest**. B+LNZ is concerned by the proposed level of the NDC ("much more" than 35% above 2005 levels). Meeting this level of ambition would require New Zealand to purchase a significant amount of offsets from overseas, at a cost estimated between NZD5.8 – 11.5 billion by 2030. B+LNZ thinks that New Zealand should spend its money at home to develop mitigations, in particular in the agricultural sector, rather than purchasing emission offsets offshore.

- The Commission does not appropriately take into account the true warming impact of methane in its analysis. **The Commission must engage with a broader pool of experts and correct factual errors on greenhouse gas metrics before it finalises its advice on the NDC and on future biogenic methane emissions**.

8. Given New Zealand's global leadership in action on agricultural emissions and the fact that these proposals, if adopted, will increase the cost of producing red meat, it is critical that the Government actively supports industry to capture market opportunities from being an early mover. B+LNZ requests the Commission to recommend to the Government that it should strive for equivalence in trade negotiations and financially support industry initiatives such as B+LNZ's Taste Pure Nature origin brand[1] that is aiming to reach consumers with New Zealand's climate change story.

9. B+LNZ wishes to continue to engage with the Commission as it finalises its advice to the Government by 31 May 2021 and remains available to provide further information to resolve some of the issues identified while working through the Commission's draft advice.

INTRODUCTION

10. Beef + Lamb New Zealand (B+LNZ) welcomes the opportunity to submit its views to the Climate Change Commission (the Commission) on its draft advice to the Government, contained in the *2021 Draft Advice for Consultation* document and supporting evidence.

11. B+LNZ wishes to acknowledge the work of the Commission since its inception in early 2020, and to commend the Commission for its level of engagement with New Zealanders

[1] http://tastepurenaturenz.co.nz/

in the preparation of its first advice – particularly with the ongoing disruptions caused by the global COVID-19 pandemic.

12. B+LNZ has engaged with the Commission at all available opportunities and is willing to continue to do so as the Commission refines its advice to the Government by 31 May 2021.

13. This submission presents B+LNZ's views on the Commission's analysis and draft recommendations, based on the information available at the time of writing. While an extension in the deadline for submissions has been helpful to undertake further analysis than what the original timeframe would have allowed, there are still areas of the advice and underpinning evidence that B+LNZ will continue to assess. In particular limited information on the assumptions used to underpin the modelling undertaken by the Commission has been publicly released, which has regrettably compromised the analysis of all submitters, including B+LNZ.

14. B+LNZ therefore reserves the right to provide further technical information and data to underpin its position in further discussions with the Commission, in particular as the Commission refines its assumptions, modelling, and advice.

15. This submission contains two main substantive parts:

    a) The first is B+LNZ's summary of its key views and commentary about the proposals and recommendations made by the Commission.

    b) The second part provides a more in-depth response to the consultation questions as posed by the Commission.

16. B+LNZ welcomes further opportunities to discuss the content of this submission with the Commission as it assesses submission and finalises its advice to the Government.

BACKGROUND

17. B+LNZ is an industry-good body funded under the Commodity Levies Act through a levy paid by producers on all cattle and sheep slaughtered in New Zealand. Its vision is 'Sustainable and profitable farmers, thriving farming communities, valued by New Zealanders'. Through the Commodity Levies Act process B+LNZ has the mandate to submit on behalf of its levy-paying producers.

18. Sheep and beef livestock production is essential to maintaining the vibrancy of rural communities and their cultural, societal, and environmental wellbeing, as well as contributing regionally and nationally to the country's economic wellbeing.

19. In 2017-18, the red meat industry accounted for over 92,000 jobs, nearly $12 billion in industry value added and $4.6 billion in household income, including flow-on effects. It accounts for 4.7 percent of total national employment and over 4 percent of national industry value added and household income when flow-on effects are taken into account. The contribution of the sector to the national economy in absolute terms is substantial.[2]

20. Exports from New Zealand's red meat industry totalled $9.1 billion for the year ended 30 June 2019 – about 16% of New Zealand's merchandise goods exports – and domestic sales were around $1.6 billion at retail value. The sector exports over 90 per cent of its production and is New Zealand's largest manufacturing industry. The health and wellbeing of the sheep and beef livestock production sector within New Zealand is therefore important to the economy of the country, and the ongoing vitality and wellbeing of rural communities.

21. B+LNZ is actively engaged in environmental management, with a particular emphasis on building farmers' capability and capacity to support an ethos of environmental stewardship, as part of a vibrant, resilient, and profitable sector based around thriving communities. Protecting and enhancing New Zealand's natural capital and economic opportunities and the ecosystem services they provide is fundamental to the sustainability of the sector and to New Zealand's wellbeing for current and future generations.

22. Sheep and beef farmers are committed to playing their part in the actions needed to achieve New Zealand's climate change objectives. This is why B+LNZ has, through its Environment Strategy, committed to leading the sector to working towards being carbon neutral by 2050.

23. Additionally, B+LNZ, alongside other industry bodies, is a partner in the Pastoral Greenhouse Gas Research Consortium (PGgRc), which exists to provide knowledge and tools for New Zealand farmers, so they can mitigate greenhouse gas emissions from the agricultural sector.

[2] SG Heilbron Economic & Policy Consulting, Economic Impact of the Beef and Lamb Industries in New Zealand, Melbourne, January 2020

24. B+LNZ is also fully committed to He Waka Eke Noa – the Primary Sector Climate Action Partnership, to implement a framework by 2025 to reduce agricultural greenhouse gas emissions and build the agriculture sector's resilience to climate change.

25. Farmers have an in-built capacity for change. The shifts in the industry following the removal of production subsidies in the late 1980s are an extreme example that resulted in new farming systems being developed to maximise economic opportunities within the constraints of the natural environment. These changes saw sheep and beef farmers adapt to climatic, societal, consumer and regulatory requirements, provided there was the flexibility and time to do so. However, the reforms of the 1980s were not without significant costs to the industry, farming businesses, and the rural communities they supported.

26. Since 1990, the number of sheep in New Zealand has reduced by over 50 percent[3], while the volume of lamb produced is just 8 percent less. Reductions in sheep occurred for a variety of reasons other than the removal of production-distorting subsidies, including conversions to other land-uses. However productivity gains have been achieved through a range of improvements as farmers have optimised their businesses to meet customer, environmental and farming family needs, including through genetics and breeding, nutrition, and improving reproductive rates.

27. These “technology” improvements have produced more with fewer inputs, and so have provided eco-efficiency gains.

28. Similarly, the number of beef cattle is around 20 percent lower than in 1990. These reductions in the number of capital livestock and the improvements in productivity has been hugely positive environmentally and economically. As an example, our sector has achieved a more than 20 percent reduction in nitrate leaching per unit of saleable product, while simultaneously increasing the value of its exports by 83 percent to over $9 billion per annum.

29. Absolute GHG emissions from the sheep meat sector are about 40 percent lower than they were in 1990 and 10 percent less than 1990 levels for the beef sector including dairy beef. Collectively, the sheep and beef livestock production sector’s GHG emissions are 30 percent lower than in 1990. The emissions intensity (i.e. emissions per unit of production) has improved (i.e. reduced) at an average rate of about 1 percent per year since 1990. However, it is important to note that there are biological and biophysical

[3] Agricultural Production Statistics, Statistics New Zealand.

limits to the scale and magnitude of eco-efficiency and productivity gains that can be accomplished.

30. As Kaitiaki, sheep and beef farmers manage 2.8 million[4] hectares of native habitat, including 1.4 million hectares of native forest. This is the second largest holding of native forest and native biodiversity – bettered only by the Crown estate – and represents almost 25% of New Zealand's remaining native vegetation. In some regions, such as the East Coast, there is more native biodiversity on land that sheep and beef farmers manage than in the Crown estate. Added to this is an estimated 180,000 hectares of forestry blocks on sheep and beef farms.

31. It has recently been established that woody biomass on sheep and beef farmland sequesters a significant amount of carbon (from 5.5 Mt CO_2-e sequestered as estimated by the Ministry for the Environment, to 10.4 – 19.7 Mt CO_2-e sequestered as estimated by the Auckland University of technology).[5,6]

32. Sheep and beef farmers take an integrated and holistic view of the sustainable management of natural resources. They actively seek solutions that enable and empower multiple benefits across New Zealand's range of natural assets including biodiversity, aquatic ecosystem health, soils, climate, and healthy vibrant communities.

33. Climate mitigation and adaptation pathways should be progressively transformative in design, enabling and empowering individuals and communities to build resilience across all wellbeings, including ecosystem services, community and cultural wellbeing, and economic wellbeing. While climate policy and adaptation pathways need to provide for clear and timebound outcomes to enable business and community certainty including investment certainty, they will also need to provide carefully crafted frameworks that enable flexibility and innovation and provide for what will be an ongoing need for business and community adaptation.

34. As such, it is imperative that domestic climate policy is not created in a silo (in isolation from freshwater and biodiversity policy for example), without considering the combined impact of multiple policies, and the need to adapt to climate change as food and water

[4] Norton D., Pannell J., 2018. Desk-top assessment of native vegetation on New Zealand sheep and beef farms.
[5] Ministry for the Environment, 2021. Net emissions and removals from vegetation and soils on sheep and beef farmland. LUCAS, Ministry for the Environment.
[6] Case B., Ryan C., 2020. An analysis of carbon stocks and net carbon position for New Zealand sheep and beef farmland. Department of Applied Ecology, School of Science, Auckland University of Technology.

resources become scarcer globally, rather than just focusing on greenhouse gas mitigation.

35. Instead, we encourage domestic climate policy to provide a progressively transformational policy foundation that will deliver on New Zealand's climate change commitments and enable and empower New Zealand's sheep and beef farmers to continue to build diverse, resilient, productive landscapes for the benefit of all New Zealand and play their part in maintaining vibrant thriving communities.

PART A: HIGH-LEVEL FEEDBACK ON THE COMMISSION'S ANALYSIS AND RECOMMENDATIONS

36. The following sections detail B+LNZ's support for, and concerns with, the proposals contained in the *2021 Draft Advice for Consultation* document. For ease of reading and analysis, this high-level feedback is provided in 2 sub-sections:

    a) What B+LNZ supports

    b) What B+LNZ has concerns about.

a) What B+LNZ supports

37. B+LNZ acknowledges the breadth of the analysis undertaken by the Commission to underpin its advice. There are a number of messages, proposals and recommendations the Commission has made that B+LNZ supports.

1. New Zealand must decarbonise its economy

38. B+LNZ is pleased that the Commission's advice is underpinned by the principle that all sectors of the economy and members of society have a role to play.

39. B+LNZ agrees with the Commission's strong direction that to effectively respond to climate change, New Zealand must decarbonise its economy by making real reductions to its gross emissions, in particular carbon dioxide emissions from fossil fuel use.

40. While it is important to acknowledge that, if adopted, these proposals will likely have significant impacts on the way New Zealanders, including farmers (through for example increased processing costs and transport), live, work, travel and play, the direction proposed by the Commission would mark a step-change to New Zealand's approach to meeting its climate change targets – which has to date mainly been to offset emissions

through forestry in New Zealand or through the purchase and use of international market-based units (i.e., 'international carbon units).

2. New Zealand must wean-off its reliance on offsets from exotic forestry

41. B+LNZ agrees that, as the Commission has put it, "*forests have a role to play, but we can't plant our way out of climate change*" and that "*forest sequestration should not displace making gross emissions reductions*". New Zealand has to date relied heavily on offsets from exotic forestry to meet its international climate change targets.

42. B+LNZ has long argued that relying on forestry offsets to meet our country's targets and contribute to the global effort to respond to climate change is only a short-term solution to the problem, but one that comes with serious consequences.

43. While forestry offsets enable us to make progress towards our targets, they are only a way of delaying the inevitable— the science tells us that carbon dioxide emissions must reduce, they cannot continue to increase.

44. Additionally, relying on offsets to meet our targets is likely to come at significant cost to the economy and society; offsetting emissions now makes mitigation/emissions reductions in the future more expensive.

45. We also note that a strategy of offsetting through forestry is committing parcels of land to a single use in perpetuity, which carries with it significant potential consequences for the long-term future of rural communities. Industry discussions indicate that once a parcel of land is converted into trees the logistics and cost of converting back into pasture is prohibitive.

46. New research shows that a significant amount of carbon is sequestered on sheep and beef farmland, yet much of it is not currently accounted. If accounting for the purposes of meeting the proposed budgets were to allow for all of the sequestration estimated to occur on pastoral farmland, this could significantly further reduce our country's dependence on large-scale exotic forestry to meet the proposed budgets and domestic targets set in the Zero Carbon Act. It would also further incentivise farmers to integrate a variety of trees into their farming landscapes with the potential for significant wider environmental benefits – e.g., erosion control, or biodiversity. Thirdly, accurate determination of the sequestration would potentially avoid New Zealand overshooting on targets, reducing the need to purchase international credits and avoiding unnecessary personal, business, community and overall economic pain in the interim.

3. The ‘split-gas’ approach taken for budgets and future pathways

47. The approach taken in the Zero Carbon Act in 2019 to split emissions reductions targets by gas (biogenic methane on the one hand, and other gases on the other) was ground-breaking and world leading.

48. The approach of splitting-out long-lived and short-lived gases clearly acknowledges that different gases have different impacts on warming, and therefore there is good reason to treat them separately.

49. Even though B+LNZ does not agree with the targets that were set in the Zero Carbon Act, B+LNZ is pleased that the Commission has chosen to provide advice on emissions budgets and policy direction using a split-gas approach – it is the right thing to do.

50. Notwithstanding this, B+LNZ has concerns about the level of biogenic methane reductions the Commission is recommending in its draft budgets (discussed in the next section).

4. The recognition of the role of indigenous vegetation within productive farming systems

51. B+LNZ is pleased with the recognition that indigenous vegetation and native forests can create a long-term carbon sink while providing a range of other benefits, such as improving biodiversity, erosion control and freshwater health attributes.

52. The Commission’s advice makes it clear that existing forests, small blocks of trees, soils and wetlands can all store more carbon, but also provide a range of other ecosystem services and co-benefits that are important to recognise.

53. It is also refreshing to see the Commission calling for the Government to develop a cohesive strategy that includes water, biodiversity and climate, with the clear acknowledgement that there are multiple benefits to taking a holistic view of how we use and protect our land.

54. This is very much in line with B+LNZ’s views that protecting and enhancing New Zealand's natural capital, economic opportunities and ecosystem services is fundamental to the sustainability of not only the sheep and beef sector, but also critical to New Zealand's wellbeing for current and future generations.

55. Additionally, B+LNZ seeks to ensure that policy proposals and directions in different environmental domains are not made in isolation from each other, and advocates for

integrated environmental management. That is policy that achieves multiple positive outcomes on New Zealand's environmental, social, cultural and economic wellbeings, without creating perverse outcomes and unintended consequences for sheep and beef farmers and New Zealand's rural communities.

56. The Commission's draft advice goes a long way in supporting these views, therefore B+LNZ welcomes these points and fully supports them. Where appropriate, B+LNZ also makes suggestions to strengthen recommendations in Part B of this submission.

57. In particular, in an attempt to offer solutions to take a more integrated approach to environmental management across New Zealand's landscapes, B+LNZ strongly encourages the Commission to recommend in its final advice that the Government adopt Nature-based Solutions[7] as a way of incentivising native vegetation planting on-farm, and to achieve positive outcomes across climate mitigation, adaptation, biodiversity and community wellbeing.

5. The need for a long-term research and development plan to deliver on future technologies and help different adapt sectors to a changing climate and policy environment.

58. B+LNZ strongly supports the Commission's recommendation to review current arrangements and develop a long-term plan for targeted research and development technologies (including evaluating the role of emerging technologies such as genetic engineering) and practices to reduce agricultural emissions.

59. The Commission rightly points out that new technologies would provide greater flexibility to the sector in how it meets its emissions reductions objectives. This new technology can only be the result of significant and sustained investment that must start as soon as possible.

60. Investment should focus both on innovation and on continued investment to make sure the plan covers-off all aspects from invention through to delivery and that multiple stakeholders are involved in developing this plan and it spans the whole continuum – from science through to delivery for our farming systems. Innovation should not only cover new technologies, but also innovation and research for new farming practices and farm management.

[7] Seddon, N., et al. (2020). Understanding the value and limits of nature-based solutions to climate change and other global challenges. *Philosophical Transactions of the Royal Society*, 375(1794), 20190120.

61. In addition, it is critical that urgent investment is made into methodologies that can accurately assess the sequestration happening through tree/shrub vegetation spread across New Zealand's farms and landscapes down to a very granular scale. This is important from three perspectives; firstly that New Zealand as a whole accurately assesses the sequestration from a national emissions perspective, secondly that landowners are fully recognised for their sequestration and thirdly that the right guidance and incentives can be put in place for future plantings and management.

b) What B+LNZ does not support

62. There are areas of the draft advice where B+LNZ has significant concerns, and therefore does not support the draft advice and recommendations and is seeking amendments. These are summarised at a high-level in this section.

1. The level of the proposed emissions budgets, in particular the biogenic methane budgets

63. B+LNZ has significant concerns about the levels of biogenic methane reductions recommended by the Commission in its draft advice.

64. The Commission's draft advice is that it is achievable to reduce biogenic methane emissions 13.2% below 2017 levels by 2030, and recommends the Government puts policies in place to meet these budgets. This represents a 32% increase in ambition from the biogenic methane target set in the Zero Carbon Act (ZCA), which is to reduce biogenic methane emissions to 10% below 2017 levels by 2030.

65. B+LNZ disagreed with the level of this target being set in the ZCA as it was not based on the latest science on the warming impacts of short-lived climate pollutants such as methane. B+LNZ firmly stands by this view.

66. The Commission's advice essentially increases the level of ambition and biogenic methane emissions reductions further. B+LNZ sees this as inappropriate for the following reasons:

- Increasing the level of ambition and biogenic methane emissions reductions this way shifts the goal posts further for methane-emitting sectors.

- From a scientific perspective the Commission is asking methane-emitting sectors to have a 'cooling' impact on the atmosphere, whereas carbon dioxide emissions will continue to have a warming impact on the atmosphere, albeit to a lesser degree than without these proposed budgets.

- This raises questions of equity. The Commission has a key principle to "transition in an equitable and inclusive way", yet it is recommending that more is done by methane-emitting sectors than the rest of the economy, in particular in the next 10 years.

- A compounding factor is that there is also no recognition of the marginal impact methane-emitting sectors have had on the atmosphere for the past two decades. Methane emissions in New Zealand stabilised in the early 2000s, and have steadily declined since, meaning that there has been little additional warming from methane emissions in New Zealand since the early 2000s. Methane-emitting sectors, in particular the sheep and beef sector, have already achieved significantly more than other sectors, yet they are asked to do even more and at a faster rate than other sectors of the economy.

- B+LNZ does not agree with the Commission's assessment that the budgets that have been proposed are achievable. B+LNZ has concerns with the assumptions the Commission has made in modelling scenarios to determine the achievability of the proposed budgets, in particular with regard to assumptions that seem to imply that historical productivity gains will continue at the same rate as in the past.

67. Because B+LNZ disagrees with the levels of the biogenic methane budgets, this means that B+LNZ also does not support the levels of the overall budgets (aggregated across sectors and gases) recommended by the Commission.

2. The significant amount of new forestry planting required, and lack of limits proposed

68. As stated earlier, B+LNZ supports the Commission's views that trees have an important role to play in responding to climate change, but that New Zealand cannot plant its way out of the problem.

69. Nevertheless, the Commission is recommending significant amounts of new forestry to be planted over the next 15 years (around 380,000 ha of exotic forests, and close to 300,000 ha of native forests by 2035).

70. The Commission does not provide much evidence as to where these forests will be planted, although it identifies that "*there is on the order of 1,150,000 to 1,400,000 hectares of marginal land that could be planted in forestry*". The Commission also projects that sheep and beef farmland will decrease from 8.15 million hectares (Mha) in 2018 to 7.4 Mha in 2030, a decrease of approximately 700,000 ha, so B+LNZ assumes

that the vast majority of planting that the Commission is forecasting will happen on sheep and beef farmland. Within the analysis there is little definition of what marginal land is and why. This needs to be more clearly defined and the rationale clearly explained.

71. The Commission has provided very little evidence of the potential socio-economic impacts these significant levels of planting will have on the sheep and beef sector and on the rural communities and economies sheep and beef farmers are integrally a part of.

72. Furthermore, it is not clear if the Commission is recommending for the Government to limit the amount of exotic forestry planting to 25,000 hectares per year. Notwithstanding the fact that B+LNZ has concerns regarding such high levels of afforestation, should policy settings and incentives not be changed rapidly (in particular in the Emissions Trading Scheme), with an increasing carbon price we are very likely to see levels of planting that far exceed 25,000 ha per year.

73. B+LNZ calls on the Commission to make it clear that it is recommending to the Government that offsetting be limited to a certain level – either on a national basis, or through limits on the abilities of individual entities to offset vs reduce emissions. We call on the Commission to provide more specific policy guidance to the Government on how/what policy settings could be changed to remain within these levels of offsetting, in particular in the ETS.

3. The lack of recognition of the progress our sector has made since the 1990s

74. Absolute emissions from sheep and beef cattle have decreased by approximately 30% since 1990. Methane emissions in particular have decreased by 31% since 1990. [8]

75. There is also a growing body of evidence showing that there is a significant amount of sequestration that is happening from woody vegetation integrated within sheep and beef farming landscapes. These estimates range from 5.5 Mt CO_2-e sequestered per year as estimated by the Ministry for the Environment, to 10.4 – 19.7 Mt CO_2-e sequestered as estimated by the Auckland University of Technology.

76. There is very little recognition given by the Commission of the progress that has been made by the red meat sector to date.

[8] Climate Change Commission analysis, 2021.

77. More worryingly, the Commission, through its advice, is asking sheep and beef farmers to do even more, and much faster than other sectors of the economy.

78. The Commission has a guiding principle that early movers should not be penalised. However, by not recognising the progress made since 1990 and asking for significantly more emissions reductions and land-use change from a 2018 baseline, the Commission is effectively penalising the sector and likely disincentivising those farmers from going further.

79. The overwhelming sentiment B+LNZ has received from farmers is that they are disappointed the work they have achieved to date, to both reduce their emissions and increase the sequestration within their farm systems, is not recognised in the Commission's advice.

80. B+LNZ requests the Commission to give clear recognition of the progress the sector has made since the 1990s and consider how this progress could be rewarded.

4. Responding to climate change in a manner that does not threaten food production should be a key principle guiding recommendations for the land sector

81. Article 2 of the United Nations Paris Agreement on climate change states very clearly that one of the three key aims of the Paris Agreement is to *"Increase the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development,* ***in a manner that does not threaten food production***".

82. B+LNZ is disappointed that this key aim of the Paris Agreement is not reflected in the guiding principles used by the Commission in determining the level of the proposed budgets for the primary sector.

83. It is critical that this key consideration in the main international agreement on climate change must flow-through into the way New Zealand develops its domestic pathways in responding to climate change. As a net exporter of food to a world with a rapidly increasing number of mouths to feed, this aspect of the Paris Agreement has particular relevance to New Zealand.

84. The Commission argues that not only are the proposed emissions budgets achievable, they can also be achieved without reducing the level of red meat production in New Zealand.

85. To reach this conclusion the Commission has made a range of assumptions to inform its modelled scenarios. As little information has been made publicly available with regard to these assumptions it is very difficult to assess the likelihood of the Commission's projections eventuating. However, B+LNZ has significant reservations about these scenarios and does not believe the levels of emissions reductions the Commission has deemed achievable would not come at a cost of decreased production.

86. B+LNZ requests that this key aim of the Paris Agreement be included in the guiding principles the Commission uses as it refines its advice and/or reruns its modelling scenarios before presenting them to the Government by 31 May 2021.

5. The Nationally Determined Contribution (NDC) should split-out different gases

87. The Commission is recommending that the Government continues to define the NDC on the basis of all greenhouse gases using the most recent IPCC global warming potentials 100 adopted by the Parties to the UNFCCC.

88. Throughout the consultation material, the Commission makes a robust case for why a split-gas approach to climate change mitigation is sensible. The main merit being that it enables the treatment of long-lived and short-lived gases separately, based on their warming impact on the climate.

89. B+LNZ is therefore disappointed that the Commission has not recommended a split-gas approach to the form of New Zealand's NDC.

90. Splitting-out targets in the NDC is the right thing to do and would demonstrate global leadership, in particular to developing countries. It would show that focusing on the different warming impacts of different gases is possible, creates opportunities, and enables targeted interventions to be taken to mitigate the impacts of different gases.

6. The level of future biogenic emissions recommended

91. B+LNZ argued as part of its submissions on the Zero Carbon Bill in 2018-19, that it is not appropriate to use the IPCC global scenarios to determine domestic targets. The IPCC scenarios are by definition global scenarios, and therefore do not reflect circumstances that are particular to individual countries.

92. Additionally, B+LNZ believes there is a lack of transparency around the qualitative analysis that the Commission has undertaken, in particular on how some of the 'value judgements' made by the Commission have been arrived at.

93. While B+LNZ appreciates the time pressures associated with developing this advice, B+LNZ is concerned that a number of value judgements have been arrived at without having been properly tested with experts and interested stakeholders.

94. There is in particular little evidence provided of how the Commission considered some of the trade-offs required to be made between different gases (long-lived vs short-lived gases), or little recognition of the progress that has been achieved to date in New Zealand and the impact that has had on warming.

95. The most recent science on the contribution of biogenic methane to global warming clearly shows that reductions of 49% to 60% below 2017 levels by 2100 as suggested by the Commission go well beyond the reductions required for biological methane to not contribute to any further warming. For our sector, this raises significant questions around the application of the Commission's guiding principle of equity across sectors and communities in transitioning to a low-emissions and resilient New Zealand.

96. B+LNZ requests that the Commission engage more with relevant experts and stakeholders to make sure its assumptions and judgements are appropriately tested before finalising its advice to the Minister on future biogenic methane emissions.

PART B: DETAILED FEEDBACK ON THE COMMISSION'S ANALYSIS AND RECOMMENDATIONS

97. The following section presents B+LNZ's more detailed views on the consultation questions posed by the Commission, and on the draft recommendations it is making to the Government.

Consultation question 1: Principles

Do you support the principles we have used to guide our analysis? Is there anything we should change, and why?

98. The Commission has outlined seven principles to guide its analysis and recommendations:

1. Align with the 2050 targets
2. Focus on decarbonising the economy
3. Create options
4. Avoid unnecessary cost
5. Transition in an equitable and inclusive way
6. Increase resilience to climate impacts

7. Leverage co-benefits

99. B+LNZ broadly supports these principles, but requests that the Commission expands on them in developing its final recommendations to the Government, by incorporating the following feedback.

100. Under **Principle 1 Align with the 2050 targets**: This principle quotes the 1.5°C temperature goal from the Paris Agreement, but fails to recognise that action on climate change should happen in a way that does not threaten food production.

101. Article 2 of the United Nations Paris Agreement on climate change states very clearly that one of the three key aims of the Paris Agreement is to *"Increase the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, **in a manner that does not threaten food production***".

102. It is therefore very important that this key aim of the Paris Agreement is reflected and taken into consideration when advice is developed for the pathways countries take individually to contribute to meeting international objectives set out in the Paris Agreement.

103. Additionally, when referring to the global effort on climate change, such as done in this principle, the Commission should clearly state that the temperature goal in the Paris Agreement is to *hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels*.

104. While B+LNZ acknowledges that the Government has chosen to aim for the lower part of this 'range' of temperature objectives in the Zero Carbon Act, it is nevertheless important that the Commission be clear, when it refers to the global effort under the Paris Agreement, that the temperature goal is a range. The Government's decision to focus on the 1.5°C end of the range is a political one, but the Commission's advice should reflect the 'range' of temperature goals when it refers to the Paris Agreement.

105. Additionally, this principle states that "actions in the next five years will need to set Aotearoa up to deliver the deeper reductions required in subsequent emissions budgets and to meet and sustain the 2050 target". The way this is being implemented by the Commission (i.e., as per the level of the budgets) is to ask methane producing-sectors to do more than carbon dioxide-producing sectors over the next 5 years, inherently

meaning that methane producing sectors are asked to do more than CO_2 emitting sectors.

106. This interferes with Principle 5 which is about "transitioning in an equitable and inclusive way". If the Commission stays true to not wanting to "pick winners and losers", it needs to set budgets that are equitable from 2022 onwards, and not trade different gases off in different budget periods.

107. Under **Principle 2 Focus on decarbonising the economy**: B+LNZ strongly supports that the focus should be placed on decarbonising the economy and that forest sequestration should not displace making gross emissions reductions.

108. However, the argument could be strengthened by making the point that reliance on carbon forestry not only would "delay action, lead to higher cumulative emissions and put the burden of addressing gross emissions for future generations" but would also likely create some unintended and negative consequences for food production and for communities around New Zealand, in particular regional and rural communities.

109. Under **Principle 5 Transition in an equitable and inclusive way**: B+LNZ strongly supports that principles of equity, including intergenerational equity and equity across sectors and communities, are recognized.

110. B+LNZ also supports the clear statement that early movers should not be penalised in the 'climate transition'. However, B+LNZ argues that early movers should not only not be penalised but should also be recognised for their progress to date.

111. Under **Principle 7 Leverage co-benefits**: It is great that the Commission clearly states that the actions the country takes to meet emissions budgets and targets should "consider wider benefits, including to health, broader wellbeing and the environment".

112. This is line with B+LNZ's position that policy decisions in different environmental domains should not be made in isolation from each other, but should be integrated. That is policy that achieves multiple positive outcomes on New Zealand's environmental, social, cultural and economic wellbeings, without creating perverse outcomes and unintended consequences for sheep and beef farmers and New Zealand's rural communities.

Consultation question 2 – Emissions budget levels

Do you support budget recommendation 1? Is there anything we should change, and why?

113. The Commission is recommending three draft emissions budgets for the periods 2022 – 2025, 2026 – 2030, and 2031 – 2035. The Commission is recommending these budgets are aggregated using the Global Warming Potential 100 (GWP100) metric from the Intergovernmental Panel on Climate Change (IPCC) fifth assessment report (AR5) for consistency with international reporting obligations. The draft budgets are as follows:

	2018	Emissions budget 1 (2022 – 2025)	Emissions budget 2 (2026 – 2030)	Emissions budget 3 (2031 – 2035)
All gases, net (AR4)		271 Mt CO_2e	286 Mt CO_2e	223 Mt CO_2e
Annual average	69.2 Mt CO_2e	67.7 Mt CO_2e/yr	57.3 Mt CO_2e/yr	44.6 Mt CO_2e/yr

114. B+LNZ strongly disagrees with the level of the targets set for biogenic methane proposed by the Commission. B+LNZ cannot agree with the Commission's assessment that these budgets are 'achievable' based on current practices, as asserted by the Commission with limited evidential basis.

115. Because B+LNZ disagrees with the proposed budgets by gas, it therefore also disagrees with the aggregated budgets provided in the table above.

116. Additionally, while B+LNZ acknowledges that the Zero Carbon Act requires the Commission to express the budgets as a net quantity of carbon dioxide, B+LNZ also believes that the Commission has a duty to provide free and frank advice if the metric used to determine carbon dioxide equivalency is inadequate.

117. B+LNZ notes that in Chapter 8 (p.164) the Commission states "*This makes it [GWP] less useful in analysis of pathways to a specified temperature goal*". With the aims of the ZCA and Paris Agreement being temperature goals (contribution towards 1.5°C - 2°C) our strong view is that the Commission should recommend to the Government that GWP100 is an inadequate metric for aggregating gases in budgets.

118. New Zealand's emissions budgets should be based on contribution to the global temperature goal, and not bound to metrics developed as the world first turned its mind to consideration of climate change in the 1990s.

Consultation question 3 – Break-down of emissions budget

Do you support our proposed break down of emissions budgets between gross long-lived gases, biogenic methane and carbon removals from forestry? Is there anything we should change, and why?

119. The Commission is recommending that the Government implement policies that will meet emissions budgets based on the balance of emissions and removals as outlined in the table below.

	Emission budget 1 (2022 – 2025)	**Emission budget 2 (2026 – 2030)**	**Emission budget 3 (2031 – 2035)**
Total net emissions budget *Annual average*	271 Mt CO_2e 67.7 Mt CO2e/yr	286 Mt CO_2e 57.3 Mt CO2e/yr	223 Mt CO_2e 44.6 Mt CO2e/yr
REMOVALS Forestry carbon removals *Annual average*	 26 Mt CO_2e 6.5 Mt CO_2e/yr	 49 Mt CO_2e 9.8 Mt CO_2e/yr	 68 Mt CO_2e 13.6 Mt CO_2e/yr
EMISSIONS – LONG-LIVED GASES Gross long-lived gases	 174 Mt CO_2e	 190 Mt CO_2e	 153 Mt CO_2e
Carbon dioxide	133.7 Mt CO_2e	143.2 Mt CO_2e	110.8 Mt CO_2e
Nitrous oxide	29.4 Mt CO_2e	35.3 Mt CO_2e	33.1 Mt CO_2e
F-gases	7.3 Mt CO_2e	8.1 Mt CO_2e	6.7 Mt CO_2e
Non-biogenic methane	3.4 Mt CO_2e	3.1 Mt CO_2e	2.2 Mt CO_2e
EMISSIONS – BIOGENIC METHANE Gross biogenic methane*	 4.92 Mt CH_4	 5.83 Mt CH_4	 5.53 Mt CH_4

* Note that biogenic methane numbers are provided in megatonnes of methane (Mt CH_4). Megatonnes of methane do not equate to megatonnes of carbon dioxide equivalent (Mt CO_2e). As a result, the numbers in this table cannot be summed to give the total net emissions budget. However, the methane volume can be converted into a CO_2e amount by multiplying by 25, the IPCC AR4 GWP_{100} value for methane.

120. The Commission is also recommending that the Government implement policies that deliver emissions reductions of each greenhouse gas as outlined in the following table.

	2018	Emission budget 1 (2022 – 2025)	Emission budget 2 (2026 – 2030)	Emission budget 3 (2031 – 2035)
Total net emissions				
Annual average	69.2 Mt CO_2e	67.7 Mt CO_2e	57.3 Mt CO_2e	44.6 Mt CO_2e
Reduction from 2018		1.5 Mt CO_2e (2.1%)	11.9 Mt CO_2e (17.2%)	24.6 Mt CO_2e (35.5%)
Total gross emissions				
Annual average	78.6 Mt CO_2e	74.2 Mt CO_2e	67.1 Mt CO_2e	58.2 Mt CO_2e
Reduction from 2018		4.4 Mt CO_2e (5.6%)	11.5 Mt CO_2e (14.7%)	20.4 Mt CO_2e (25.9%)
Broken down by:				
Carbon dioxide (gross)				
Annual average	35.1 Mt CO_2e	33.4 Mt CO_2e	28.6 Mt CO_2e	22.2 Mt CO_2e
Reduction from 2018		1.6 Mt CO_2e (4.7%)	6.4 Mt CO_2e (18.3%)	12.9 Mt CO_2e (36.8%)
Nitrous oxide				
Annual average	7.7 Mt CO_2e	7.3 Mt CO_2e	7.1 Mt CO_2e	6.6 Mt CO_2e
Reduction from 2018		0.4 Mt CO_2e (4.9%)	0.7 Mt CO_2e (8.6%)	1.1 Mt CO_2e (14.2%)
F-gases				
Annual average	1.9 Mt CO_2e	1.8 Mt CO_2e	1.6 Mt CO_2e	1.3 Mt CO_2e
Reduction from 2018		0.1 Mt CO_2e (3.5%)	0.3 Mt CO_2e (15.3%)	0.6 Mt CO_2e (29.7%)
Non-biogenic methane				
Annual average	1.0 Mt CO_2e	0.8 Mt CO_2e	0.6 Mt CO_2e	0.4 Mt CO_2e
Reduction from 2018		0.2 Mt CO_2e (8.0%)	0.4 Mt CO_2e (39.0%)	0.6 Mt CO_2e (56.1%)
Biogenic methane				
Annual average	1.32 Mt CH_4	1.23 Mt CH_4	1.17 Mt CH_4	1.11 Mt CH_4
Reduction from 2018*		0.09 Mt CH_4 (6.5%)	0.15 Mt CH_4 (11.4%)	0.21 Mt CH_4 (15.9%)

* Note that the percentage reduction is for the annual average over the budget period. The biogenic methane target for Aotearoa is a 10% reduction by 2030 compared to 2017 levels. Under our emissions budget path, Aotearoa would reduce biogenic methane emissions by 13.2% by 2030 relative to 2017.

121. B+LNZ supports the approach taken by the Commission to split the budgets out by gas. This approach stays true to the Zero Carbon Act and enables us to target our level of effort based on the warming impact of different gases. B+LNZ also supports the fact that the Commission is recommending actual decreases in CO_2 levels, rather than simply offsetting emissions through forestry.

122. **B+LNZ however disagrees with the level of these budgets**.

123. B+LNZ is particularly concerned about the level of the proposed biogenic methane targets.

124. In Budget Recommendation 3 on page 33 of the consultation document, the Commission is recommending that the Government implements policies that deliver on biogenic methane reductions of 13.2% on 2017 levels by 2030.

125. The legislated target for biogenic methane (which B+LNZ already disagreed with as it is not supported by the latest science on the true warming impact of methane) is for a 10% reduction on 2017 levels by 2030.

126. The Commission is therefore, through this budget setting process, recommending a 32% increase to the level of the biogenic methane target, which is not acceptable. This is shifting the goal posts for methane-emitting sectors, in particular agriculture, at a time where consolidation and action is key through programmes such as He Waka Eke Noa – the Primary Sector Climate Action Partnership.

127. B+LNZ requests the Commission to revise the level of the biogenic methane emissions budgets to bring them in line with the legislated targets. Note that this should not be taken as an endorsement of the legislated 2030 target for biogenic methane.

128. Furthermore, the Commission is recommending that methane-emitting sectors reduce their emissions further and faster than carbon-dioxide producing sectors. B+LNZ is concerned that through this advice the Commission is asking methane producing sectors to essentially offset emissions from the rest of the economy, while the rest of the economy invests in technologies (such as electric vehicles) that will enable reductions of carbon dioxide later.

129. The fact that Commission is trading-off reductions of different gases is not acceptable, as it raises concerns about the equity of the transition (as per the Commission's guiding principle that the transition should happen in an equitable and inclusive way).

130. As a compounding factor, this advice takes no consideration of the marginal impact methane-emitting sectors have had on warming over the past 20 years. Methane emissions in New Zealand stabilised in the early 2000s, before steadily decreasing since 2005. At the same time, carbon dioxide emissions in New Zealand increased by approximately 8%.

131. Taking into consideration this trend over the past 20 years, and given the fact the Commission is recommending a further 13.2% decrease in methane emissions until 2030 implies that the Commission is asking methane-emitting sectors to have a 'cooling' impact on the climate over the first 3 budget periods, whereas carbon dioxide producing sectors are asked to not contribute as much warming as they would have without these budgets.[9]

132. Section 5ZC(2)(b)(iv) specifies that in advising on budgets, the Commission must have regard *to the need for emissions budgets that are ambitious but likely to be technically and economically achievable*.

133. The Commission has assessed that the budget for biogenic methane is achievable based on current practices and without additional technology. B+LNZ has significant reservations about this assessment, in particular with regard to assumptions that seem to imply that historical productivity gains will continue at the same rate as in the past. B+LNZ has not been able to adequately assess the assumptions used by the Commission, in particular in the modelling it undertook to inform these budgets, as the assumptions used have not been made public.

134. B+LNZ requests that all the assumptions used and inputs to the model be made public to enable a full and transparent critical assessment to take place.

135. The Commission must advise the Government on the proportions of an emissions budget that will be met by domestic emissions reductions and domestic removals. While B+LNZ reiterates that it supports the Commission in its message that New Zealand needs to wean off its reliance on exotic forestry to offset carbon dioxide emissions, B+LNZ also does not support the budgets for carbon dioxide removals. These appear to be set a very high level, meaning in effect that the country is still expected to rely significantly on forestry offsets and on significant amounts of new planting to meet the targets in the Zero Carbon Act.

136. In the third budget period for example (2031 – 2035), the Commission is recommending that approximately 45% of carbon dioxide emissions are offset by forestry removals. This is a significant amount which will corelate to very high levels of planting in the next

[9] Based on Allen, M., Cain M., Lynch J., and Frame, D. (2018) Climate metrics for ruminant livestock, Oxford Martin School, University of Oxford. This paper states that gradually declining methane emissions (-0.3%/year or 10% over 10 years) make no further contribution to warming. Faster cuts cause cooling, while any increase causes substantial warming.

10 years, which will in turn have impacts on any future flexibility of land use in the hill country, with flow-on effects for the wellbeing of rural communities.

137. B+LNZ therefore requests that the Commission publicly releases its assumptions and modelling, and also re-assesses the level of the proposed budgets. **B+LNZ is willing to assist the Commission to undertake this exercise in any way it can, for example by providing additional data, as required, to rerun scenarios in the models used by the Commission or to provide alternative scenarios that better reflect the likely pathway forward.** The Commission must engage with agri-economists and farm-systems scientists to re-assess its scenarios.

Consultation question 4 – Limit on offshore mitigation for emissions budgets and circumstances justifying its use

Do you support budget recommendation 4? Is there anything we should change, and why?

138. In preparing budgets the Commission must advise the Government on the appropriate limit on offshore mitigation that may be used to meet an emissions budget, and an explanation of the circumstances that justify the use of offshore mitigation.

139. In this draft advice the Commission is advising that no offshore mitigation should take place, so that the emissions reductions and removals happen domestically only over the first three budget periods.

140. The Commission is recommending that the only circumstances that would justify the use of offshore mitigation is as a last resort, in exceptional circumstances beyond the Government's control, such as force majeure events, where domestic circumstances cannot compensate for emissions impacts.

141. B+LNZ supports this recommendation in principle, as while offshore mitigation can be a cost-effective way of meeting budgets and targets, investment in domestic mitigation technologies is preferable. However, limits on offshore mitigation need to be accompanied by limits on domestic offsetting if we are to avoid 'planting our way out of the problem' to our long-term detriment.

Consultation question 5 - Cross-party support for emissions budget

Do you support enabling recommendation 1? Is there anything we should change, and why?

142. The Commission is recommending that the Minister for Climate Change seek cross-party support on emissions budgets. Under the Zero Carbon Act the Minister must consult representatives of political parties on emissions budgets before they are notified but, in addition to this, the Commission recommends that the Minister should also seek to ensure that the emissions budgets are debated in the House of Representatives so that the positions of each political party are on the parliamentary record.

143. B+LNZ supports this recommendation, as it is useful that such debates occur and be placed on the parliamentary record.

Consultation question 6 - Coordinate efforts to address climate change across Government

Do you support enabling recommendation 2? Is there anything we should change, and why?

144. The Commission recommends that the Government:

a) In each emissions reduction plan, include policies and strategies for meeting both the next and future emissions budgets (as recommended but not required under the Climate Change Response Act).

b) In each emissions reduction plan, nominate specific Ministers and agencies with accountability for implementing policies and strategies in line with emissions budgets.

c) Assess and meet funding requirements for implementing each emissions reduction plan in line with emissions budgets.

d) Establish Vote Climate Change as a specific multi-agency appropriation which consolidates existing and future government funding for core climate change mitigation and adaptation activities.

145. B+LNZ welcomes these recommendations, noting that a more joined-up approach across government agencies is something that B+LNZ has been advocating for. This should create efficiencies and lead to better outcomes for New Zealand.

146. B+LNZ however recommends that an additional recommendation is included to reflect the Commission's advice that policy development should be more integrated across environmental domains, such as climate change, freshwater, biodiversity and soils management. Without a specific recommendation there is a risk that climate change policy will be developed in a silo, aside from other environmental and resource management issues, which has the potential to create perverse outcomes and unintended consequences in other environmental management domains.

147. The recommendation could read:

    a) *"Establish a process to ensure that climate change policy is developed alongside policy in other environmental domains such as biodiversity, freshwater and soils management, to ensure an integrated approach to the management of New Zealand natural resources"*

Consultation question 7 - Genuine, active and enduring partnership with iwi/Māori

Do you support enabling recommendation 3? Is there anything we should change, and why?

148. The Commission recommends that, in transitioning Aotearoa to a thriving, climate-resilient and low emissions future, central and local government take action to ensure genuine and enduring partnership with iwi/Māori.

149. B+LNZ welcomes this recommendation. Ownership of land by iwi/Māori entities and communities is complex and creates demanding issues for climate change mitigation and adaptation. Significant elements of Māori owned land are relatively undeveloped, which creates challenges in the context of emissions reduction targets. Given historical land ownership issues, it is essential that strong Crown-Māori partnerships underpin actions in this area.

150. Māori sheep and beef farmers, incorporations and post-settlement entities early in their farming development journey stand to be unfairly disadvantaged by the Commission's advice for methane emitters to go faster than the rest of the economy and secondly by the lack of accurate recognition of all of the sequestration happening on those farms.

Consultation Question 8 – Central and local government working in partnership

Do you support enabling recommendation 4? Is there anything we should change, and why?

151. The Commission recommends that in transitioning Aotearoa to a thriving, climate-resilient and low emissions future, central and local government work together to:

    a) Align legislation and policy to enable local government to make effective decisions for climate change mitigation and adaptation, including aligning the Local Government Act, the Building Act and Code, national direction under the RMA, the proposed RMA reforms, implementation of the freshwater management framework and the 30-year infrastructure plan.

    b) Implement funding and financing mechanisms to enable the emissions reduction plans to be implemented effectively and to address the distributional effects of policy change today and for future generations.

152. B+LNZ welcomes these recommendations but wishes to stress that while alignment of legislation is important, it is also very important that the overarching response to climate change must continue to be governed by the Climate Change Response Act (CCRA). Any issues that are created by the CCRA must be dealt with through the CCRA in the first instance.

153. It is also important that distributional impacts of policy changes today and for future generations are addressed. B+LNZ requests that the Commission provides an assessment of the distributional impacts it expects from the recommendations it is providing to the Government before it finalises its advice to the Government.

Consultation questions 10 & 11 – Locking in net zero

Do you support our approach to focus on decarbonising sources of long-lived gas emissions where possible? Is there anything we should change?

Do you support our approach to focus on growing new native forests to create a long-lived source of carbon removals? Is there anything we should change, and why?

154. B+LNZ supports the Commission's focus on the need to decarbonise the economy and on the high-level messaging that New Zealand cannot plant its way out of the climate change problem.

155. B+LNZ also supports, in principle, the 'new' approach presented by the Commission on the role of forestry offsets. This would see the country's reliance on offsets from exotic forestry decrease over time, and shift towards a greater role for new permanent native forests to achieve long-term sequestration, in particular in order to offset "*remaining long-lived gas emissions in sectors with limited opportunities to reduce emissions from 2050*".

156. B+LNZ also supports the Commission's approach to focus on growing forests to create a long-lived source of carbon removals, as native forestry grows slower than exotic species, but sequesters carbon for a much longer period of time. B+LNZ is also pleased about the recognition that native species bring with them a range of other values and benefits, such as improved biodiversity and freshwater quality.

157. However, it is critical that the approach proposed by the Commission does not come at the expense of productive farmland which is essential for producing food and fibre.

158. B+LNZ's views are that the levels of planting recommended by the Commission (remain significant and will lead to swathes of productive farmland being converted to forestry given the current policy settings (especially with an increasing carbon price). While the forecast decrease in the area of sheep and beef farmland over the next 15 years is lower than projections from government agencies, they are nonetheless still significant.

159. These changes in land-use will likely lead to significant consequences on red meat production, and flow-on impacts on rural communities and economies. However, again, little evidence is provided about the impacts (in particular distributional) these recommendations will have on rural communities.

160. While the proposed approach has merits, it appears that the Commission is not recommending any cap, or limits, on the amount of offsetting that New Zealand should rely on in order to meet the proposed budgets. The Commission is not providing much policy direction to the Government on how to limit our country's reliance on forestry to make progress on the proposed budgets and on the 2050 target.

161. Without specifying a firm limit on the amount of offsetting that New Zealand relies on, and based on current policy and legislative setting, in particular those that govern the Emissions Trading Scheme (ETS), we are likely to see levels of offsetting that far exceed the levels the Commission estimates in its scenarios.

162. This is because the current settings in the ETS heavily incentivise planting of exotic forestry, and with a carbon/New Zealand Unit price that is forecast to continue to rise,

we are likely to see levels of exotic forestry planting that far exceed the 25,000 ha that the Commission forecasts will be planted every year for the next 15 years.

163. B+LNZ welcomes the Commission's statement (p.99) that "constraining the price incentive for afforestation through the Emissions Trading Scheme could help limit the overall level of afforestation". **B+LNZ requests the Commission turns this statement into an explicit recommendation**.

164. B+LNZ commissioned independent research from BakerAg to assess the amount of land that has been or will be planted in the near future that is likely to take land out of pastoral production, and on what land classes this planting will occur.[10]

Amount of planting since July 2017

165. The results of this research show that 102,215 ha of pastoral farmland has been or is in the process of being taken out of food production since July 2017. The gross land area of whole farm conversions to (mainly exotic) forestry was 68,600 ha. The remainder of the area is made of landowners afforesting parts of their properties by taking up the One Billion Trees planting grant and the Crown Joint Venture fund.

166. The research assessed why there has been the recent increase in farmland being sold to forestry interests.

167. Land prices in some regions have been relatively stable for some years before re-emerging opportunities associated with the ETS and increasing carbon prices resulted in forest investors coming back into the market for land. Forestry investors have been prepared to pay more for land in high Land Use Capability classes (and often relatively remote areas) than farmers because of:

    a) a combination of good carbon revenue streams due to the increase in the carbon price and projected long-term returns on investment from forestry (based on expectations for further increases in the price) and

    b) perceived uncertain times ahead in the short-to-medium term for hill country farmers.

168. The estimates of afforestation rates contained in the BakerAg report far exceed the Commission's assessment of afforestation for the years 2017– 2020 (approximately

[10] BakerAg (2021) *Independent validation of land-use change from pastoral farming to large-scale forestry*, prepared for B+LNZ.

102,000 ha estimated in the BakerAg report, against approximately 70,500 ha in the Commission's assessment).

169. This calls into question the Commission's assumptions with regard to historical and projected rates of afforestation, which in turn means that the Commission could likely have underestimated the amount of sequestration that would occur in its scenarios.

170. B+LNZ's assessment is that without firm limits placed on the amount of offsetting New Zealand should rely on, and with an increasing carbon price and unbalanced incentives towards exotic forestry, it is highly likely that we will continue to see afforestation rates that far exceed the estimates the Commission has provided.

171. This will in turn have significant consequences for the sheep and beef sector, and on the rural communities and economies sheep and beef farmers support.

172. Without limits imposed on the amount of offsets New Zealand should rely on to meet its budgets and targets, it is unclear how "profound" (as stated by the Commission) a shift this "new approach" represents.

173. There is very little analysis of the distributional impacts of the proposals/recommendations made by the Commission. This is concerning given The Commission's duties under the Zero Carbon Act (sections 5F and 5ZC). B+LNZ requests this analysis is completed before the Commission finalises its advice to the Government.

Land classes where planting is occurring

174. B+LNZ also queries assumptions around where the Commission expects trees to be planted.

175. The Commission states on page 67 that "*estimates from recent studies suggest there is on the order of 1,150,000 to 1,400,000 hectares of marginal land that could be planted in forestry*", yet it does not provide a definition of what it considers to be 'marginal' or 'less productive' land.

176. The Commission also states that "*as much of this land is steep and prone to erosion, we consider that it would be more suitable for permanent forests, particularly native forests*".

177. While it is undeniable that there is steep land that is prone to erosion on pastoral farmland, the Commission must provide its assumptions of where (i.e., what regions and

land classes) it expects the 680,000ha of forests to be planted over the next 15 years before it finalises its advice.

178. The BakerAg study assessed, of the 102,215 ha of pastoral farmland that have or are being planted, on what type of land they encompass.

179. Approximately 87% of planting has occurred (or will occur) on land use classes 6 (58%) and 7 (29%).

180. In addition, the majority (70%) of this planting is taking place on land with Low (34%) to moderate (35%) erosion susceptibility, with only 30% happening on highly (23%) or very highly (7%) erodible land.

181. Furthermore, analysis of the 2016 LUCAS layers suggest that 67% of the land sold for planting was in clear pasture, 7% in potentially reverting country, and 25% in land holding exotic or indigenous forest species at the time of the 2016 LUCAS update.

182. The results may challenge the assumptions made by the Commission on where it is forecasting new forests will be planted, but in any case it is important that the Commission is transparent about where it expects new forests to be planted.

183. In order to achieve a mantra of 'right tree in the right place', planting decisions (of any specie) should be made on the basis of the natural capital of the land, and not simply on subjective assessments that there are large amounts of 'marginal' or 'unproductive' land, in particular in the hill country, that is expendable and should be planted up.

Consultation question 12 – Our path to meeting budgets

Do you support the overall path that we have proposed to meet the first three budgets? Is there anything we should change, and why?

184. The Commission states "*we have developed this [a path to meeting budgets] by looking closely at the emissions reductions that are technically and economically achievable over each of the first three emissions budget periods. We have looked at both existing and emerging opportunities, technologies and behaviour or practice change*".

185. The proposals the Commission is making are transformational for the New Zealand economy and way of life. Therefore, it is absolutely critical that the Commission gets its assumptions right, and needs to make sure that those assumptions have been duly reviewed by experts in each sector.

186. The consultation document, supporting evidence report, and information subsequently released online make it very difficult to dig into the assumptions used by the Commission, and its assessment of what is "*technically and economically achievable*". Without full transparency and clarity on the assumptions that have been made and the modelling that has been undertaken, it is extremely difficult to assess the merits of the Commission's pathways and scenarios.

187. B+LNZ notes that the Commission used the Biological Emissions Reference Group (BERG) report as a basis for the assumptions it used in its modelling. B+LNZ has a number of reservations about the BERG report, but more importantly there are a number of significant caveats within the BERG report that are often not adequately reflected when the BERG report is used for policy development.

188. In addition, the BERG report does not consider land-use change (in its projected mitigations) except where it is considered feasible within existing farm systems.

189. Therefore, if the Commission is projecting for emissions from sheep and beef farms to decrease over the next 15 years, B+LNZ can only assume the vast majority of these reductions would mainly be the result of land-use change (in particular conversions to exotic forestry).

190. Based on the limited information available, B+LNZ does not believe that the Commission's pathway for the sheep and beef sector will eventuate or is achievable. B+LNZ request that the Commission works with B+LNZ and other relevant experts (in particular agri-economists and farm systems scientists in finalising their advice on their pathway for the sheep and beef sector.

Consultation question 13 – An equitable, inclusive and well-planned climate transition

Do you support the package of recommendations and actions we have proposed to increase the likelihood of an equitable, inclusive and well-planned climate transition? Is there anything we should change, and why?

191. Under section 5ZC of the Zero Carbon Act, the Commission must have regard to a number of matters when advising on emissions budgets. These matters include (but are not limited to):

    a) The likely impact of actions taken to achieve an emissions budget and the 2050 target, including on the ability to adapt to climate change

b) The distribution of those impacts across the regions and communities of New Zealand, and from generation to generation

c) Economic circumstances and the likely impact of the Minister's decision on taxation, public spending and public borrowing

d) The implications, or potential implications, of land-use change for communities.

192. Chapter 5 of the consultation document presents the Commission's assessment of the impacts of emissions budgets on New Zealanders. As a result of this analysis, the Commission states that "*the transition to a low emissions society needs to be well-signalled, equitable, and inclusive in order to maximise the opportunities, minimise disruption and inequalities, and be enduring as a result*."

193. The Commission then recommends that in the first emissions budget period the Government develop an Equitable Transitions Strategy (by 31 December 2023) that is linked to the Government's Economic Plan and outlines:

a) How the Government will build the evidence base for assessing the distributional impacts of climate change policy decisions that align with tikanga values

b) A process for factoring distributional impacts into climate policy and designing social, economic and tax policy in a way that minimises or mitigates the negative impacts

c) Guidance for developing localised transition plans that are customised for and co-developed with local government and affected communities.

d) How the Government will support affected workers to transition into new work.

194. The Commission also recommends that, in the first budget period the Government progress the following steps to meet emissions budgets:

a) Identify communities and regions that may be particularly affected by climate change and the transition to a low emissions society, and initiating processes for localised transition planning in these areas. This would require the Government to work in partnership with local government and regional economic development agencies, iwi/Māori, local communities, businesses, civil society groups and stakeholders.

195. Given the profound emissions reductions and land-use changes the Commission is recommending, the Commission has a legal and moral duty to provide a robust assessment of the socio-economic impacts that these proposals will have for New Zealanders.

196. B+LNZ judges the Commission's assessment of the impacts its proposals will have on New Zealanders, and in particular on red meat producers and on regional and rural communities, to be insufficient and unsatisfactory.

197. The Commission makes the following high-level statements in the consultation document:

> 1) *We have looked at the impacts which our budgets could have on the economy and society over the next 15 years. The overall costs of meeting the country's targets and our proposed emissions budgets are likely to be less than 1% of projected GDP. This is significantly lower than what was estimated when the 2050 targets were set. While the overall costs are small relative to the size of the whole economy, they will not be evenly felt.*
>
> *The transition to a low emissions society will bring opportunities, benefits, challenges and costs. Any change needs to be well-signalled, equitable and inclusive to make sure that it maximises opportunities while minimising disruption and inequities.*
>
> *Different groups of society, regions and sectors will be affected in different ways, and impacts won't always be evenly distributed. The Government will need to address this through careful policy design and targeted support*. (p.18)
>
> 2) *We have heard through our engagement about concerns that the speed and potential extent of afforestation could have negative impacts on rural communities and provincial centres that are reliant on the food and fibre industry for employment. This would include not only those working on the land, but also those involved in transporting and processing food and fibre products.*
>
> *[…] The impacts of any afforestation will depend on the scale, pace and species of trees that are grown, the purpose for which the trees are grown, the type of land that is afforested, and the land use that is displaced*

> *[…] We heard throughout our engagement about the concern that whole farms could be planted in exotic forests, either for production forestry or permanent carbon forestry. This could have impacts on rural communities and the wider food and fibre sector.* (p.98)

198. B+LNZ supports these statements the Commission has made, however is disappointed that the Commission has not gone a step further in undertaking its own analysis of the social, economic and distributional impacts to further qualify these high-level statements.

199. While B+LNZ appreciates that the Commission is recommending the Government outlines a process for factoring distributional impacts into climate policy and designing social, economic and tax policy in a way that minimises or mitigates the negative impacts, it is B+LNZ's view that the Commission has an obligation to undertake this level of analysis on social, economic and distributional impacts before it provides its final advice to the Government.

200. B+LNZ also requests that a more balanced presentation of socio-economic impacts of large-scale afforestation on rural communities is presented. Currently page 99 of the draft advice only cites a study commissioned by MPI on the economic impacts of forestry in New Zealand.

201. B+LNZ requests that in its final version of the advice the Commission also presents the results from the BakerAg case study[11] commissioned by B+LNZ on the socio-economic impacts of large-scale afforestation on rural communities in the Wairoa District. This study found that if all the sheep and beef farms in Wairoa were converted to forestry, then Wairoa would see a net loss of nearly 700 local jobs (the equivalent of one in five jobs in Wairoa) and net $23.5 million less spent in the local economy when compared to blanket forestry (excluding harvest year).

202. Furthermore, the Commission has not released the models it has used to inform its proposed advice, so it makes it very challenging for stakeholders, including B+LNZ, to critically assess and question the modelling undertaken.

203. However, B+LNZ has undertaken further analysis of potential socio-economic impacts should the Commission's pathways eventuate.

[11] Bruce, H., Harrison, E. (2019) *Socio-Economic impacts of large-scale afforestation on rural communities in the Wairoa District,* BakerAg, commissioned by B+LNZ.

Socio-economic impacts

204. The Commission suggests that a 15% reduction in livestock numbers could materialise by 2030 for sheep, beef and dairy cattle should its modelling and assumptions come to fruition.

205. It is estimated that a 15% decrease in livestock numbers would lead to a loss of 7,000 total direct jobs (N.B. individual jobs not full-time equivalents (FTEs)) in the "red meat industry", with approximately 3,000 of these in "livestock production" and 4,000 in "red meat processing".[12]

206. Furthermore, there could be a loss of approximately 15,800 jobs in other industries as a flow-on effect from losses in the "red meat industry", and a rise in the national unemployment rate of more than 19 per cent – from 4.7% to 5.6%.

207. There would be an uneven distribution across the country because "livestock production" and "red meat processing" are not distributed evenly. These increases in unemployment would be more concentrated in areas with a high concentration of employment in "livestock production" or "red meat processing" or both.

208. An estimated loss of $72 million in personal income tax revenue each year and an increase in social security and welfare costs of $234 million each year – a total of around $300 million each year, which may not seem particularly significant but the impact on individual local areas, particularly those in rural locations, may be profound.

209. Not surprisingly, the impact is more pronounced in those areas with significant employment in "livestock production" and "red meat processing".

210. Agricultural support services, rural supply stores and other sectors directly servicing "livestock production" and "red meat processing" could become economically unsustainable.

211. A summary of the potential negative social impacts for each Territorial Authority by industry sector is provided below. It should be noted that this is a subjective ranking and does not make quantitative comparisons between Territorial Authorities.

[12] Heilbron., 2021. Internal report to B+LNZ

Territorial Authority	Livestock production	Red meat processing	Comments
A	High	High	High level of employment in "livestock production" with job losses contributing to a significant increase in unemployment levels, which are already above national average. Concern regarding long-term viability of "red meat processing" facility if facing a 15% reduction in throughput.
B	High	High	Area already has significantly above average unemployment levels with any additional job losses exacerbating this. Population characteristics may impact on likelihood of out-migration, resulting in greater reliance on welfare payments locally.
C	Medium	Medium	The TA could be expected to have the capacity to absorb job losses in the "livestock production sector, given the anticipated magnitude and resultant impact on unemployment levels. Job losses in the red meat processing sector are estimated to include residents from outside the TA, reducing the net local effect.
D	Low	High	Relatively low level of employment in "livestock production" with job losses having a minimal impact on unemployment levels. Concern regarding long-term viability of "red meat processing" facility if facing a 15% reduction in throughput.
E	High	High	High level of employment in "livestock production" with job losses contributing to a significant increase in unemployment levels and resultant out-migration. High level of employment in "red meat processing", with associated job losses also likely to result in out-migration.
F	Low	High	Low level of employment in "livestock production" with job losses more likely to result in individuals exiting the labour force. Concern regarding long-term viability of "red meat processing" facility if facing a 15% reduction in throughput.

212. The socio-economic impacts that can be expected from the Commission's proposals are significant, yet the Commission has not provided granularity or analysis on these impacts. B+LNZ requests the Commission undertake this analysis and provide it to the Government as part of finalising its advice.

Consultation question 16 – Agriculture

Do you support the package of recommendations and actions for the agriculture sector? Is there anything we should change, and why?

213. The Commission has assessed that currently available changes to management practices have the potential to meet the 2030 biogenic methane target. New technologies would provide greater flexibility and the ability to meet the more ambitious end of the 2050 biogenic methane target range without reducing output. It is recommending that in the first budget period the Government:

    a) Ensure that effective mechanisms are in place so that the plans, advisory and guidance tools developed by He Waka Eke Noa will endure beyond 2025 and can support achievement of the emissions budgets and targets.

    b) Drawing on the work of He Waka Eke Noa, decide in 2022 on a pricing mechanism for agricultural emissions as is required by legislation that is suited to the characteristics of the sector and capable of supporting achievement of the emissions budgets and targets.

    c) Ensure the Rural Broadband Initiative is resourced and prioritised to achieve its 2023 target, so that farmers have access to data and information to support decision making and the ability to practice precision agriculture.

    d) Review current arrangements and develop a long-term plan for targeted research and development of technologies (including evaluating the role of emerging technologies such as genetic engineering) and practices to reduce biogenic emissions from agriculture.

    e) Review and update processes and regulatory regimes to ensure that new emissions reducing technologies and practices can be rapidly deployed as and when they are developed.

214. The Commission is also recommending for progress indicators to be set by the Government, which are:

    a) Government to have, by 31 December 2022, developed a long-term plan for funding research and development to support reductions in biological emissions from agriculture.

b) Government to have, by 31 December 2022, reviewed and amended processes and regulatory regimes for new emissions reducing technologies and practices.

215. While B+LNZ has reservations about the statement that "*currently available changes to management practices have the potential to meet the 2030 biogenic methane target*" B+LNZ supports in principle the recommendations made by the Commission.

216. B+LNZ is fully committed to He Waka Eke Noa, the Primary Sector Climate Action Partnership, which has an overarching objective to reduce New Zealand's agricultural emissions, recognise on-farm sequestration and help farmers adapt to the impacts of climate change. It is important that He Waka Eke Noa is enduring, to deliver the right outcomes for farmers over time.

217. B+LNZ also supports the prioritisation of the Rural Broadband Initiative so that farmers have access to data and information to support decision making and give them more ability to make the most use of technology.

218. B+LNZ also strongly supports the Commission's recommendation to develop a long-term plan for targeted research and development technologies (including evaluating the role of emerging technologies such as genetic engineering) and practices to reduce agricultural emissions.

219. The Commission rightly points out that new technologies would provide greater flexibility to the sector in how it meets its emissions reductions objectives. This new technology can only be the result of significant and sustained investment that must start as soon as possible.

220. Investment should focus both on innovation, and also on continued investment to make sure the plan covers-off all aspects from invention through to delivery and that multiple stakeholders are involved in developing this plan and it spans the whole continuum – from science through to delivery for our farming systems.

221. The plan must look at the requirements throughout the innovation continuum such as for example:

a) Mitigation solutions that can count in the National Inventory and are able to be practically used in current farm systems

b) Product quality is not impacted and if possible enhanced to ensure that all market requirements are met

c) Opportunities are developed to enhance the path to market for partners and also for adoption enhancement

d) Understanding the economic aspects; the cost of the innovation and its delivery.

222. Although the majority of current funding is focused on the science development of options a plan must include enhancement to all aspects of the pathway to delivery and look to create partnership to support that.

223. Investment should be a mixture of opportunities to support the grass-fed farming systems we operate in New Zealand, building on the current Crown investment and offering flexibility for co-funding with industry, commercial delivery agents and international partners. The timeframe for investment should reflect the long time required to develop prove and roll out these options (eg, 5-10 year horizons).

224. B+LNZ requests the Commission to bring forward the first progress indicator it is recommending to the Government by one year, so that it reads "Government to have, by 31 December 2021, developed a long-term plan for funding research and development to support reductions in biological emissions from agriculture".

225. In addition to the approaches recommended above the Commission should recommend that the Government should support initiatives taken by industry to increase market returns from New Zealand's early mover status on agriculture emissions. As one example the red meat sector has developed the origin brand "Taste Pure Nature" which is built around New Zealand's unique farming systems and environmental leadership. There is no doubt that the Commission's advice and Government policy related to climate change is going to increase farming costs. It is therefore incumbent on Government to support industry to capture extra value from the on-farm investment. Therefore the Government should directly support initiatives like Taste Pure Nature to help farmers capture that value to offset costs and potential production losses.

Consultation question 17 – Forestry

Do you support the package of recommendations and actions for the forestry sector? Is there anything we should change, and why?

226. The Commission states that production forests will play an important role in meeting the first three emissions budgets, and new permanent native forests will also balance emissions from hard-to-abate sectors in the long term. The Commission recommends, as a time-critical action, that the Government should enable afforestation to provide a carbon sink over the long-term by:

a) Implementing measures to incentivise establishing and maintaining at least 16,000 hectares of new permanent native forests per year by 2025, increasing to at least 25,000 hectares per year by 2030 and continued until at least 2050.

b) Requiring an appropriate forest management plan for all forests over 50 hectares defined as permanent to monitor the forest's permanence and limit exposure to risks such as climate change impacts, governance failure, and community impacts.

c) Designing a package of policies that must include amendments to the NZ ETS and land use planning rules, to deliver the amount and type of afforestation needed over time to align with our advice on the proportion of emissions reductions and removals and addressing intergenerational equity.

227. B+LNZ reiterates that it supports the Commission high-level messaging that New Zealand can't plant its way out of climate change by relying on exotic forestry. We support the approach recommended by the Commission for increasing the amount of native planting to create a long-term carbon sink. However, planting has to be integrated as part of farming systems and not have a negative impact on food production and rural community wellbeing.

228. B+LNZ has reservations on the level of offsetting the Commission is recommending in its budgets, and in turn with the level of planting that is required. B+LNZ remains concerned with the over-reliance on exotic forestry over the first three emissions budgets and with the 25,000 ha of exotic forestry that is recommended to be planted on an annual basis until 2035, in particular because the Commission has not provided adequate analysis of the socio-economic impacts this level of planting will have on rural communities.

229. While B+LNZ supports the recommendation that the package of policies to be developed by the Government must include amendments to the ETS, B+LNZ also reiterates its concern that the Commission is not recommending for any limits to be placed on the amount of offsetting through exotic forestry.

230. In order to achieve a mantra of 'right tree in the right place, planting decisions (of any specie) should be made on the basis of the natural capital of the land, and not simply on subjective assessments that there is X amount of 'marginal' or 'unproductive' land, in particular in the hill country, that is expendable and should be planted up.

231. B+LNZ notes that the Commission does not provide much indication of where it expects the planting to take place. B+LNZ therefore requests that the Commission explain where

(by region and land class) it expects planting to take place, and also that it undertakes a rigorous assessment of the socio-economic impacts before it finalises its advice to the Government. Within this assessment attention should be applied to how this will affect Māori landowners and Māori sheep and beef farmers in particular.

232. B+LNZ supports the Commission's reference to addressing intergenerational equity in its third recommendation. However, B+LNZ requests the Commission expands this recommendation to include limiting social and economic impacts that arise from land-use change on rural communities and economies. B+LNZ requests this recommendation be changed to:

> *c. Designing a package of policies that must include amendments to the NZ ETS and land use planning rules, to deliver the amount and type of afforestation needed over time to align with our advice on the proportion of emissions reductions and removals, addressing intergenerational equity,* ***and limiting the socio-economic impacts of land-use change on rural communities and economies.***

233. The Commission has also recommended that in the first budget period the Government make progress in maintaining and increasing the amount carbon stored in forests by:

a) Improving and enforcing measures to reduce deforestation of pre-1990 native forests.

b) Encouraging storage of additional carbon and maintaining carbon stocks in pre-1990 forests through activities such as pest control, noting that these removals may be outside of current emissions accounting approaches.

c) Evaluating approaches for storage of new and additional carbon through small blocks of trees and vegetation, noting that these removals may be outside of current emissions accounting approaches.

234. B+LNZ supports these recommendations. New research shows that there is a significant amount of sequestration on sheep and beef farmland, much of which farmers/landowners do not get recognition or reward for as this sequestration often falls outside of current emissions and removals accounting approaches.

235. B+LNZ, through He Waka Eke Noa is working with partners, government agencies and iwi/Māori to assess how farmers can be recognised for the sequestration on their farms through the pricing mechanism that is being developed.

236. However, the Commission could also strengthen the need for landowners to be recognised for the sequestration on their land, in particular for native vegetation and when this sequestration falls outside of established accounting approaches. This would provide additional incentives for landowners to maintain and increase the amount of carbon stored in vegetation that is integrated on farm. This would also provide additional incentives to landowners to maintain and enhance habitats for indigenous biodiversity.

237. B+LNZ therefore requests that the Commission adds a recommendation which could read:

> *"establishing approaches to enable landowners and farmers to be rewarded for the removals on their properties, where these removals fall outside of current emissions accounting approaches"*

238. The Commission recognises that current policy settings (in particular in the ETS) heavily incentivise the planting of exotic forests over native forests. This imbalance in policy settings creates perverse outcomes and unintended social and environmental consequences, for example on rural communities and on native biodiversity.

239. in an attempt to offer solutions to re-setting the balance and to take a more integrated approach, B+LNZ strongly encourages the Commission to recommend in its final advice that the Government adopt Nature-based Solutions[13] as a way of incentivising native vegetation planting on-farm, and to achieve good outcomes across climate mitigation, adaptation, biodiversity and community wellbeing.

Consultation question 19 – Multisector strategy

Do you support the package of recommendations and actions to create a multisector strategy? Is there anything we should change, and why?

240. B+LNZ welcomes recommendations that focus on the need for climate change policy to be joined up with policy in other domains, in particular other environmental domains.

241. B+LNZ has advocated for environmental management to be integrated across climate change, freshwater, biodiversity and soils management to ensure positive outcomes across multiple wellbeings for New Zealanders.

[13] Seddon, N., et al. (2020). Understanding the value and limits of nature-based solutions to climate change and other global challenges. *Philosophical Transactions of the Royal Society*, 375(1794), 20190120.

242. A more joined up approach would also reduce the risk of perverse outcomes and unintended consequences from poor policy that is often designed in silo from other domains.

243. It is also important that a multi-sector strategy is designed in a way that respects the principles of equity and fairness, so that it doesn't lead to winners and losers across sectors and/or segments of society being picked as a result of trade-offs being made.

244. Such a strategy must also be co-designed in full consultation with, and work for, Māori.

Consultation question 20 – Rules for measuring progress

Do you agree with Budget recommendation 5? Is there anything we should change, any why?

245. The Commission is recommending a package of rules for measuring progress towards meeting the proposed budgets. At a high-level, the proposal would substantially align emissions budget accounting with the approach that is used for accounting on New Zealand's progress internationally.

246. Notably, this would mean using a modified activity-based framework for land emissions accounting, with a 1990 base year and 'averaging' for post-1989 forests, whereby sequestration in pre-1990 forests would not be accounted for.

247. The Commission acknowledges that there are sources of emissions and removals that are currently not part of New Zealand's international accounting approach. By proposing to align with New Zealand's international accounting approach, the Commission is therefore excluding these emissions and removals from domestic accounting.

248. This is disappointing, particularly as it goes against the Commission's principle that "*accounting should aim to cover all material human caused emissions sources and sinks*."

249. New research shows that there is a significant amount of sequestration on sheep and beef farmland (from 5.5 Mt CO_2-e sequestered annually as estimated by the Ministry for the Environment, to 10.4 – 19.7 Mt CO_2-e sequestered as estimated by the Auckland University of technology), much of which falls outside of the established accounting approaches.

250. Not only does this mean that sheep and beef farmers cannot currently be rewarded for the sequestration on their farms, it also means, if the Government were to follow the

Commission's advice, that the country is excluding a significant amount of removals from the proposed emissions budgets. At the lower-end, as estimated by the Ministry for the Environment, 5.5 Mt CO_2-e of removals on sheep and beef farms equates to 85% of the annual removals proposed in the first budget.

251. If the sequestration on sheep and beef farms were to be accounted for, this would significantly decrease the amount of new planting of exotic forestry that would be required to meet the budgets, and further decrease the reliance New Zealand has on offsetting from new forestry to meet its targets.

252. It is somewhat worrying that the Commission is recommending approaches that cement established approaches and violate a basic principle that everything that is emitted and sequestered from the land should be counted. By negating the ability to account for sequestration from pre-1990 land, we are omitting a significant amount of removals, a lot of which is on sheep and beef farmland and Māori land.

253. B+LNZ acknowledges that the Commission is encouraging the Government to develop methods for tracking emissions and removals by sources and sinks not yet included in the country's domestic or international target accounting, such as organic soils and biomass (including small lots of trees and regenerating vegetation), with a view to allowing them to be included in future target accounting, and requests this be changed from an 'encouragement' to a 'recommendation'.

254. However, B+LNZ believes that the Commission could demonstrate thought leadership in this area, and be prepared to challenge established practice, and challenge the status quo, instead of deferring to the Government to work on this over time.

255. B+LNZ requests the Commission to review its advice on measuring progress towards emissions budgets and the 2050 target in light of new evidence, and with a view to further incentivise sequestration from activities, land and vegetation that is currently not accounted.

Consultation question 21 – Nationally Determined Contribution (NDC)

Do you support our assessment of the country's NDC?

Do you support our NDC recommendation?

256. The Commission has assessed that New Zealand's current international target, our Nationally Determined Contribution (NDC) under the Paris Agreement (to reduce emissions to 30% below 2005 levels by 2030), is not compatible with New Zealand

making a contribution to global efforts under the Paris Agreement to limit warming to 1.5°C above pre-industrial levels.

257. The Commission recommends that to make the NDC more likely to be compatible with contributing to global efforts under the Paris Agreement to limit warming to 1.5°C above pre-industrial levels, the contribution New Zealand makes over the NDC period should reflect a reduction to net emissions of much more than 35% below 2005 gross levels by 2030, with the likelihood of compatibility increasing as the NDC is strengthened further.

258. The Commission argues that how much the NDC is strengthened beyond 35% should reflect the tolerance for climate and reputational risk and economic impact, and principles for effort sharing, which require political decisions, and leaves this decision for the Government to make.

259. B+LNZ acknowledges, to a certain extent, that the Commission's advice on the level of the NDC is constrained by the framing of the questions posed by the Minister.

260. It is important also to note that, as a signatory to the Paris Agreement, New Zealand did not commit to limit global temperature increases to 1.5°C above pre-industrial levels. The full temperature goal that New Zealand committed to is to *"hold the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels".*

261. The difference between a 1.5°C and 2°C temperature makes a significant difference in terms of the framing of the advice that the Minister has sought from the Commission. For example, officials from the Ministry for the Environment advised Minister James Shaw in February 2020 that "New Zealand's [current] NDC is not consistent with pathways limiting warming to 1.5°C with no or limited overshoot, but is consistent with pathways limiting warming to 1.5°C with no, limited, or high overshoot, or 2°C".[14]

262. B+LNZ also notes that the current NDC is already ambitious and will be extremely difficult to meet - it requires significant amounts of forestry removals and significant amounts of international offsets to be purchased, as domestic emissions reductions alone will be insufficient to meet the NDC.

263. The Commission's proposal is to increase this level of ambition by at least an additional 5%, which could only realistically be met by purchasing additional international offsets. The Commission estimates the gap between its recommended emissions budgets for

[14] https://www.mfe.govt.nz/sites/default/files/media/Legislation/scientific-analysis-of-compatibility-of-ndc-with-1.5-degrees.pdf

domestic action, and its proposed NDC, at 64 Mt of CO_2-e. At a carbon price of NZ$50/t, the Commission estimates that bridging this gap would cost NZ$5.8 billion. If the carbon price were to reach NZ$100/t, then this cost would climb to NZ$11.5 billion. If the Government were to choose an NDC higher than 35% on 2005 levels, then this cost would climb even further.

264. B+LNZ has concerns about these additional costs to the economy, and again there is no evidence presented on how the impacts of such an increase in ambition and therefore in costs would fall on New Zealanders.

265. Furthermore, it would appear unusual for a country to table an NDC mitigation target that is more ambitious than the domestic one.

266. The Commission argues that New Zealand should make significantly deeper reduction than the global average, on the basis that it is a developed country, citing the burden-sharing principle of *common but differentiated responsibilities and respective capabilities* contained in Article 2.2 of the Paris Agreement.

267. However, the Commission (bar one mention) has been selective in its representation of the full wording of Article 2.2 of the Paris Agreement, which is that the Paris Agreement *will be implemented to reflect equity and the principle of common but differentiated responsibilities and respective capabilities,* ***in the light of different national circumstances****.*

268. Notwithstanding the fact that the addition of '*in the light of different national circumstances*' to the burden-sharing principle in the United Nations Framework Convention on Climate Change was the result of decade-long negotiations, it is a principle that applies to all countries (developed or developing), when a country determines the level of its response to contribute to the Paris Agreement.

269. This brings into question the use of global IPCC scenarios in determining the appropriate level of ambition that would apply to New Zealand, as, by nature, global scenarios do not take into account different national circumstances.

270. Furthermore, New Zealand has the discretion to decide how it takes into account its national circumstances when determining the level of ambition of its contribution.

271. The Commission has assessed the cost of additional ambition to be at least an additional NZ$5.8 billion, with knock-on effects stimulating spending in downstream industries domestically (these knock-on effects would happen offshore).

272. The Commission states that should a methane inhibitor or vaccine be developed and deployed by the mid-2020s, the emissions gap (between the recommended emissions budgets for domestic action and the proposed NDC) could be significantly reduced.

273. In the light of New Zealand's national circumstances, where reducing biogenic methane emissions is challenging, B+LNZ would much prefer for the Government to spend NZ$ 5.8 billion (or part thereof), on, for example, developing a methane inhibitor or vaccine and other mitigation technologies and significantly reducing emissions at home, benefitting New Zealand researchers and industry, rather than spending this money overseas.

Consultation question 22 – Form of the NDC

Do you support our recommendations on the form of the NDC?

274. The Commission is recommending that the Government continue to define the NDC on the basis of all greenhouse gases using the most recent IPCC global warming potentials adopted by the Parties to the UNFCCC.

275. Throughout the consultation material, the Commission makes a robust case for why a split-gas approach to climate change mitigation is sensible. The main merit being that it enables the treatment of long-lived and short-lived gases separately, based on their warming impact on the climate.

276. B+LNZ is therefore disappointed that the Commission has not recommended a split-gas approach to the form of New Zealand's NDC.

277. The main argument the Commission has used against recommending this approach is that "*a split-gas NDC would be unlikely to meet current international expectations that a developed country's NDC should be an all-sector, all gas absolute emission reduction target. Anything other than this is likely to be perceived as stepping back from responsibility and ambition. It could prompt a high degree of criticism from other countries and civil society groups*".

278. B+LNZ argues that a split-gas NDC would be an all sector, all gases and absolute emissions reduction target. It would simply be expressed in a different way, but would deliver on the same outcomes as an aggregated all gases target – plus it can still be aggregated for the purposes of international comparisons.

279. The national determination of NDCs is a core principle of the Paris Agreement, and presents opportunities to do things that challenge the established status quo. B+LNZ

believes that the Commission has the mandate to provide leadership on this issue, even if it goes against the norm.

280. Splitting-out targets in the NDC would demonstrate global leadership, in particular to developing countries. It would show that focusing on the different warning impacts of different gases is possible, creates opportunities, and enables targeted interventions to be taken to mitigate the impacts of different gases.

281. It appears the Commission has made a number of value judgements in reaching its conclusions on this section. B+LNZ requests that more evidence is provided on how these value judgements were reached, and also that the Commission engages with interested stakeholders before finalising its advice to the Government on the form of the NDC.

282. B+LNZ is also very concerned about the lack of understanding and/or erroneous description of alternative metrics to GWP100, in particular of the GWP* metric which provides a much better assessment of the warming impacts of short-lived gases such as biogenic methane.

283. It is important that errors are corrected before the final advice is provided, and it is equally important that the Commission provides New Zealanders a comparative assessment of what the analysis and recommendations might be if the GWP* metric was understood and used appropriately.

284. B+LNZ also would like to see New Zealand diplomats continue to engage in the international negotiations on 'common metrics', and for New Zealand to start reporting its emissions using the GWP* metric as part of its inventory reporting to the United Nations.

Consultation question 24 – Biogenic methane

Do you support our assessment of the possible required reductions in biogenic methane emissions?

285. The Commission's draft recommendation is that the reductions in emissions of biogenic methane that Aotearoa may eventually need to make as part of a global effort to limit temperature increase to 1.5°C could be between 49% and 60% below 2017 levels by 2100.

286. The Commission has stated that the task it has undertaken to come to this recommendation:

> *"requires a mixture of quantitative and qualitative analysis. There are no exact numbers that can come out of a formula. Judgements are required regarding trade-offs, where to prioritise efforts and how the impacts and consequences of acting on climate change are distributed within Aotearoa across people, place and time. Judgement is also needed to consider opportunities and trade-offs between Aotearoa and the rest of the world. This brings in concepts of equity and fairness".*

287. The approach taken by the Commission to assess the level of future reductions in biogenic methane New Zealand as part of a global effort under the Paris Agreement to limit the global average temperature to 1.5°C above pre-industrial levels, uses, as a starting point, global scenarios produced by the Intergovernmental Panel on Climate Change (IPCC) that limit warming to 1.5°C. Each scenario has been designed to reach the temperature goal in the in the lowest cost way possible, and contains a range of assumptions about global economic growth, technology developments and lifestyles.

288. The IPCC scenarios differ in whether they stay or not within the 1.5°C goal, with some scenarios allowing temperature to overshoot 1.5°C before cooling down again later.

289. The Commission's view following the analysis of the IPCC scenarios is the following:

> *"Overall, the IPCC scenarios show that the at least a 37% reduction in agricultural methane is required to have a 50-66% chance of limiting warming to 1.5°C by 2100. Simply maintaining the current level of warming from methane is not enough, as it would require the world to reach net zero carbon dioxide by 2030 to keep warming below 1.5°C. We consider this to be infeasible and consequentially that the global warming contribution from methane must be reduced if the 1.5°C temperature goal is to be achieved".*

290. The Commission has chosen a global scenario which has a range of reductions of agricultural methane emissions (the IPCC does not distinguish biogenic methane as New Zealand does domestically so uses agricultural methane emissions as a proxy) of -37% to -60% on 2010 levels by 2100 as its preferred scenario.

291. The Commission then makes a number of qualitative assessments and judgements to determine where in that range for global methane reductions New Zealand's biogenic methane emissions reductions could be by 2100, based on New Zealand's national circumstances.

292. As a result of this assessment, the Commission has determined that:

Fundamentally, it is our judgement that there is no reason to anticipate that Aotearoa would be expected to contribute less that then middle of the IPCC range for reductions of biogenic methane.

293. Therefore, the range recommended by the Commission is reductions of biogenic methane emissions of between 49% to 60% on 2017 levels by 2100.

294. B+LNZ has a number of concerns with the analysis conducted by the Commission.

295. Firstly, as B+LNZ argued as part of its submissions on the Zero Carbon Bill in 2018-19, it is not appropriate to use the IPCC global scenarios to determine domestic targets. The IPCC scenarios are by definition global scenarios, and therefore do not reflect circumstances that are particular to individual countries.

296. Secondly, and perhaps more worryingly, B+LNZ believes there is a lack of transparency around the qualitative analysis that the Commission has undertaken, in particular on how the 'value judgements' made by the Commission have been arrived at.

297. While B+LNZ appreciates the time-pressures associated with developing this advice, B+LNZ is concerned that a number of value judgements have been arrived at without having been properly tested with experts and interested stakeholders.

298. There is in particular little evidence provided of how the Commission considered some of the trade-offs required to be made between different gases (long-lived vs short-lived gases), or little recognition of the progress that has been achieved to date in New Zealand and the impact that has had on warming.

299. This leads B+LNZ to believe that the reductions suggested by the Commission go beyond what reductions are required, taking into consideration in particular the Commission's guiding principle of equity across sectors and communities in transitioning to a low-emissions and resilient New Zealand.

300. B+LNZ requests that the Commission engage more with relevant experts and stakeholders to make sure its assumptions and judgements are appropriately tested before finalising its advice to the Minister on future biogenic methane emissions.