Ministry for the Environment
Manatū Mō Te Taiao

BRIEFING NOTE

Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement (NDC1): Our emissions profile and country comparisons

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Hon James SHAW, Minister of Climate Change	Feedback	21 June 2021

Actions for Minister's Office Staff	**Return** the signed report to MfE.
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Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement (NDC1): Our emissions profile and country comparisons

Key Messages

1. This briefing sets out some of New Zealand's key national circumstances relevant when considering upcoming choices on enhancing NDC1. It is intended to be read alongside BRF-243 on the economic and fiscal impacts of meeting the NDC.
2. New Zealand is a wealthy country with high per capita gross emissions and per capita GDP about four times the global average. It is an expectation of the Paris Agreement that developed countries take the lead on reducing emissions.
3. The NDC1 is our third international emissions reduction target, each of which must be stronger than the previous one. Previously, New Zealand has met its targets largely through forestry removals and offshore mitigation. We have continued to have high gross emissions.
4. Since the NDC was set in 2016 New Zealand now has:
    a. s 9(2)(j) ; and
    b. evidence that significant domestic abatement can be delivered at negative economic cost compared to the status quo
5. Our emissions profile has a higher proportion of emissions from the agricultural sector than any other developed country. Although our agriculture industry is highly efficient, it is efficient relative to a heavily emitting industry. In most other developed countries, carbon dioxide from energy and fuel use dominates emissions.
6. Agricultural gases (mainly methane and nitrous oxide) generally have fewer and more expensive technological options for rapid abatement than carbon dioxide. In the absence of technological solutions, significant abatement raises social, cultural and economic issues that increase the time necessary for emissions reductions, especially for our export-exposed and already highly efficient agricultural system.
7. This means that, achieving the same overall level of abatement in New Zealand as in countries with a higher proportion of carbon dioxide emissions would require relatively more effort in New Zealand. Vice versa, for the same level of effort, overall percentage reductions in New Zealand's emissions would be lower than in other countries.
8. Even in the absence of significant emission reductions, policy innovation in agriculture can still constitute leadership internationally. However, leadership will ultimately come down to effective action to reduce emissions and manage the transition to a low-emissions sector.
9. In contrast to agricultural emissions, New Zealand's net carbon dioxide emissions are much lower per capita currently than the OECD and even global averages. Globally, net carbon dioxide emissions are the key driver of global warming.
10. New Zealand has low net carbon dioxide emissions primarily because of significant carbon dioxide removal rates generated by forests that offset its gross carbon dioxide emissions. Continued large-scale forestry removals are possible, but this comes with a range of other

environmental and social issues and includes questions about the sustainability and permanence of this approach.

11. New Zealand's gross carbon dioxide emissions are comparable with the OECD average, despite our high renewable electricity generation. A relatively larger share than in the OECD average comes from emissions from transport. Transport emissions have been difficult to reduce across the OECD.
12. The different mix of economic sectors and abatement costs and potentials in different countries means that comparing only economy-wide domestic emission reductions is a poor measure of effort and leadership. Our national circumstances have been assessed by the Climate Change Commission and incorporated into their advice on the domestic emissions pathway out to 2035. Their advice reflects what they believe New Zealand can do domestically over the next three emissions budgets without creating high risks or high impacts on vulnerable parts of our population, taking into account our national circumstances.
13. Our NDC1 is set as a responsibility target. This means the overall abatement achieved through our NDC1 can draw on domestic emissions reductions as well as abatement generated in other countries. New Zealand's national circumstances can still inform consideration of the NDC1 target. But, our domestic cost of abatement is therefore not necessarily a critical factor for determining the overall NDC1 reduction target, but it shifts the balance of emission reductions we can achieve domestically and where we would have to rely on actions taken by others funded by New Zealand.
14. This raises the question of what overall level of abatement, and what combination of domestic reductions and offshore abatement would be regarded as 'balanced' in light of our national circumstances. This by its nature is challenging to quantify and we have not identified what NDC level is an appropriate reflection of our national circumstances. We have, however, identified four key considerations that flow from our national circumstances that should inform a decision on the level of our NDC beyond a simple comparison of headline numbers between countries:
    a. New Zealand is a comparatively wealthy country with high per capita GDP. We have an opportunity to use our high capacity to pay to achieve additional mitigation overseas that is not feasible at home.
    b. Emissions reductions achieved overseas, provided they have environmental integrity, have the same effect on climate as those achieved domestically. Ensuring and demonstrating the integrity of such offshore reductions will be critical for public acceptability.
    c. The extent to which offshore abatement is used to supplement, not substitute, domestic abatement has previously been a key issue for New Zealand. Very high reliance on offshore abatement can make it more difficult to maintain public support for policies aimed at reducing emissions, such as the NZ ETS.
    d. Sustained purchasing of offshore abatement to meet our NDC1 will require the commitment from successive Governments and agreement that the balance of investment into emission reductions in New Zealand and offshore is appropriate.
15. These issues imply that our national circumstances play an important role in considering what overall level of enhancement of our NDC1 may be appropriate, beyond comparing headline reduction targets across different countries.

Recommendations

We recommend that you:

a. **Note** that this briefing is part of a package of material relating to the possible update of New Zealand's NDC1

b. **Note** that the Paris Agreement requires Parties to set NDCs in line with their highest possible ambition in light of national circumstances and representing progression on previous efforts

c. **Note** that this briefing outlines some relevant national circumstances for updating New Zealand's NDC1, noting that the Commission's advice already incorporates a large body of analysis on our national circumstances

d. **Note** that this analysis is primarily a qualitative exploration of our national circumstances

e. **Agree** that this briefing and appendices will be released proactively on the Ministry for the Environment's website once decisions on NDC1 have been taken

Yes/No

Signature

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Hon James SHAW, Minister of Climate Change	

Purpose

1. This briefing is a second briefing on New Zealand's national circumstances as they relate to the enhancement of New Zealand's first nationally determined contribution (NDC1). This is to go alongside BRF-243 on the fiscal and economic costs of meeting the proposed options for NDC1.
2. This briefing covers New Zealand's national circumstances, including its emissions profile and how it compares with that of other countries, and how this affects choices on enhancing NDC1.

Context

3. Under the Paris Agreement, NDCs must reflect a country's highest possible ambition in the light of different national circumstances and represent an increase in ambition compared to the previous target. NDC1 is New Zealand's third international climate change target.
4. This means that we must take into account relevant factors about our economy, emissions profile and position in the world when making choices on NDC1.
5. A number of countries are increasing the ambition of their NDC1s in response to renewed framing of climate policy around limiting warming to 1.5°C above preindustrial levels. In a separate briefing (BRF-213), we have provided advice to you on NDC1 options that would be consistent with 1.5°C.
6. Highest possible ambition in the light of different national circumstances does not mean trading off deep emissions reductions to limit the effects on the economy. It means ensuring that we understand how our circumstances interact with our ability to reduce emissions, including where our circumstances limit our ability to make deep cuts and where they actually enable us to take strong and ambitious action.
7. The Climate Change Commission (the Commission) has analysed our national circumstances and set out a pathway to achieving the domestic targets in the Climate Change Response Act. Their advice recommends a level of domestic ambition that reflects the highest ambition for New Zealand that is achievable economically and socially. Importantly, their analysis found that the impacts on GDP of long term emissions reductions have decreased compared to previous estimates.
8. NDC1 is a "responsibility" target. This means it can be met domestically via gross emissions reductions and removals through forestry, but in addition also via international cooperation. Even without enhancement, international cooperation will be necessary to meet NDC1. If emissions track along the Commission's Demonstration Path (i.e. the Commission's recommended domestic budgets are achieved), more offshore abatement will be required than will be achieved domestically over 2021-2030.

Analysis and Advice

New Zealand has high agricultural emissions

9. New Zealand is a developed country with high per capita GDP and emissions. At 48% of gross emissions, our biggest emitting sector is agriculture, the majority of these emissions being methane. Figure 1 shows our emissions profile in 2019. Methane contributes 42% of gross emissions, and most of this is agricultural. For comparison, the percentage of

agricultural emissions in the OECD average is just over 9%. Developing countries tend to have relatively higher agricultural emissions, so the global average is around 12%.

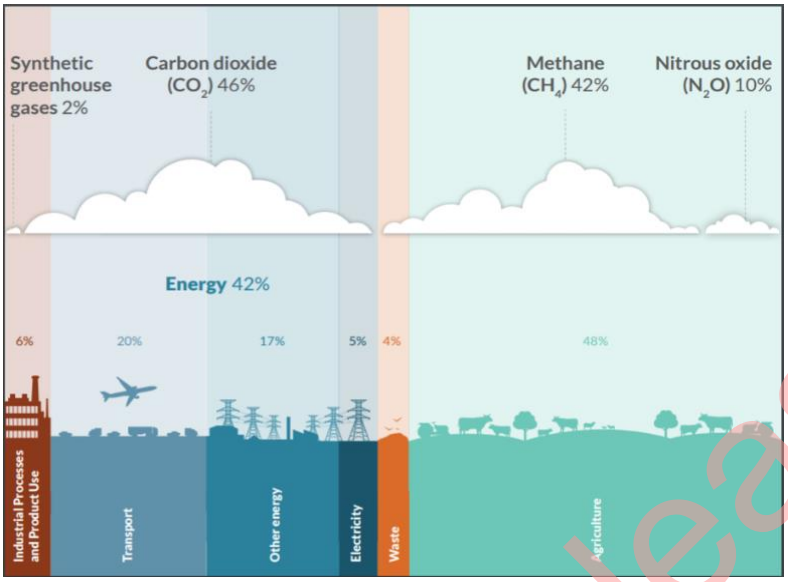

Figure 1. New Zealand's emissions in 2019

10. New Zealand's methane emissions in 2019 were 7 tonnes CO2-e per capita. The OECD average is 0.5 t CO2-e. This puts us at well over 10 times the OECD average.

11. As figure 2 shows, per capita agricultural emissions have decreased since 1990, reflecting population growth, and some efficiency and productivity gains. Despite our high absolute agricultural emissions, New Zealand's agricultural sector is recognised as highly efficient and is among the least emission intensive livestock industries in the world. But, it's important to note that this efficiency is in the context of a highly-emitting industry.

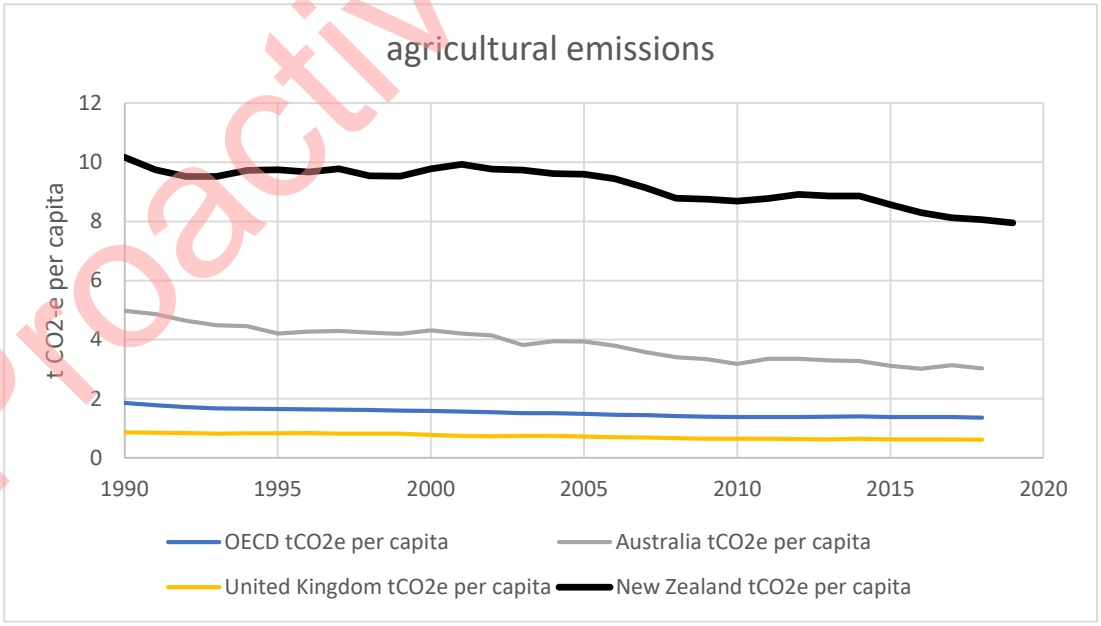

Figure 2. Trends in agricultural emissions in the Australia, the UK, the OECD and New Zealand since 1990

Agricultural gases have fewer options for rapid emissions reductions

12. The effort required to abate emissions of different gases, in different sectors and from different industries varies greatly. This is because the costs of abatement vary depending on the options available to reduce emissions. For example, carbon dioxide from electricity production is relatively easy to abate, since retirement of coal-fired electricity generation often has good economic grounds and there is a range of options to replace it. In contrast, agricultural methane is more difficult to rapidly abate. There are fewer available technological options and they tend to be more expensive.

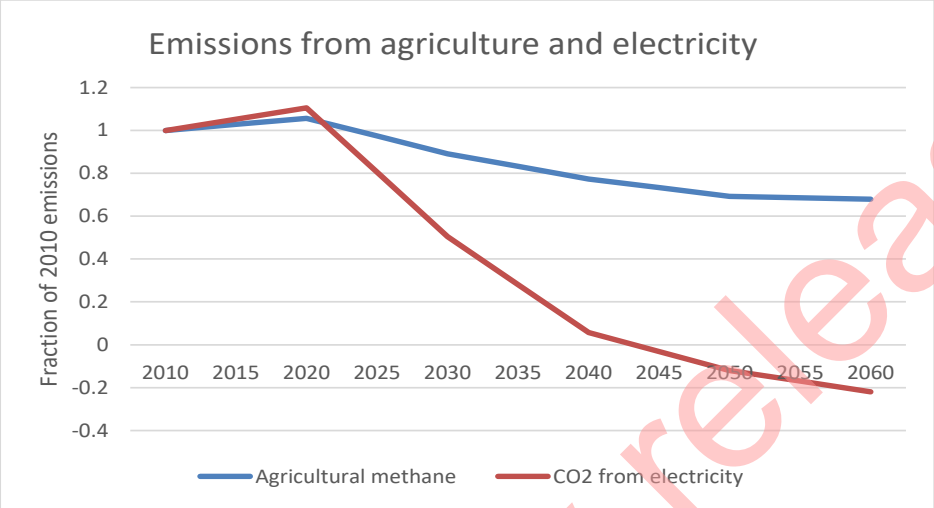

Figure 3. Emissions pathways for agricultural methane and carbon dioxide from electricity production in global modelled scenarios that limit warming to 1.5°C. These pathways are a function of the cost of abatement.

13. Global models show this clearly. Figure 3 shows that reductions in the models are driven by the cost of abatement – the higher the cost, the slower the reductions in emissions, since the models will always choose the lowest cost mitigation option. In modelled pathways that limit warming to 1.5°C, agricultural methane and nitrous oxide reduce much more slowly than carbon dioxide from electricity production and transport, for example.

14. This is particularly true for New Zealand. The global models reflect reductions in emissions in agriculture systems globally. A large proportion of these reductions come from efficiency and productivity improvements, many of which have already been achieved in New Zealand, making further reductions even more challenging.

15. Another important consideration is that New Zealand's agriculture sector is export-driven. Trends in output and emissions are primarily driven by changes to overseas markets, making it harder to apply emissions reduction measures at home.

16. Deep emissions cuts in agriculture are possible, but require transitions that must incorporate a wide range of socio-economic considerations. This type of transition takes time and cannot deliver rapid emissions reductions in the near term.

17. Two outcomes from this are that it requires greater effort in New Zealand to achieve similar abatement to other developed countries, and that leadership in the agricultural sector does not necessarily mean large percentage emissions reductions.

18. For example, as Figure 4 shows, most of the UK's emissions are carbon dioxide, largely from burning fossil fuels for electricity production. In contrast, New Zealand's emissions are dominated by agricultural gases. It is therefore likely to require less effort for the UK to make deep cuts to their emissions than for New Zealand, because there is a broader range of lower cost options available to rapidly reduce carbon dioxide emissions than in the agricultural sector.

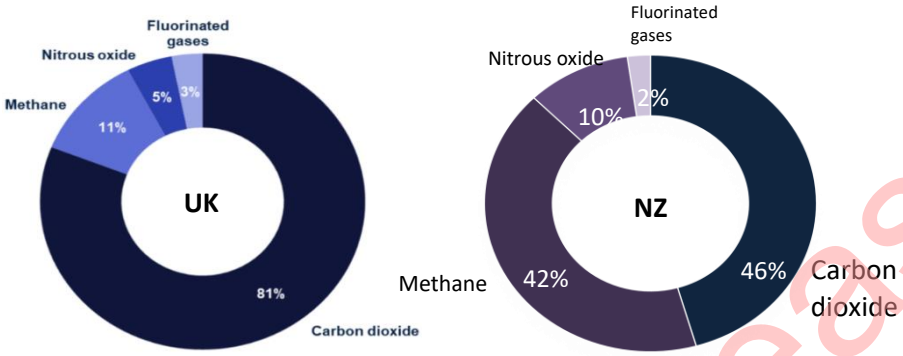

Figure 4. Emissions profile of UK (left) and New Zealand (right). New Zealand's has a much greater proportion of agricultural emissions

19. Policy innovation, such as the work that is going on in the He Waka Eke Noa programme to price agricultural emissions, is the first of its kind and constitutes international leadership. Although it may not achieve deep cuts in the near term, it is part of a world-leading push to reduce emissions in a sector with few technological options for rapid abatement. Similarly, contributions to research programs such as the Global Research Alliance on Agricultural Greenhouse Gases is funding research and development with the potential to support major reductions in global agricultural gases.

New Zealand has low net carbon dioxide emissions

20. Figure 5 shows that New Zealand's net per capita carbon dioxide emissions were 2 t per capita in 2019. This is well below the OECD average of 7.9 t.

21. The main reason for this is our high rate of forestry removals rather than low gross carbon dioxide emissions. New Zealand has abundant previously deforested land that has been replanted with exotic forestry. In 2019, the land sector offset about 33% of New Zealand's emissions through planted forests. The OECD average is around 3%.

22. There is potential in New Zealand for continued large-scale removals from forestry with large areas of erosion prone land that may be suitable for either plantation or permanent native forestry. The Commission's demonstration path sees the establishment of new native forests increase to 25,000 ha per year from 2030 (Chapter 7, pg 120).

23. In global models, removals from forestry and other negative emissions technologies are used to offset the warming from residual emissions from hard to abate sectors like agriculture. As the Commission noted, they should complement, rather than replace, gross emissions reductions. For New Zealand, this could be interpreted as implying that forestry should offset the residual warming impact of hard to abate agricultural emissions of methane and nitrous oxide. But, our current emissions profile suggests that forestry is compensating for high gross carbon dioxide emissions, making us look good globally by having low net carbon dioxide with relatively little effort, rather than offsetting hard to abate sectors.

24. Our low net carbon dioxide emissions place us as a leader globally. For example, the UK has reduced its emissions by around 42% since 1990. Despite this, their per capita carbon dioxide emissions were still around 5.6 t in 2018, almost triple New Zealand's, despite ours having risen since 1990.

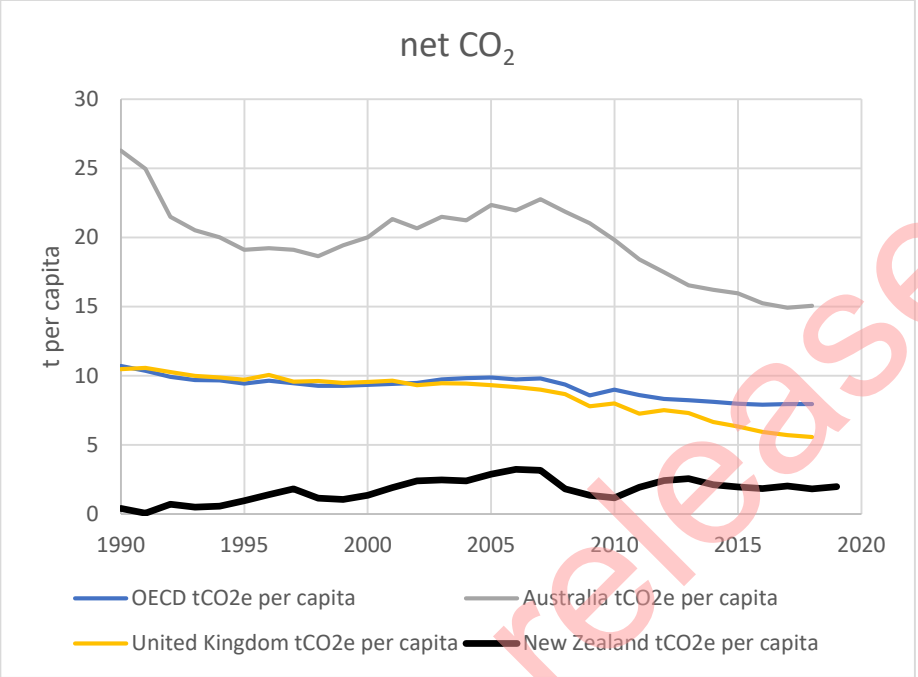

Figure 5. Trends in net carbon dioxide in Australia, the UK, the OECD and New Zealand since 1990

But, our gross carbon dioxide emissions are similar to the OECD average

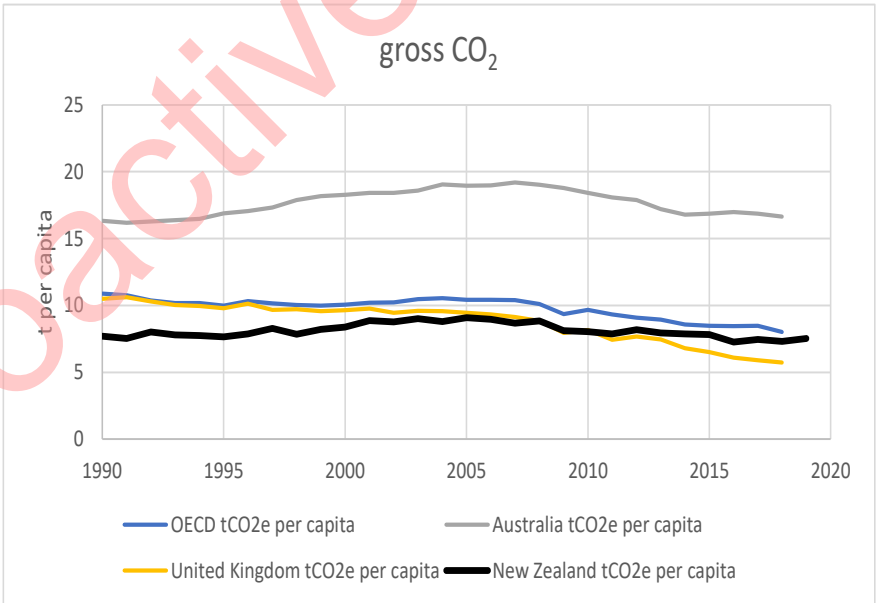

Figure 6. Trends in gross carbon dioxide in Australia, the UK, the OECD and New Zealand since 1990

25. Figure 6 (previous page) shows that New Zealand's gross carbon dioxide emissions are similar to the OECD average, though their sources differ from most other OECD countries. Unlike other developed countries whose emissions largely come from fossil-fuel

electricity generation, New Zealand's electricity sector is mostly renewable, and our emissions are dominated by road transport. It's worth noting that New Zealand has high potential for renewable energy in sectors other than electricity.

26. This means that, despite our emissions being close to the OECD average, we do not necessarily have the same options for abatement as other countries. Transport has been a challenging sector to abate for the entire OECD, and a large part of the abatement possible in those other countries is from reducing fossil fuel electricity generation.

Emissions in New Zealand and globally have changed over time

27. Greenhouse gas emissions in New Zealand have grown since 1990, in contrast to the OECD as a whole. The analysis in Figure 7 helps understand key drivers in those diverging trends, based on changes in population, wealth (expressed by GDP per capita), and emissions intensity of the economy (expressed as greenhouse gas emissions per unit of GDP). Figure 7 shows these trends for New Zealand and OECD countries in aggregate.

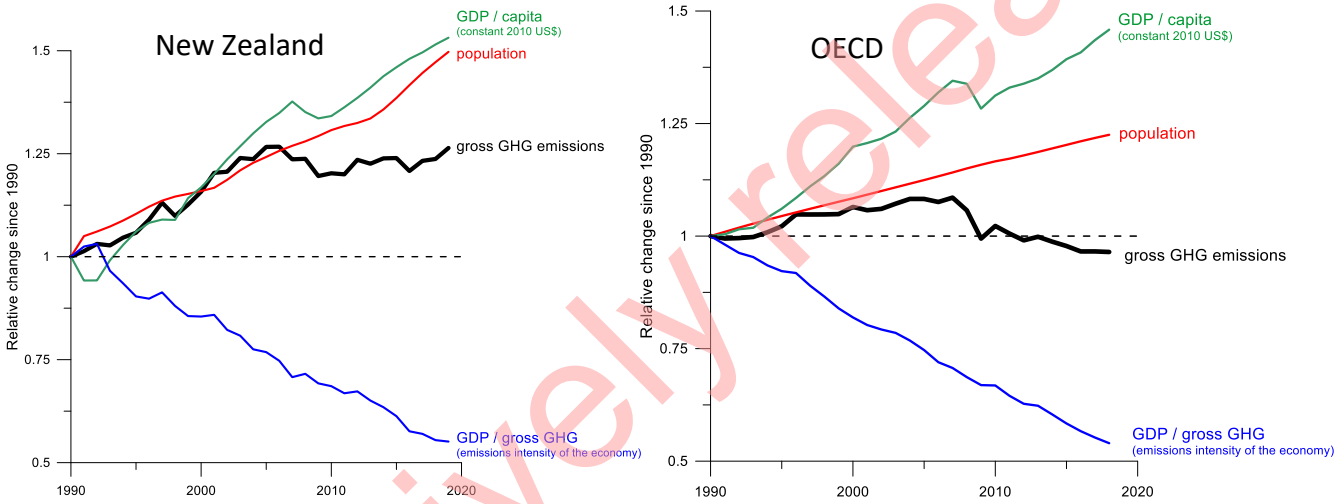

Figure 7. Trends in GDP per capita, population, gross emissions and emissions intensity of the economy in New Zealand and the OECD

28. This analysis shows that the emissions intensity of the economy declined in New Zealand at almost the same rate as in the OECD overall. By contrast, the main driver of the greater increase in greenhouse gas emissions in New Zealand was the increase in population and the slightly greater increase in GDP per capita in between 1990 and 2019 compared to the OECD average.

29. This comparison suggests that economic growth and gross emissions have in fact decoupled at similar rates in New Zealand and the OECD as a whole, despite differences in the role of different sectors in overall economic output.

30. The different rates of population growth also explain why greenhouse gas emissions have continued to decline in the OECD following the global financial crisis in 2008/09 but have remain relatively steady in New Zealand and in fact have shown a slight upward trend since 2010. In the OECD, the growth in population and in GDP per capita was not high enough to offset the decline in the emissions intensity of the economy, whereas in New

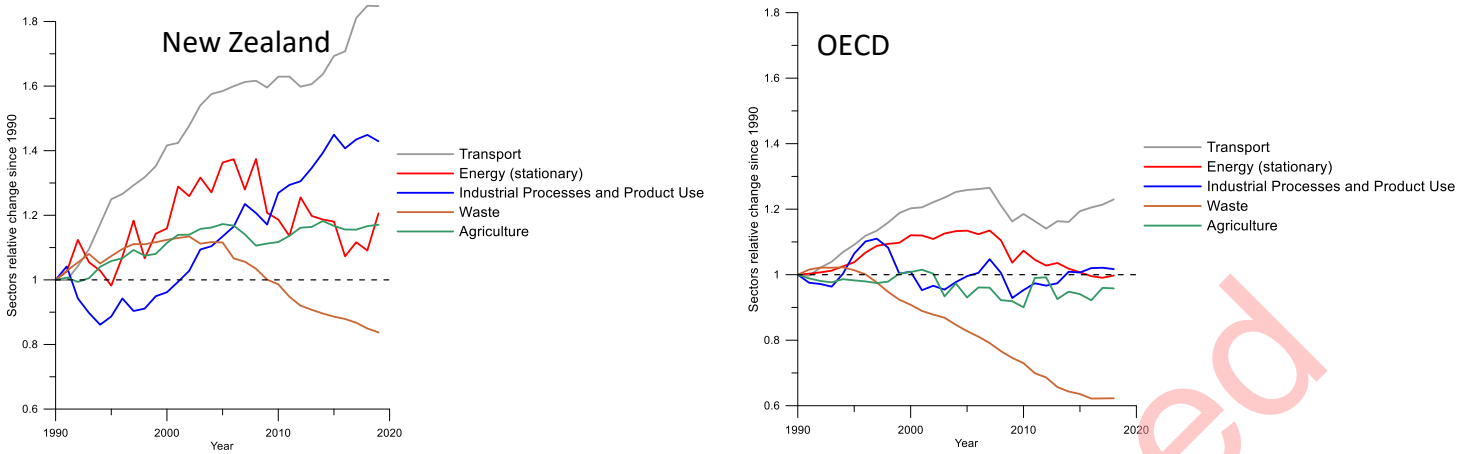

Figure 8. Changes in sectoral emissions since 1990 in New Zealand and the OECD

Zealand, the increase in population together with slightly higher economic growth rates fully offset the declining emissions intensity of the economy.

31. A detailed sector comparison helps understand differences in individual sectors in past emission reductions in New Zealand and the OECD as a whole.

32. Figure 8 shows that transport emissions have grown faster than any other sector in New Zealand. The same is true for the OECD as a whole, but the overall rate of growth was much less. This difference is only partly explained by different overall population trends, as per capita emissions from transport in New Zealand still grew by more than 20% since 1990, whereas in the OECD as a whole, transport emissions per capita in 2019 were roughly the same as they were in 1990.

33. Emissions from industrial processes and product use have also grown significantly in New Zealand, whereas they remained relatively flat in the OECD. The New Zealand trends cannot be explained by population growth only since those emissions should be little affected by population and reflect the growth in the sector and lack of decarbonisation of key processes.

What does it mean for abatement?

34. A consequence of this is that countries with a high proportion of emissions from hard to abate sectors will get less abatement from an equivalent level of effort to compared other countries with easier to abate emissions. This is a key aspect of New Zealand's national circumstances – our high agricultural emissions and already-low electricity generation emissions mean the level of abatement we can achieve for a given amount of effort is lower than other countries with more typical emissions profiles.

35. The UK is an example of the difference in level of effort. Historically, the UK has high carbon dioxide emissions from electricity generation. The effort required to make significant emissions reductions is expected to be lower than it would be for New Zealand to make an equivalent reduction in the energy sector, as our electricity sector is already largely low-emitting. For this reason, comparing their percentage reduction with New Zealand's is not the same as comparing the effort going towards reducing emissions.

36. In reality, national circumstances paint a very complex picture. As discussed, New Zealand also has high transport emissions and significant areas of land available for forestry

removals. In 2019, the land sector offset almost around 33% of our gross emissions, well above the OECD average of around 3%.

37. Forestry in New Zealand does have the potential for long-term, large-scale negative emissions. Given our already low net CO_2 emissions, large-scale forestry has the potential balance our higher mitigation costs in the long term. But, this is unlikely to be possible in time for the NDC1 period as forests take time to grow. It also introduces a range of other environmental and social issues.

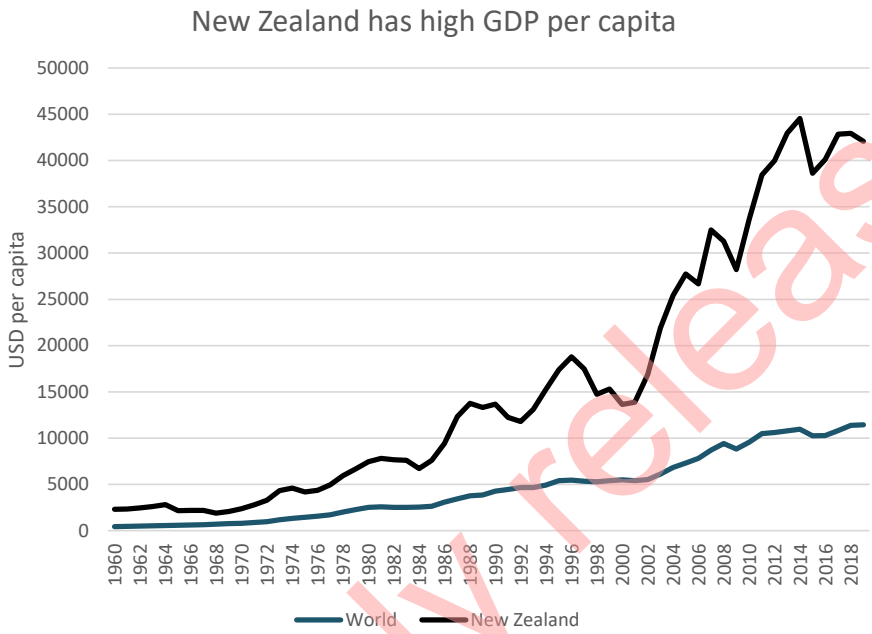

Figure 9. GDP per capita in New Zealand and globally since 1960

To meet NDC1, we can do more than is achievable domestically

38. New Zealand is a wealthy country with high per capita GDP. As Figure 9 shows, per capita GDP has risen much faster than the global average since 1960.

39. The Commission has provided advice an ambitious and achievable level of abatement for New Zealand. But, through our NDC1 responsibility target, we have an opportunity to do more than is possible domestically by funding offshore mitigation. s 9(2)(g)(i)

40. Emissions reductions achieved overseas, provided they have high environmental integrity, have the same effect on climate as those achieved domestically.

41. Offshore abatement should be used to supplement, not substitute, domestic abatement. The extent to which this has been done in the past has been an issue for New Zealand. The Commission has provided advice on a high ambition domestic pathway for emissions. Offshore mitigation can supplement the domestic abatement recommended in their advice.

Where are we placed compared to other countries?

42. As highlighted above, comparing countries efforts to reduce emissions is not the same as comparing their headline percentage reductions. As we have discussed, the effort required to reduce emissions depends hugely on where the abatement is being found. For example, a certain level of effort may mean a country with high emissions from electricity production is likely to be able to make deep cuts, while a country with high agricultural emissions can only manage lower cuts for the same level of effort.

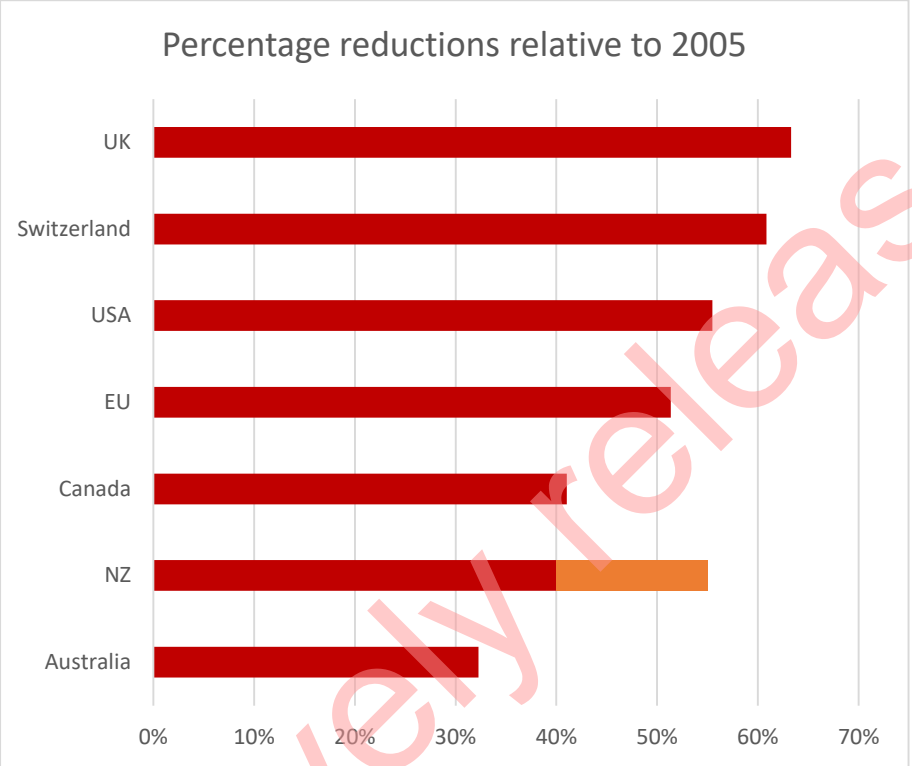

Figure 10. Headline numbers for a range of countries relative to 2005. For countries adopting a budget approach, the percentage reductions are estimates of emissions in 2030 assuming a linear trajectory from now until the target is met in 2030. These countries were chosen to reflect a geographic s 6(a) The orange bar shows NZ's percentage reduction with a 45% NDC.

43. This does not mean they are showing less leadership or lower ambition, just that their circumstances make deep emissions reductions more challenging. For this reason, solely comparing headline percentage reductions can be misleading.

44. Figure 10 shows that, based on headline reductions, New Zealand's current NDC1 of 30% below 2005 levels by 2030 leads to lower percentage reductions than most other countries listed. But, an increase to 45% below 2005 levels by 2030 would put us near the top.

45. However, as discussed above, this type of comparison masks important underlying information. For example, New Zealand's per capita emissions in sectors with more options for near term emissions reductions are relatively low. Table 1 below shows this.

	Gross CO_2	Net CO_2	CH_4	N_2O	Total with net CO_2	Total with gross CO_2
New Zealand	7.4	2.4	7.2	1.6	11.3	16.3
European Union	6.7	6.1	0.9	0.5	7.5	8.1
Australia	16.7	15.1	5.0	0.9	21.1	22.7
Canada	15.7	15.3	2.5	1.0	18.8	19.2
Switzerland	4.3	4.1	0.6	0.3	5.0	5.2
United Kingdom	5.7	5.5	0.8	0.3	6.6	6.8
United States	16.6	14.1	2.0	1.4	17.5	19.9
India	1.8	1.8	0.5	0.2	2.5	2.5
China	7.2	6.8	0.9	0.4	8.0	8.5
OECD	8.8	8.4	1.2	0.5	10.2	10.5

Table 1. Per capita gross carbon dioxide, net carbon dioxide, methane, nitrous oxide and total net and gross emissions for a range of developed and developing countries. These data are for 2018 from the UNFCCC database.

46. This table shows that New Zealand has high gross per capita emissions, but it's primarily the result of high emissions in the harder to abate agricultural gases. It also shows that New Zealand's net carbon dioxide emissions are very low compared to other developed countries.

47. Under the UK's NDC1 of 68% below 1990 levels by 2030, their per capita net carbon dioxide emissions are expected to be around 4.5 t per capita by 2030. Similarly for the EU, although we do not have detailed data on their pathway to 2030, their 55% below 1990 NDC1 will likely still leave them with higher net per capita carbon dioxide than New Zealand.

48. On the other hand, New Zealand's per capita methane and nitrous oxide emissions are currently and will remain far above both the EU's and the UK's. The upshot of this is that the challenges facing New Zealand when reducing emissions are fundamentally different to those of other countries. Each country has its own unique national circumstances and this makes it very hard to accurately compare our targets with theirs.

49. We note that the comparison of per capita emissions also has limitations and make no comment on what is a fair or equitable NDC1 for New Zealand. This is covered in a separate briefing (BRF-213). This is particularly true in an export-dependent economy like New Zealand's, where changes in per capita agricultural emissions, for example, have been closely related to changes in population over time, rather than the emissions intensity of the industry.

The role of international cooperation in meeting NDCs

50. Reliance on international cooperation to achieve our NDC1 brings with it a range of implementation issues associated with different purchasing options. This includes ensuring the use of international offsets does not impact the integrity of our domestic emission budgets and providing the public a strong assurance that we will not experience a repeat of the 'hot air' issues as occurred under the Kyoto Protocol.

51. At the current NDC1 level of 30% below 2005 levels, domestic abatement only gets us less than half of the abatement necessary to meet NDC1, assuming the Commission's domestic path is met. Enhancing NDC1 means the quantity of offshore mitigation will be

significantly larger than domestic abatement. For example, with a 45% NDC1, 120 Mt of offshore units would be required above the 43 Mt the Commission's path would provide. This is almost triple the amount of abatement that would need to come from offshore.

52. s 9(2)(g)(i) [redacted]

53. There is no rule or norm around the proportion of abatement that comes domestically or offshore. It is likely, however, that some commentators and other Parties to the Paris Agreement will note the low proportion coming from domestic action versus the high level of abatement being sought offshore.

What do these national circumstances mean for NDC1?

54. This paper has discussed a range of national circumstances that are relevant for enhancing NDC1. Although this discussion cannot determine specific recommendations for NDC1, we can make high-level statements on their implications.

55. Because our NDC1 is a responsibility target, our domestic cost of abatement is not necessarily a critical factor for determining the overall NDC1 reduction target. The extent to which it can shift the balance of domestic emission reductions offshore mitigation involves weighing up a number of factors.

56. This raises the question of what overall level of abatement, and what combination of domestic reductions and offshore abatement would be regarded as 'balanced' in light of our national circumstances. This by its nature is challenging to quantify and we have not identified what NDC level is an appropriate reflection of our national circumstances. We have, however, identified four key considerations that flow from our national circumstances that should inform a decision on the level of our NDC beyond a simple comparison of headline numbers between countries:

    a. New Zealand is a comparatively wealthy country with high per capita GDP. We have an opportunity to use our high capacity to pay to achieve additional mitigation overseas that is not feasible at home.

    b. Emissions reductions achieved overseas, provided they have environmental integrity, have the same effect on climate as those achieved domestically. Ensuring and demonstrating the integrity of such offshore reductions will be critical for public acceptability.

    c. The extent to which offshore abatement is used to supplement, not substitute, domestic abatement has previously been a key issue for New Zealand. Very high reliance on offshore abatement can make it more difficult to maintain public support for policies aimed at reducing emissions, such as the NZ ETS.

    d. Sustained purchasing of offshore abatement to meet our NDC1 will require the commitment from successive Governments and agreement that the balance of investment into emission reductions in New Zealand and offshore is appropriate.

57. These issues imply that our national circumstances play an important role in considering what overall level of enhancement of our NDC1 may be appropriate, beyond comparing headline reduction targets across different countries.

Consultation and Collaboration

58. The analysis in this paper was prepared by MfE and shared with other agencies. We received feedback from MFAT and MPI who provided useful context and comments, noting however they had limited opportunity to comment on the analysis in this paper.

Risks and mitigations

59. The discussion in this paper reflects a qualitative exploration of New Zealand's national circumstances as they relate to enhancing NDC1. Other perspectives on these issues almost certainly exist.

Next steps

60. You are discussing NDC options with your colleagues at the next Climate Response Ministers Group on 23 June ahead of Cabinet decisions on consultation on 5 August.
61. This paper should be considered alongside advice we have previously or are in the process of providing to inform decisions on NDC options ahead of consultation. These papers are:
    i. BRF-137: Initial options for updating New Zealand's first Nationally Determined Contribution under the Paris Agreement (NDC1)
    ii. BRF-213 Consistency of NDC1 with efforts to limit global warming to 1.5 degrees
    iii. BRF-211 Supporting paper - methodologies for defining and accounting for New Zealand's NDC
    iv. BRF- 243 Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement (NDC1): Fiscal, economic and feasibility considerations
62. We understand MFAT is also providing advice on international considerations.