

UPDATED VERSION: Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement - issues paper

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	Action sought:	Response by:
To Hon James SHAW, Minister of Climate Change	Approve paper for circulation ahead of CRMG	23 July 2021
CC Rt Hon Jacinda ARDERN, Prime Minister	For information	N/A
CC Hon Grant ROBERTSON, Minister of Finance		
CC Hon David PARKER, Minister for the Environment		

Actions for Minister's Office Staff	<p>Forward the attached Issues Paper and accompanying A3s to the Climate Change Response Ministerial Group ahead of the next meeting on 27 July 2021</p> <p>Return the signed report to MfE.</p>
Number of appendices and attachments #	<ol style="list-style-type: none"> Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement - Issues Paper Set of summary A3s 'Updating New Zealand's Nationally Determined Contribution'

Key contacts

Position	Name	Cell phone	1st contact
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Responsible Treasury Manager	Nicky Lynch		

UPDATED VERSION: Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement - issues paper

1. Attached to this briefing note is an updated version of an issues paper and covering set of A3s to support Ministers' discussion on updating New Zealand's Nationally Determined Contribution (NDC1) under the Paris Agreement at the next Climate Response Ministerial Group (CRMG) meeting, scheduled for 27 July 2021.
2. At the most recent CRMG meeting on 23 June 2021, there was a discussion on updating NDC1. Subsequently, CRMG directed officials to prepare an issues paper laying out the range of considerations relevant to enhancing NDC1 "under the direction of Ministers Shaw, Robertson and Parker (in consultation with Minister Mahuta)".
3. This material will support a discussion at CRMG where officials are seeking direction from Ministers on consulting the public on updating NDC1. Public consultation is scheduled to occur in mid-August to mid-September. This will enable a final decision on updating NDC1 prior to this year's international climate change conference (COP26) in November 2021.
4. Last week, officials from Treasury and the Ministry for the Environment provided Ministers with a draft version of this issues paper and set of summary A3s. We have since received feedback from you, the Prime Minister, Hon Robertson, and Hon Parker. This feedback has been incorporated into the attached updated material.
5. Below are the key amendments we have made to the material to incorporate Ministers' feedback:
 - a. Amended text around international leadership to provide clarity on role of New Zealand in contributing to and reinforcing the global temperature limitation goal and to provide more context on the value and impact of leadership where it is discussed as a consideration
 - b. Provided additional advice on the options for offshore mitigation from the Pacific and other options outside of ETS linking (in the issues paper and row 3.4 of the slides)
 - c. Updated the key trade-offs for consideration in the covering A3s to include the balance between domestic and international reductions
 - d. Highlighted the impact of ETS linking on the NZ ETS as a revenue source
 - e. Updated analysis into the issues paper on opportunities for abatement within the land sector
 - f. Updated economic and fiscal section with additional analysis
 - g. s 9(2)(g)(i)

- h. Minor amendments to address Ministers' questions of clarification or requests for additional information
6. We are now seeking your final approval for this material, and for it to be circulated to the CRMG for discussion at the next meeting on 27 July 2021.

Recommendations

We recommend that you:

- a. **Approve** the attached NDC1 issues paper and set of covering A3s for circulation to the Climate Response Ministerial Group
Yes/No

- b. **Agree** that this briefing and appendices will be released proactively on the Ministry for the Environment's website once final decisions on updating NDC1 have been taken
Yes/No

Signature

Craig Salmon Chief Advisor, Climate Change Ministry for the Environment	Approved electronically.
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Nicky Lynch Manager, Climate Change Treasury	Approved electronically.
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Hon James SHAW, Minister of Climate Change	
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Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement - Issues Paper

For discussion at the Climate Response Ministerial Group meeting, 27 July 2021

Key Messages

1. The Paris Agreement requires New Zealand to set its Nationally Determined Contributions with a view to achieving the purpose of the Paris Agreement, including the aim to hold the increase in the global average temperature to well below 2°C and pursue efforts to limit the temperature increase to 1.5°C.
2. New Zealand's first Nationally Determined Contribution (NDC1) was set in 2016 and is to reduce emissions 30% below 2005 levels by 2030. Since NDC1 was first set there has been an increasing focus on pursuing efforts to limit the increase in temperature to 1.5°C. Science has highlighted the impacts of greater than 1.5 degrees of warming and the scale and urgency of emissions reductions needed to avoid this. This knowledge has resulted in action – both in terms of major developed countries committing to increased NDCs and in terms of advocacy from these countries and countries highly vulnerable to the impacts of climate change (e.g. countries in the Pacific). Over the course of 2020/21, 35 of 38 OECD members have either provided or announced substantive updates to their NDCs, with 33 raising or announcing increased headline ambition.
3. In early 2020, the Minister of Climate Change asked the Climate Change Commission (the Commission) to assess the compatibility of NDC1 with the 1.5°C global goal. The Commission advised that the current NDC1 is not compatible with 1.5°C and that it would need to be “much more than 36%” below 2005 levels to be compatible.
4. It is in New Zealand's best interest to support global action on climate change to reduce its adverse effects. We are a small actor and want other countries to commit to action. One way for New Zealand to influence the global response is to reinforce the Paris Agreement and promote greater global action by leading by example. There are a range of considerations for the Government to balance when considering New Zealand's position and how NDC1 might be updated. These include:
 - a. the degree to which New Zealand aims to contribute to and reinforce the global effort to limit the temperature increase
 - b. the impact of the NDC on other foreign policy considerations
 - c. the possible pathways New Zealand has to meet the current or an enhanced NDC1 (including the balance of domestic and international action)

- d. economic and fiscal impacts
 - e. feasibility constraints of meeting an enhanced NDC
 - f. options for funding and financing domestic and international emissions reductions
5. When comparing New Zealand with other OECD countries' NDCs we sit at the bottom of a "headline target" comparison table, but that doesn't necessarily show the effort required by each country to reach its target. In addition, it is difficult to directly assess the compatibility of other individual countries' NDCs with the global 1.5°C goal. Collectively, emission reduction targets put forward by developed countries in their NDCs fall well short of what is required to limit global warming to 1.5°C once equity perspectives such as capacity to pay or responsibility for historical emissions are considered, consistent with the obligation for developed countries to take the lead in mitigation.
 6. The Commission has assessed what is possible domestically (the 'demonstration pathway') and has proposed a pathway for domestic emissions reductions and increased removals. They have also identified options to outperform this recommended pathway through their 'tailwinds scenario'. The demonstration pathway delivers about half of what is needed to meet the current NDC1 and tailwinds scenario delivering up to around 75%. Officials do not have a high degree of confidence over the achievability of the tailwinds scenario, and relying on such an approach to reduce the costs of the current (or an enhanced) NDC would carry significant risk. On the other hand, experience from the United Kingdom that, unlike New Zealand, has reduced their gross emissions since 1990 is that the transition for change is cheaper and faster than even their most optimistic modelling.
 7. Initial analysis provided by the Commission suggests that accelerating domestic mitigation beyond the demonstration pathway before 2030 will involve increases in economic cost before 2030 for some long-term benefit beyond 2030, though more analysis is required. In order of magnitude terms, the expected benefit does not outweigh the shorter-term cost, even using a zero discount rate. Either way due to the very high cost of meeting the NDC entirely domestically, New Zealand will still need to use international carbon markets alongside domestic action to meet our current or an enhanced NDC1. This conclusion will need to be reassessed over time as technical feasibility and economic viability can change rapidly when and if, for example, new feasible options open up for domestic mitigation.
 8. International carbon markets under the Paris Agreement are emerging and require countries and organisations to work together to develop programmes or projects for trading or links through existing systems.
 9. Linking to international emissions trading schemes (ETS) is currently the most viable option for New Zealand to access offshore mitigation with environmental integrity.
s 9(2)(j)
The amount we can access in this way, however, is limited by the maximum number of units that can be

allowed into the NZ ETS within our ETS cap. A linked ETS system will also impact ETS proceeds to the Crown.

10. The Government faces a fiscal cost if it purchases offshore mitigation or allows domestic ETS participants to purchase international units (the latter requiring decreased auction volume). The fiscal cost of meeting the current NDC in this way ranges from \$3.9 to \$7.0 billion spread over the 2021-2030 period assuming domestic action followed the demonstration pathway. This would negatively impact Government cash and core Crown debt. The Treasury and Ministry for the Environment are currently investigating options for funding and financing domestic and international emissions reductions.
11. Accessing additional offshore mitigation from other sources, such as bilateral project -based linking or participating in third party programmes, is possible and other countries have begun to access units in this way, although there are uncertainties around this option. It would require the establishment of new international work programmes to identify and source additional units.
12. The immediate decision facing Ministers is what material to include when consulting the public. Enabling the Government to take a final decision on enhancing NDC1 prior to the COP26 (the next world leaders' climate summit and meeting governing the Paris Agreement) requires that public consultation occurs during August and September, so that Cabinet can consider a final decision in October. Due to the tight timeframes, officials are seeking clear direction from Ministers on the content of public consultation material, to allow a Cabinet paper and draft discussion document seeking approval to consult to be prepared for Cabinet's consideration in mid-August.
13. There are three high level choices for how we consult the public on updating NDC1. These are to present to the public and seek feedback on: (1) a preferred option on an updated NDC1 level; (2) a range of options for an updated NDC1 level; (3) or a relatively open consultation process, for example seeking the public's views on the Commission's advice.
14. Alongside this issues paper, we officials identified a broad range of 'conceptual options' for Ministers' consideration and have presented these is an accompanying set of A3s to support the discussion at the Climate Response Ministerial Group meeting on 27 July 2021.

Updating New Zealand's first Nationally Determined Contribution under the Paris Agreement - Issues Paper

Purpose

1. This paper sets out the key issues relevant for decisions on enhancing New Zealand's first nationally determined contribution (NDC1) for discussion at the Climate Response Ministerial Group (CRMG) meeting on 27 July 2021.
2. This paper provides an overview of the relevant context, including New Zealand's requirements under the Paris Agreement and recent advice from the Climate Change Commission that New Zealand's current NDC1 is not compatible with contributing to with the global goal to limit temperature rise to 1.5°C. It also discusses the range of considerations relevant to the Government when making a decision on enhancing NDC1, including:
 - a. the degree to which New Zealand aims to contribute to and reinforce the global effort to limit the temperature increase
 - b. the impact of the NDC on other foreign policy considerations
 - c. the possible pathways New Zealand has to meet the current or an enhanced NDC1 (including the balance of domestic and international action)
 - d. economic and fiscal impacts
 - e. feasibility constraints of meeting an enhanced NDC
 - f. options for funding and financing domestic and international emissions reductions

Background

The Paris Agreement and our current Nationally Determined Contribution

New Zealand is required to set a Nationally Determined Contribution with a view to achieving the goals of the Paris Agreement and has flexibility in how it meets this obligation

3. The Paris Agreement is a legally binding international treaty that aims to strengthen the global response to the threat of climate change. It sets objectives relating to limiting the rise in global temperature, adaptation, and consistency of financial flows with a pathway towards low emissions and climate-resilient development.
4. New Zealand's first Paris Agreement emissions reduction target, our Nationally Determined Contribution (NDC1), was set in 2016 to reduce emissions to 30% below 2005 levels by 2030. We expect to achieve this target through a mixture of domestic action (reducing emissions and increasing forestry) and international cooperation (using

international carbon markets to purchase offshore mitigation with environmental integrity).

5. s 9(2)(h)

6. s 9(2)(h)

7. The Paris Agreement also commits New Zealand to set sequential NDCs that reflect its highest possible ambition in light of national circumstances, become stronger over time, contain an economy-wide emissions reductions target, and are consistent with the collective aim of peaking greenhouse gas emissions as soon as possible and achieving a balance between emissions and removals in the second half of this century.

8. Unlike the Kyoto Protocol there is no true-up period at the end of our NDC target period. Instead, throughout the whole NDC period, New Zealand will be required to show how it is implementing its NDC and whether it is on track to achieve it. This will include showing how we are developing access to offshore mitigation, and how this offshore mitigation has environmental integrity.

The global 1.5°C temperature goal, the Climate Change Commission’s advice, and science and equity considerations

Since New Zealand’s NDC1 was first set, the 1.5°C temperature limitation goal has become increasingly important

9. Since the NDC1 was first set, there has been an increasing focus internationally on the global goal to pursue efforts to limit the increase in global average temperature to 1.5°C.

10. The Intergovernmental Panel on Climate Change (IPCC) published its Special Report on Global Warming of 1.5°C in 2018, setting out the risks and impacts of 1.5°C and 2°C of warming, and summarising global emissions pathways that limit warming to 1.5°C.

11. The global emissions pathways showed that to meet the 1.5°C goal, global net carbon dioxide emissions need to reduce to about 45% below 2010 levels by 2030 and reach net zero around 2050, along with deep reductions in other greenhouse gases.

12. This has led to major developed countries committing to increased NDCs as well as advocacy from these countries and countries highly vulnerable to the impacts of climate change (e.g. countries in the Pacific).

13. s 9(2)(h)

There are, however, clear expectations, communicated to us directly by a number of countries and interested groups s 6(a), that New Zealand will substantively update its NDC1 ahead of the COP in November 2021.

The Commission assessed the compatibility of New Zealand's NDC1 with the 1.5°C global temperature goal and found it was not compatible

14. In early 2020, the Minister of Climate Change asked the Climate Change Commission (the Commission) to assess the compatibility of New Zealand's NDC1 with contributing to global efforts to limit global warming to 1.5°C above pre-industrial levels, and, if needed, to recommend any changes to NDC1 that would make it compatible with global efforts to limit warming to 1.5°C.
15. The Commission advised that the current NDC1 is not compatible with New Zealand contributing to global efforts to limit warming to 1.5°C, and that to be compatible it would need to be enhanced to "much more than 36% below 2005 levels by 2030".
16. The Commission did not advise on how much more than 36% the NDC1 would need to be for it to be compatible with 1.5°C. It noted that "science alone cannot determine the share Aotearoa should contribute to those global reductions. Reaching a conclusion on this also depends on social and political judgements about international equity."
17. The Commission derived the benchmark number of 36% by assuming that New Zealand's emissions should reduce at least at the same rate as global emissions of those gases in pathways consistent with the global pathway to 1.5°C.
18. The Commission notes, however, that this is only a starting point. Under the Paris Agreement developed countries are expected to do more than the global average while there is an understanding that developing countries may do less than the global average – and that this convergence will mean that the global average is met.
19. Given New Zealand's status as a highly developed country and taking global equity into account, the Commission considers that our emissions should reduce at a greater rate than the global average, but the Commission did not quantify how much greater those reductions should be.

There is no single measure to assess if a country's target is compatible with the 1.5°C goal; instead, value judgements are required to determine the level of emission reductions individual countries' need to make to be compatible with the 1.5°C goal

20. When considering the level and rate of emissions reductions a single country needs to make to be compatible with the 1.5°C global goal, there is no single measure of equity – rather there are multiple lenses through which equity can be viewed. Simple global equity lenses include:

- a. equality: which could be interpreted as
 - i. equal rate of emission reductions (e.g. no matter the starting point, all reduce by the same proportion)
 - ii. equality (equal emissions per capita) (e.g. all reach the same amount)
- b. capacity: equal share of the global cost of mitigation
- c. responsibility: equal overall responsibility for global warming including from historical emissions
- d. need: equal right to sustainable development.

21. None of these approaches is objectively superior from a scientific perspective but reflect different value judgements. Each gives a different answer for New Zealand's "fair share" emissions budget and NDC1 target.

22. The Commission quantified only the first of those principles (equal rate of reduction) but not any of the other approaches. Building on the Commission's advice, officials have quantified 1.5°C-consistent NDC1 budgets based on the other principles listed above, summarised in Figure 1.

23. The key outcome is that different equity principles result in different answers about what NDC1 level would be compatible with 1.5°C. Even for each individual principle, there is a considerable range reflecting uncertainties in global mitigation pathways, different methodological choices and different data sources.

24. Overall, it is clear that the stronger New Zealand's NDC1, the more likely it is consistent with efforts to achieve the global 1.5°C pathway across a range of global equity perspectives.

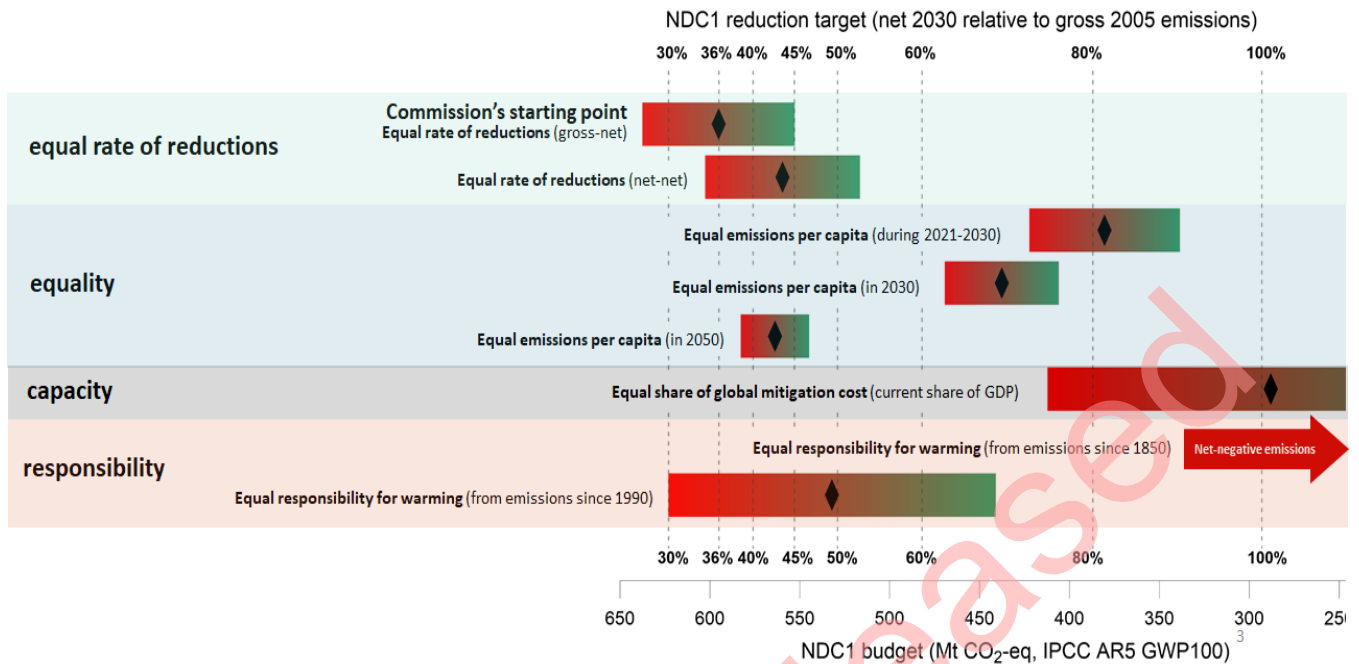


Figure 1. Illustrative ranges of NDC1 budgets and 2030 reduction targets that would be consistent with 1.5°C based on a range of simple global equity principles. Emission budgets have been updated to use Global Warming Potentials from the IPCC's 5th Assessment Report, which countries are required under the Paris rulebook to use for reporting of their aggregate emissions from 2021 onwards, and are assumed to be met via net target accounting.

The current state of international plans to reach NDC targets

- 25. The analysis at figure 1 above only compares New Zealand with global 1.5°C-consistent emissions based on simple global equity principles; it does not compare New Zealand with actual policies or targets by other countries. Aggregated, actual policies and targets do not currently put the world on track to limit warming to 1.5°C or even well below 2°C.
- 26. In addition, what constitutes any country's highest possible ambition also needs to reflect their specific national circumstances that cannot be accounted for in the simple global equity perspectives summarised in Figure 1.

Other countries' NDCs

New Zealand's current NDC1 headline target is at the lower end when compared with other OECD countries

27. When comparing target reductions, New Zealand's current NDC1 of reducing emissions to 30% below 2005 levels by 2030 appears weaker than most other developed countries, as Figure 2 shows.

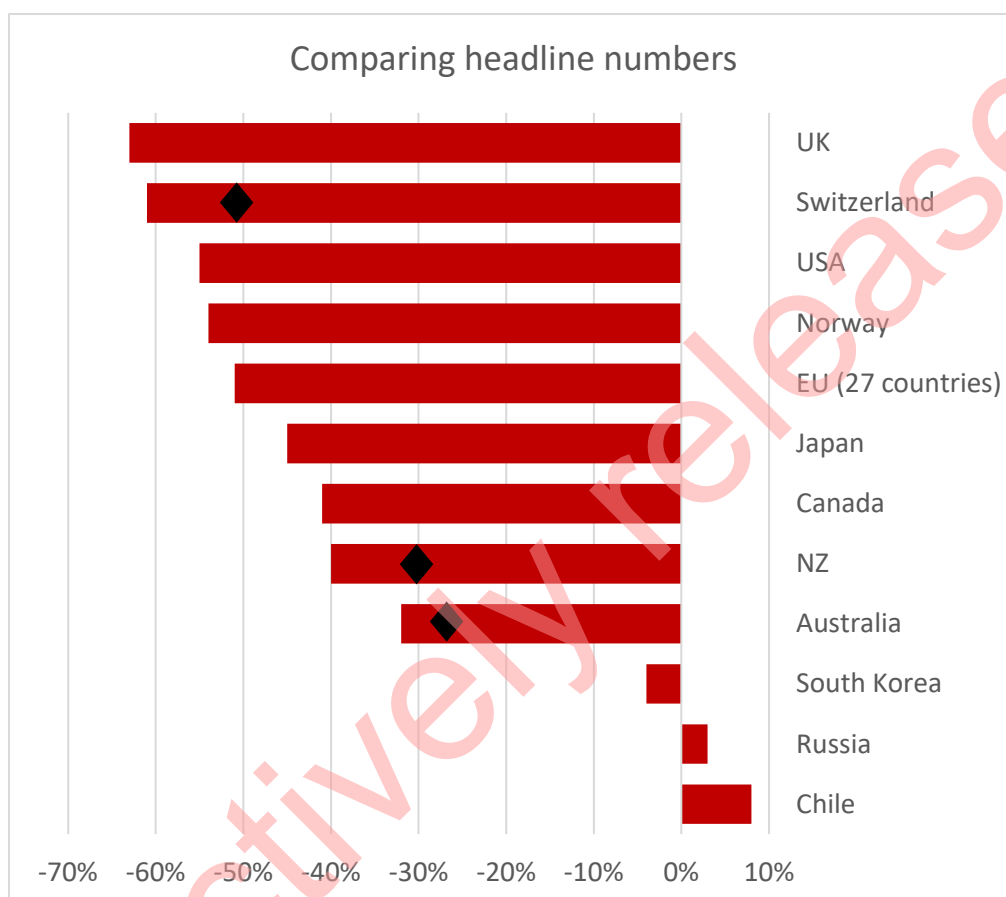


Figure 2. Headline NDC targets relative to 2005 gross emissions for a range of OECD countries. For countries adopting a budget approach, their target has been converted to a point year, with the headline number represented by black diamonds.

28. However, “headline” target numbers mask important information on national circumstances that affects how challenging a target is to meet. Percentage reductions also mask information on historical emissions. For example, a country with high historical emissions is likely to be able to make deeper emissions reductions than one with low historical emissions. Similarly, a country that has seen rapid population growth will have more difficulty reducing emissions. These and other factors mean that the level of reduction is often very different to the actual level of effort required to meet a target. Comparing headline target numbers therefore has limitations.

29. The different mix of economic sectors and abatement costs and potentials in different countries means that comparing only economy-wide domestic emissions reductions cannot be used as a proxy for comparing effort. The effort required to reduce emissions

depends on where the abatement is being found. This depends on a range of factors including the cost of abatement, economic and opportunity costs, age of infrastructure etc. 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. For this reason, solely comparing headline percentage reductions can be misleading.

30. We can get some insight into this by looking at per capita emissions of the three main greenhouse gases: carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), as in Table 1 below.

Table 1. Per capita emissions (t CO₂-eq/capita) from a range of countries and groups

	Gross CO ₂	Net CO ₂	CH ₄	N ₂ O	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
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
OECD	8.8	8.4	1.2	0.5	10.2	10.5

31. 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.
32. Under the UK's NDC1 of 68% below 1990 levels by 2030, their per capita net carbon dioxide emissions are expected to be around 4.5t 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.
33. 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 challenges facing New Zealand when reducing emissions are fundamentally different to those of other countries. In New Zealand, a large proportion of our emissions come from agriculture and transport. In agriculture, there are currently limited options for rapidly reducing emissions, and transport has been challenging to decarbonise for OECD countries. In countries with a high proportion of emissions from electricity production, there are more low-cost options for rapid abatement. Each country has its own unique national circumstances and this makes it very hard to accurately compare our targets with theirs.

34. s 9(2)(g)(i)

a. s 9(2)(g)(i)
[Redacted]

b. s 9(2)(g)(i)
[Redacted]

Other countries' plans to meet their NDCs

35. Officials have received no evidence that countries are *not* intending to meet their NDCs. The evidence suggests most countries are grappling with the realities of how they will meet their NDCs. Countries are developing and implementing a range of measures including plans, regulatory measures, and access to international carbon markets (e.g. EU and individual member states, UK, USA, Japan, Canada, Switzerland, and Norway). The UK has estimated the costs of their 2050 targets as 1-2% of GDP. Canada's federal carbon price will reach 160 NZD by 2030. A number of countries are not clear on the cost to their economy of their updated NDCs – s 6(a)
[Redacted]

The ability to use offshore mitigation to meet NDCs can play a role in New Zealand and other countries' targets

36. As New Zealand's NDC1 is a responsibility target, our domestic cost of abatement is not the only factor for determining the overall NDC1 reduction target. The extent to which the Government determines the balance of domestic emission reductions vs offshore mitigation involves weighing up a number of factors.

37. International carbon markets under the Paris Agreement require individual countries and organisations to work together to develop programmes or projects for trading or links through existing systems. Almost 100 NDCs mention carbon markets, illustrating the potential for growth over time.

38. A number of countries, including Canada, Denmark, Finland, Iceland, Japan, Germany, Norway, Sweden, Switzerland, and the UK participate in existing programmes or pilots to access offshore mitigation run by governments or multilateral development banks, or have linked their emissions trading schemes (ETs).

39. Switzerland plans to realise its NDC mainly domestically (75%) but will also partly (25%) use international cooperation under the Paris Agreement to meet its target. A case study of Switzerland's approach to securing access to offshore mitigation is provided below.
40. Japan has also set up agreements with 17 partner countries through its Joint Crediting Mechanism (JCM) and has implemented 176 projects including solar, hydro, and biomass power generation, energy-saving and high-efficiency equipment, and co-generation systems. The amount of emissions reduction Japan expects by 2030 is an estimated at 18 Mt. Japan intends to expand the use of the JCM to achieve its new NDC and has allocated approximately NZD 171 million in FY2021-22 to increase the number of JCM projects. To reach its aim of 100MT Funding allocated for the JCM will be up to NZD 12.9 billion for the public and private sectors combined.
41. Countries including Canada, the UK, Sweden and Germany are all developing or participating in various Article 6 pilot activities. For example, the Swedish Energy Agency is investing into the Asian Development Bank to establish a trust fund and programme to develop emissions reduction projects in the ASEAN region; programmed and managed by the bank.
42. It is important to note that other countries have either secured or are developing access to offshore mitigation means, which demonstrates that this is also a viable option for New Zealand.

New Zealand's position and considerations for updating our NDC

There are a range of considerations for the Government when considering updating NDC1

43. New Zealand's current NDC1 was set on the basis that it would be met through a combination of domestic action (i.e. reducing emissions and increasing removals such as forestry) and the use of offshore mitigation. This means that NDC1 is different from the plan New Zealand will need to transition our domestic economy to low emissions, which will be put in place through setting domestic emissions budgets and the Government's emissions reduction plan.
44. The Government will need to consider a broad range of issues when coming to a decision about revising the NDC1, including:
 - a) the degree to which New Zealand contributes to and reinforces the global effort to limit the temperature increase
 - b) Impact of our NDC on other foreign policy considerations
 - c) the possible pathways New Zealand has to meet the current or an enhanced NDC1 (including the balance of domestic and international action)
 - d) economic and fiscal impacts

- e) feasibility constraints of meeting an enhanced NDC
- f) options for funding and financing domestic and international emissions reductions

Contributing to and reinforcing the global effort to limit the temperature increase

New Zealand has national interests in an effective and ambitious global response to climate change

- 45. New Zealand has a strong national interest in an effective and ambitious global response to climate change. New Zealand is a small actor and cannot unilaterally prevent the adverse effects of climate change. It is in our interest, as well as those of our Pacific neighbours, for all countries to commit to and deliver ambitious action consistent with limiting the global temperature increase to 1.5°C.
- 46. New Zealand can decide to what degree it contribute to the global effort to limit the temperature increase to 1.5 degrees. This decision also implicitly determines what burden we are asking others to lift. Paragraphs 19 – 25 discuss the science and equity considerations behind contributing to this goal.

How will New Zealand influence others to contribute to an effective and ambitious global response?

- 47. New Zealand also has a strong national interest in using its influence to press for an effective global response to climate change. As a small actor, our ability to do so is built upon us delivering effective and ambitious action ourselves. If our NDC is credible, then our action can be used to pressure action from other significant emitters.
- 48. A number of major economies have already increased their NDCs in response to new information about the global ambition gap and the criticality of taking prompt action (in the 2020s), including the United States, European Union, United Kingdom, Japan, Switzerland and Canada. Countries are calling on others to follow suit and commit to greater action through their NDCs in order to meet the 1.5°C global goal, and some are asking New Zealand to do so directly. New Zealand can choose to add to this momentum to encourage greater action.
- 49. Developed countries fulfilling these expectations is particularly important at this time. The upcoming international climate change meeting in November 2021 (COP26) is being seen as a critical moment for the Paris Agreement and global climate response - either Governments in aggregate will have committed sufficient ambition to keep the 1.5°C temperature limitation goal within reach (often referred to as 'keep 1.5 alive') or we end the first year of the Paris period with not enough on the table.
- 50. There is a real risk that perceptions of low ambition may be used to justify less action from other larger emitters s 6(a) [REDACTED] Some countries have directly reinforced their concerns that New Zealand would provide cover for low ambition by major developing country emitters if New Zealand were to provide a low update.

Impact of our NDC on other foreign policy considerations

Climate change and other foreign policy considerations

51. Since the NDC was first set in 2016, and in response to the growing importance and urgency of ambitious climate action, climate change has taken on an increasingly prominent role in broader foreign policy, trade and development arenas. New Zealand's international climate change engagement plan includes, for example: trade agreements, business to business links, supporting New Zealand's economic transition, action on economic opportunities (such as green hydrogen), promoting evidence-based sustainable food systems, security, climate migration, sea level rise.

Climate change and key partners

52. Action on climate change is a critical part of New Zealand's relationships with key partners such as Pacific Island countries, the United States, China, the European Union, and the United Kingdom. These key partners already pay close attention to our climate policy response – they recognise the need for climate action, and the need for other countries to take action alongside them. We anticipate that scrutiny of individual country actions (and advocacy to raise ambition) will only grow stronger in the future.

53. Action on climate change is also critical for New Zealand's broader regional objectives. The Government's rationale for the Pacific Reset included New Zealand's unique drivers for engagement in the Pacific – Pacific identity, regional stability, and shared prosperity. The impact and severity of climate change across all of these is known and of paramount importance to the region. For example, Pacific Leaders have declared that climate change is the single greatest threat to the livelihoods, security and well-being of the peoples of the Pacific (see Boe Declaration, 2018).

54. Partners will interpret whether New Zealand is or is not like-minded on climate action, and whether New Zealand's action matches its rhetoric through the lens of our NDC. New Zealand's choices about its NDC may have potential impacts on these relationships, with uncertain impacts on New Zealand's ability to achieve other international goals.

The NDC and climate finance

55. In addition to the NDC, New Zealand also has separate (and non-fungible) responsibilities to provide support to developing countries (e.g. financial, technological and capacity-building support). s 6(a)

[REDACTED]

The possible pathways New Zealand has to meet the current or an enhanced NDC1

The Climate Change Commission’s pathway for domestic reductions will require a concerted effort across the economy

56. As part of transitioning our domestic economy, the Climate Change Commission has advised on the maximum level of domestic reductions that is technically achievable and economically affordable with currently commercialised technologies. This is set out in their “demonstration path” and associated recommended emissions budgets for 2022-2025, 2026-2030 and 2031-2035.
57. The demonstration path sees New Zealand’s net emissions fall from the base year levels of 78 Mt in 2019 to an average of 72.4 Mt CO₂-e per annum over 2022-25, to 62.4 Mt per annum over 2026-2030, to 50.6 Mt per annum over 2031 – 2035.
58. The Commission envisages that policies to achieve the demonstration path will result in domestic reductions in non-transport energy (34%); transport (23 %); agriculture (19%) and waste (7%) and forestry (15%).
59. These reductions would see New Zealand reduce net emissions by approximately 46 Mt over the 2021-2030 period, equivalent to around 50% of the reductions required to meet the current NDC1. This means achieving the current NDC1 will require an additional 53 Mt from either additional domestic emissions reductions or purchasing offshore mitigation.

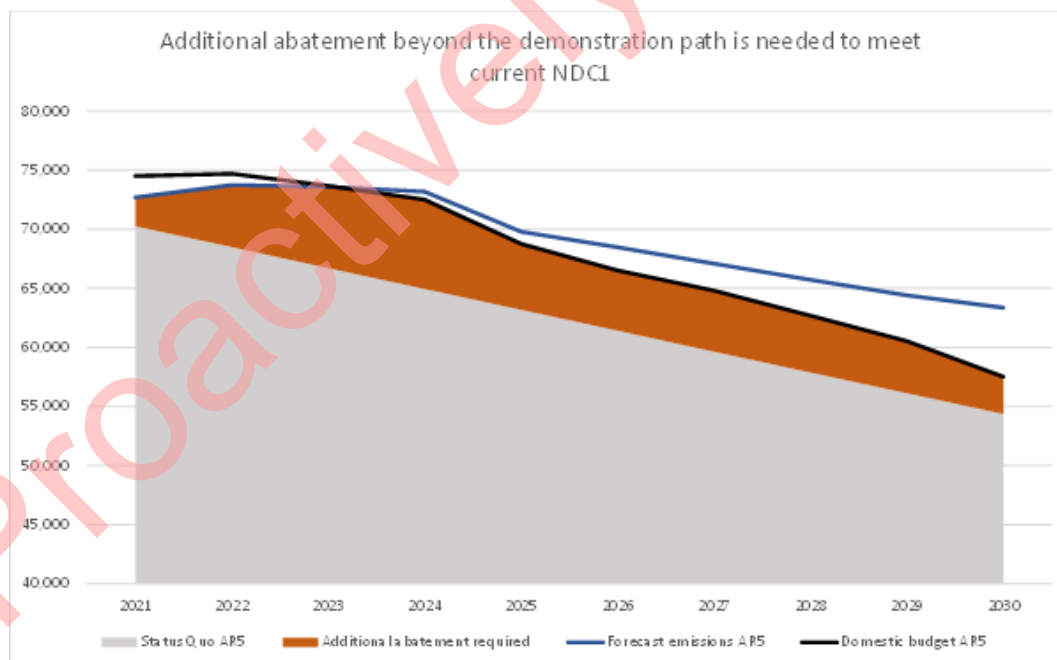


Figure 3. Forecast emissions (blue line), the Commission's recommended domestic budget (black line) and the current NDC1 budget (grey). The additional abatement required to meet NDC1 (brown) represents a gap that must be filled with further domestic action and/or international cooperation.

60. The Commission's demonstration path is based on capital stock being replaced at the end of its life, rather than earlier; and is focussed on technologies that are commercially available now. For example, the demonstration path assumes no adoption of a methane inhibitor or other methane reducing technologies that are not already commercially available. This means that biogenic methane reductions are relatively less ambitious in the demonstration path compared to reductions in long lived greenhouse gases.
61. Achieving the demonstration pathway would require substantial changes to energy and land use in the New Zealand economy by 2030. Some examples of the scale of change assumed by the Commission before 2030 are:
- a. more than doubling electricity generation from wind and solar
 - b. closure of the Tiwai aluminium smelter by 2025 (as signalled by Rio Tinto in 2020)
 - c. no more installation of new fossil gas heating from 2025
 - d. zero coal used for baseload electricity generation from 2025
 - e. 9% reduction in household light vehicle travel
 - f. 2% of all liquid fuel comprised of biofuel
 - g. 13% reduction in livestock herd numbers
 - h. 460,000-hectare reduction in land use for sheep and beef
 - i. 30,000-hectare reduction in land use for dairy
 - j. 225,000 hectares of exotic afforestation
 - k. 160,000 hectares of native afforestation.

62. There are a number of uncertainties over the achievement of the demonstration path. The Commission highlights particular risks including changes to New Zealand's baseline emissions, uncertainty over the future of the New Zealand aluminium smelter, and uncertainty over emissions from deforestation. Changes in GDP growth, population, and the effectiveness of mitigation policies will also impact whether the demonstration path can be achieved.

At the same time, the Climate Change Commission has identified options to outperform the demonstration path

63. Although the Commission recommends that the Government set the demonstration path emissions budgets, it also recommends the Government put in place policies to outperform the budget in order to manage the risk of underachievement. To illustrate where further actions could deliver further emissions reductions, the Commission developed a "tailwinds" scenario.
64. The tailwinds scenario goes further in domestic abatement and, if achieved over and above the demonstration path, would deliver an additional 25 Mt, reaching 75% of the existing NDC. Most of this additional abatement would come from agriculture (46%), especially from methane inhibitors, and in the transport sector (27%) through faster

uptake of EVs and shifts to public transport and cycling. Other industries that play more minor roles are waste, non-transport energy and forestry.

65. In effect, the tailwinds scenario combines a mix of favourable conditions outside the control of government (e.g. arrival of a new more effective technology from another country, including cheaper than expected EVs) and additional effort by New Zealand society (including NZ government). Further policy work is needed to disentangle the gains that could be expected from deliberate investments or actions versus windfall gains.

66. s 9(2)(f)(iv)

[Redacted]

67. s 9(2)(f)(iv)

[Redacted]

68. There are several land-use activities that are not included in our target accounting for NDC1. These include shelter belts, shrubland (including riparian plantings), orchards and wetlands. Further research data collection and analysis to identify potential carbon sequestration gains and losses from these types of other land-uses (such as wetlands and small vegetation) would be required before they could be counted towards meeting our targets or NDC. This is necessary to ensure such data can be relied on as an accurate measure of carbon storage.

69. s 9(2)(f)(iv)

[Redacted]

The Commission's advice confirms that NDC1 cannot be met entirely domestically and domestic action needs to be supplemented with offshore mitigation

70. In line with their challenging proposed demonstration path, the Commission advises that meeting the NDC1 domestically "would likely lead to severe social and economic impacts on communities, people and businesses – far more than necessary to achieve the same amount of emissions reductions given more time." Pursuing domestic reductions greater than the domestic budgets to meet the NDC1 was assessed as "unmanageable" due to:

- a. lack of time to implement physical changes required for the extra reductions (e.g. commissioning new industrial heating technology)

- b. severe impacts on communities through the reduced industrial and agricultural output that would be required
- c. reliance on as-yet unproven technologies.

71. The Commission therefore concluded that “offshore mitigation will be critical to meeting the current NDC.”

There is no central “international carbon market” under the Paris Agreement, New Zealand needs to work directly with other countries to secure access to offshore mitigation with environmental integrity

72. In line with the Commission’s advice, offshore mitigation can provide a way to supplement domestic action, while managing the cost, impact, and pace of transition impact on New Zealand society.

73. Access to a variety of different emissions reduction opportunities offshore - either of a different type than are in the New Zealand economy, or which are available at a greater scale - offers more potential for cost effective action, than if constrained to only the opportunities available in New Zealand. In considering options for accessing offshore mitigation, the Government can do so in a way which:

- a. has high standards of environmental integrity
- b. is complementary to New Zealand’s transition
- c. makes economic sense
- d. shares the cost of accessing offshore mitigation with polluters
- e. supports New Zealand’s wider foreign policy and relationship goals.

74. The Government has made a commitment that only offshore mitigation with demonstrable environmental integrity would be considered for use towards New Zealand’s targets.

75. s 9(2)(j)

[Redacted text block]

76. Other opportunities for accessing offshore mitigation also exist but come with risks and uncertainties over the 2021-2030 period, as they are largely emerging and unproven.

s 9(2)(j)

Economic and Fiscal impacts

Increasing domestic mitigation beyond the demonstration pathway budget will be accompanied by increasing economic and/or fiscal costs, though the exact scale is uncertain. Similar uncertainties arise over the cost of offshore mitigation.

77. As set out above, the Commission recommends that the Government set the demonstration pathway emissions budgets, and then put in place ‘tailwinds’ policies to reduce risk of underachievement and if possible to outperform the budget.
78. The Government has a further option to put in place lower overall domestic emissions budgets through to 2030 (i.e. more ambitious than the demonstration path). The greater the domestic emissions reductions sought, the greater the fiscal and/or economic costs of domestic mitigation become through to 2030. This is because additional reductions will have to be drawn from successively more expensive sources along New Zealand’s marginal abatement cost curve for mitigation. As levels of ambition increase, costs would also be driven up through early scrapping of capital stock and the reduction of economic output.
79. Officials do not have complete data to quantify the nature of these increasing costs¹. Table 2 sets out the available information from the Commission’s modelling, indicating that the GDP impact of the demonstration path through to 2030 (first row in the table) is significantly lower than the GDP impacts of higher levels of domestic mitigation to 2030 (second row in the table). These results should be treated as indicative only, showing direction and order of magnitude solely of domestic mitigation. The figures are scenarios rather than forecasts and involve differing assumptions. Further caveats to these results are described below.

s 9(2)(g)(i)

80. Caution is required in interpreting the figures in Table 2. The figures suggest that there is some limited long-term benefit of earlier domestic mitigation, but no net benefit (order

¹ For example, the accelerated demonstration pathway results below described as ‘NDC path’ only include accelerated mitigation via long-lived gases, not biogenic methane. This is due to time and resource constraints. They are also not completely aligned with ENZ scenarios.

of magnitude) over the whole transition. Modelling of this nature becomes increasingly uncertain the longer the time-frame, and does not fully reflect all the possible likely gains. In particular, the modelling work does not include some likely innovation impacts. For example, whether increasing domestic mitigation beyond the demonstration pathway in the 2020s may serve to incentivise additional innovation investment which then opens up new options for reducing transition costs in later decades.

81. The Commissions' work is anchored in judgements about what is technically feasible and economically viable *now* but this assessment will change over time as more information is revealed about the opportunities and challenges particular to New Zealand and as the international technology frontier evolves. The transition is not likely to be this static in reality. This also means it will be important to regularly update these kinds of assessments.
82. The balance of where the direct costs of transition lie - fiscal or economic - is similarly uncertain because it will depend on the policy mix applied, e.g. between emissions pricing levers or direct Government investment.
83. The alternative - offshore mitigation - also involves significant fiscal costs and indirect economic costs. The Government faces a fiscal cost if it purchases offshore mitigation, for example through international emissions trading schemes. Similarly, if the Government allows NZ ETS participants to trade directly in international ETSs, there is a fiscal cost in the form of reduced New Zealand ETS auction proceeds. Like for domestic abatement, the scale of these costs is uncertain, including the price that New Zealand may face, and the volume able to be accessed from reliable sources.
84. A basic estimate of the total cost of offshore purchasing takes a range of potential international carbon prices and multiplies this by the volume of total mitigation required. This doesn't reflect how the offshore purchasing would be acquired or who would pay for it. The cost estimate of the required offshore mitigation (if domestic action followed the demonstration pathway) to meet the current NDC ranges from \$3.9 to \$7.0 billion over the 2021 – 2030 period.² Figure 4 below provides an example of cost estimates at a range of illustrative NDC examples.

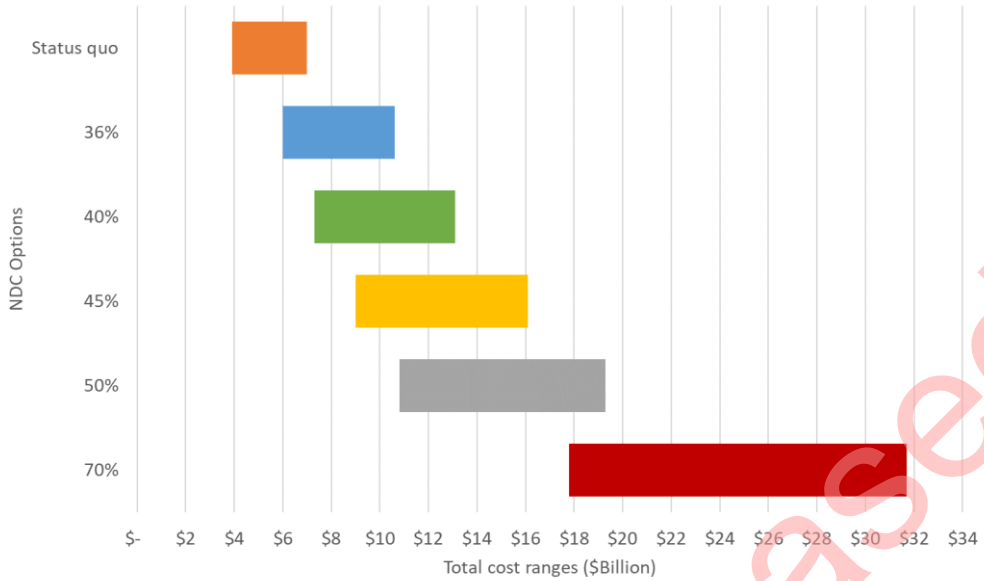


Figure 4 Total cost of international purchasing

85. In order to put the costs of international purchase in context, we have also calculated a “net ETS cash flow” based on the required offshore mitigation purchases if domestic action followed the demonstration pathway. This is also likely to reflect the costs/impact of linking the NZ ETS to international ETSs.

86. The figure is largely based on changes to Government revenue generated through NZ ETS auctions, as the use of international units means there are relatively fewer NZUs available for the Government to auction. s 9(2)(j)



Figure 5 shows the comparison of net ETS cash flow between low and high international unit costs over 2023 and 2030 across different NDC1 options.

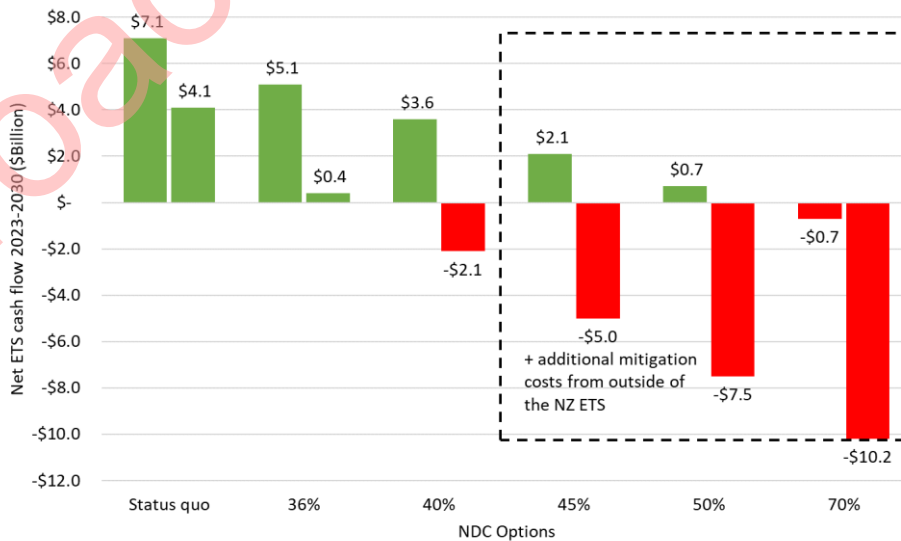


Figure 5 Net ETS cash flow with international purchase

Implications for decision making

87. As set out above, there are significant uncertainties over the optimal mix of domestic and offshore mitigation over both the short and long term.
88. But setting the demonstration path budget and coupling it with ‘tailwind’ policies offers a clear option. The demonstration path budget, by design, involves a challenging and ambitious set of changes which will be difficult to exceed. Adding tailwinds policies would reduce the risk of underachieving the emissions budgets and offer the possibility of outperforming the budget and better optimising the mix of domestic versus offshore mitigation to achieve NDC1.
89. ‘Tailwinds’ policies could include moving decisively to accelerate abatement where the risks of capital scrapping or technology-price risk are lower. Subject to due diligence this could include investigation of near-commercial methane inhibitors. Overachievement of a domestic budget and contribution to globally applicable technology developments, could, in themselves, constitute a form of leadership on climate change alongside our NDC ambition.
90. However there is not a high degree of certainty over the achievability of the tailwinds outcomes, and relying on tailwinds policies to reduce the costs of the current (or an enhanced) NDC would be an approach that carries significant risk.
91. Increasing domestic mitigation *beyond* the demonstration path involves increasing domestic economic and/or fiscal cost. s 9(2)(g)(i)
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] The Commission’s advice and modelling suggests that a ‘balance point’ currently lies at the demonstration path budget.
92. Key to any approach will be for the Government to keep a degree of flexibility on the mix of domestic and offshore mitigation, to take advantage of changing conditions. This will mean securing access to offshore mitigation, s 9(2)(j)
[REDACTED]
[REDACTED]
[REDACTED]
93. It is also important to note that any increase in domestic abatement effort to overachieve the budget would need to be considered in the context of the NZ ETS. Additional policies in sectors covered by the NZ ETS would risk simply lowering demand for domestic NZ ETS units, allowing emissions to occur elsewhere. NZ ETS supply settings may need to be adjusted to ensure the reductions are additional.

Feasibility constraints and alternative options to source international units

94. As outlined above, in order for New Zealand to access offshore mitigation, it must secure market access with willing partners (e.g. through an ETS link, or access a market set up by a credible third party such as the World Bank), and ensure the environmental integrity of the mitigation delivered through these arrangements. New Zealand must also secure

authorisation to account the offshore mitigation towards our NDC in accordance with the Article 6 of the Paris Agreement. Other countries have demonstrated that this is possible, notably Switzerland and Japan, as per the case study above.

95. When determining the optimal mix of sources of offshore mitigation, Ministers will need to consider several factors including:

- a. likelihood/certainty of securing offshore mitigation at scale and quality required (s 9(2)(j))
- b. the potential for lower costs (compared to ETS linking), by seeking out mitigation options in countries that have lower marginal abatement cost than the partners we are currently able to consider for ETS linking
- c. the social and environmental co-benefits of helping to achieve mitigation in developing and particularly least developed countries.
- d. any alignment with wider government objectives or work programmes, such as CNGP or voluntary carbon markets.

Although linking with other ETSs is our most promising option for securing offshore mitigation at scale, there is a limit to the volume of international units that can be imported via ETS links

96. s 9(2)(j)

97. s 9(2)(j)

98. In order to have environmental integrity, an ETS link needs to be implemented in a way that supports the NZ ETS achieving the emissions budgets. This is best achieved through incorporating the international units within the existing NZ ETS cap. This could involve the Government auctioning the same number of domestic units as available under our NZ ETS emissions cap, but backing them up by the purchase of an equivalent international unit from a linked ETS market. Alternatively, the Government may auction fewer domestic units, but allow participants to purchase the remaining capped units directly from the linked market.

99. However, the NZ ETS cap is limited to less than half of all New Zealand emissions, predominantly because the agricultural sector, which accounts for around half of New Zealand’s emissions, is not covered by the NZ ETS. A portion of the cap is also made up of units that are freely allocated, rather than auctioned, by the Government.

100. Increasingly ambitious NDC targets carry the risk of not being able to use the NZ ETS to purchase or on-sell the required international units. This threshold is reached with a target of around 40%. NZ ETS policy settings could be explored to increase the capacity of NZ ETS cap, and increase the volume of international units that could be purchased via ETS linking. These include the role of agriculture in the NZ ETS, the free allocation regime, and how the current NZ ETS stockpile is managed. Any change would need to fit with the wider policies, for example, the He Waka Eke Noa work programme on agricultural emissions.

There are other options for accessing offshore mitigation, however, these are less certain

101. Requiring more international mitigation than able to be imported through the NZ ETS means that alternative options for offshore mitigation would need to be found to meet an updated NDC1.

102. Other international carbon market opportunities exist – with varying levels of risk and uncertainty; and would require additional government resource to set up. These other options could, however, also bring benefits including: lower costs, social and environmental co-benefits from cooperating with developing countries benefits from cooperating with countries in the Pacific or South-East Asian region, or alignment with wider government objectives or work programmes, such as CNGP or voluntary carbon markets.

103. s 9(2)(j) [Redacted text block containing multiple lines of greyed-out content]

- s 9(2)(j) [REDACTED]
[REDACTED]
[REDACTED]).

104. s 9(2)(j) [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED].

s 9(2)(j)



105. For any of these options, including ETS linking, New Zealand will need to agree up front with all host countries to account for the mitigation that are transferred as required under the Paris Agreement. Both partners must make corresponding adjustments to their NDCs - when New Zealand claims offshore mitigation as part of meeting our NDC1, we will need to know that each partner country has adjusted its own NDC to avoid double counting.

106. Officials have identified an opportunity to support Pacific Island Countries' (PICs) implementation of the Paris Agreement, through building capacity to report inventories and engage with international carbon markets over the longer term. Potentially this cooperation could generate additional emission reductions, and a small amount of offshore mitigation (in line with PICs very small national emissions), alongside more robust and ambitious NDCs and higher quality inventories. s 9(2)(j)

In considering transferring mitigation to New Zealand, PICs would need to consider implications for their own mitigation commitments and the alternative funding routes open to them, such as available climate finance.

107. New Zealand will be required to report on the use of offshore mitigation towards NDC1 as part of our regular reporting under the Paris Agreement. We can expect scrutiny on the mix of options chosen, particularly if we are seen to use options with questionable or unproven environmental integrity. Environmental integrity of offshore mitigation has also been frequently raised as a priority consideration by iwi/Māori, NZ ETS participants and NGOs in past policy consultations on the NZ ETS and New Zealand's climate change targets.

108. A diversified package of options for access to offshore mitigation () will help to spread risk and limit exposure to price or political shocks, as well as provide a valuable tool to ensure New Zealand can deliver ambitious and progressively stronger emissions reduction targets while managing economic impacts and the pace of domestic economic transition.

s 9(2)(j)


Options for funding and financing domestic and international emissions reductions to meet the NDC

109. The demonstration path and current NDC already represent a significant funding and financing challenge.

110. As the ambition of New Zealand's NDC increases, the fiscal and economic costs of meeting that target would also increase. Although the Government will have options around how it chooses to fund and finance that NDC commitment over time, this does not fundamentally change the size of the commitment that New Zealand would be making in enhancing the NDC.

111. The fiscal costs to Government of either domestic emissions reduction activities or offshore mitigation will need to be funded as decisions are made. More broadly, the Government will want to encourage a shift in wider investment across the economy to support adjustment to a low emissions path.

112. s 9(2)(f)(iv)

A large rectangular area of the document is redacted with grey bars, obscuring the text of paragraph 112.

Next steps – consultation

The next decision point for Ministers is to make a decision on material for public consultation, which needs to occur across mid-August to mid-September

113. The immediate next decision facing Ministers is what material to include when consulting the public. There are three main choices: do Ministers want to present the public with a preferred option on an updated NDC1 level; a range of options for an updated NDC1 level; or hold a relatively open consultation process, seeking the public's views on the Commission's advice.

114. Enabling the Government to take a final decision on enhancing NDC1 prior to the next international climate change negotiations meeting (COP26) requires a very tight timeframe from now until November. This requires public consultation occurs during August and September, so that Cabinet can consider a final decision in October.

115. As a result, officials are seeking clear direction from Ministers on the content of public consultation material, to allow a Cabinet paper and draft discussion document seeking approval to consult to be prepared for Cabinet's consideration in mid-August. If consultation is unable to begin on time, there is a risk that the Government will not be able to take a final decision on the NDC1 prior to COP26.

Updating New Zealand's Nationally Determined Contribution

1

Context and background

1.1 Where are we starting from?

- A Nationally Determined Contribution (NDC) is a requirement of all Parties to the Paris Agreement.
- NDCs replace targets under the Kyoto Protocol. The Kyoto Protocol only applied targets to developed countries, whereas all countries are required to have an NDC.
- We are legally required to set an NDC with a view to achieving the purpose of the Paris Agreement, including its aim to keep temperature increases well below 2 degrees and to pursue efforts to limit increases to 1.5 degrees above pre-industrial levels.
- Each NDC we set must also reflect our highest possible ambition in light of national circumstances, become stronger over time, and contain an economy-wide emissions reductions target.
- Unlike under the Kyoto Protocol, there is no true-up at the end of the NDC period; instead New Zealand will be required to report on how it is implementing its NDC and whether it is on track to achieve it over the period.
- New Zealand's first NDC (NDC1) will be met through a combination of domestic action (emission reductions and new forests) and international cooperation (through the use of international carbon markets to help meet our target).

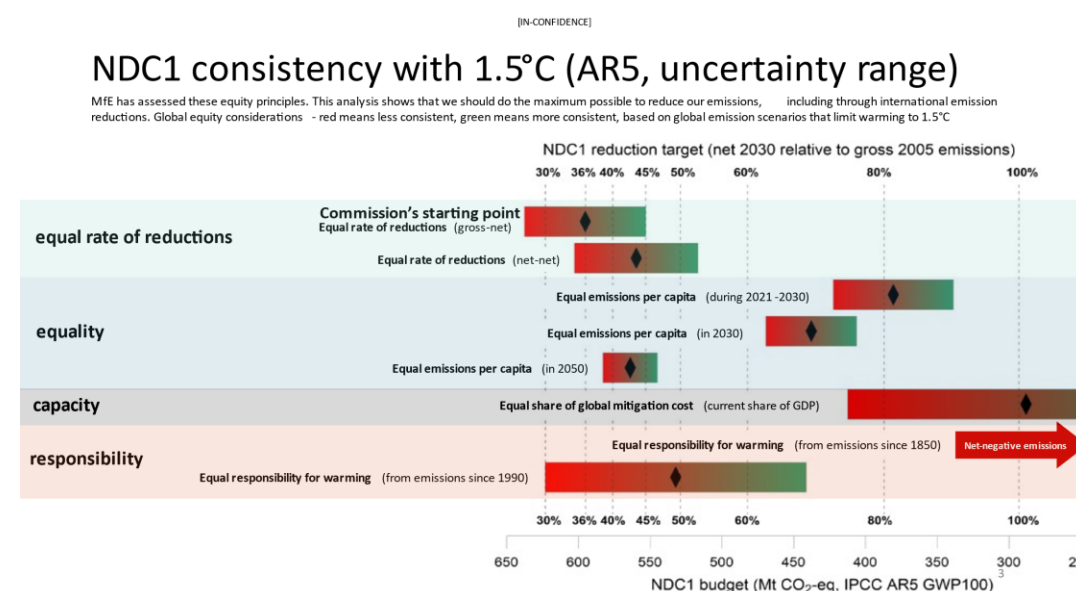
1.2 Where are we now?

- Our current NDC was set in 2016 to reduce emissions 30% below 2005 levels for the 2021 – 2030 period.
- Since the NDC1 was first set, there has been an increasing global focus on pursuing efforts to limit the increase in temperature to 1.5°C. The Intergovernmental Panel on Climate Change (IPCC) published its Special Report on Global Warming of 1.5°C in 2018, setting out the risks and impacts of 1.5°C and 2°C of warming, and summarising global emissions pathways that limit warming to 1.5°C
- Subsequent to this report, all countries have been called on to increase the ambition of their NDCs ahead of COP26. There is no legal obligation for New Zealand to update its NDC prior to COP 26. There are, however, clear expectations, communicated to us directly by a number of countries and interested groups.
- 33 OECD members have increased their NDC ambition over 2020/21. Major developed countries (e.g. US, EU, UK) have increased ambition and are pushing others to follow suit.
- The Commission's analysis and international developments mean NZ has a much better understanding of what emission reductions are possible domestically and what options are available to purchase international offsets than when the NDC was originally set.
- Meeting our current NDC will be challenging and require the use of international offsets for approximately half of our NDC. This is estimated at a cost of \$3.9 to \$7.0 billion based on current and forecast emission prices in other international ETS's.

1.3 What did the Commission say?

- The Commission assessed the compatibility of New Zealand's NDC1 with global efforts to pursue efforts to limit temperature increase to 1.5 degrees above pre-industrial levels
- The Commission recommended that the Government increase the NDC to be 'much more than 36%' to be compatible with 1.5 degrees
- The Commission did not advise on how much more than 36% the NDC1 would need for it to be compatible with 1.5 degrees. Instead, it noted the Government would need to consider a range of issues, including global equity principles, in coming to a decision on an appropriate NDC level
- The Ministry for the Environment has assessed these equity principles (refer below). The overall conclusion is that the stronger New Zealand's NDC1, the more likely it is consistent with efforts to achieve the global 1.5°C pathway across a range of global equity perspectives.

Principle	Description
<i>Equality</i>	Equal right of access of people to the atmosphere, with the remaining global emissions budget shared equally between all people. An example of how this can be expressed as equal emissions per capita.
<i>Responsibility</i>	Countries are held responsible for their historic emissions, with countries that have emitted more reducing their emissions at a deeper, and faster rate.
<i>Capability / Need</i>	The 'capacity to pay for the cost of mitigation', with those with higher levels of development reducing emissions at a faster rate than those with lower levels of development. Least developed countries may need to increase their emissions temporarily to meet basic development goals.



Updating New Zealand's Nationally Determined Contribution

2

What position does New Zealand find itself in?

2.1 NZ has strong interests in managing the risks of climate change

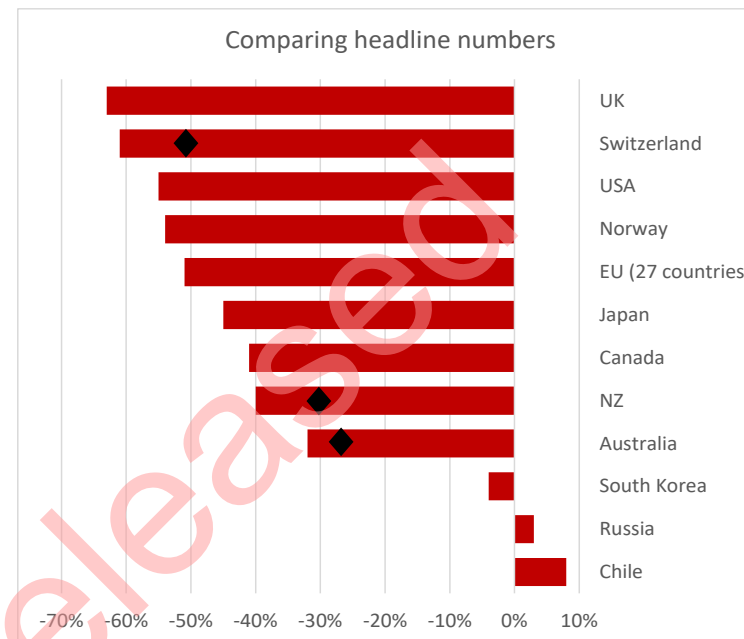
- New Zealand has a strong interest in an effective and ambitious global response to climate change.
- New Zealand is a small actor and cannot unilaterally prevent the adverse effects of climate change. It is in our interest, as well as those of our Pacific neighbours, for all countries to commit to and deliver ambitious action.
- We want other countries to act on climate change. A key question is what is the best way for NZ as a small country to influence other countries to take action,

2.2 The Climate Change Commission has assessed what is possible domestically

- The Commission has assessed the maximum level of domestic emissions reductions that are technically achievable and economically affordable through their 'demonstration' pathway.
- The Commission's 'demonstration pathway' is challenging – it would require substantial changes to energy and land use in the New Zealand economy by 2030 to achieve net reductions of approx. 45 Mt over the 2021 – 2030, equivalent to around half of what is needed to meet the current NDC1.
- The Commission has also identified options to outperform the demonstration pathway through their 'tailwinds' scenario that relies of additional abatement from the agriculture and transport sectors. Under this best case scenario, domestic emission reductions could contribute up to 75% of our current NDC1.
- This assessment confirms that New Zealand will need to use international carbon markets alongside domestic action to meet our current or an enhanced NDC1.

2.3 New Zealand's headline NDC1 is at the lower end when compared with other OECD countries

- New Zealand's headline NDC1 is currently at the lower end when compared to other OECD countries, only outperforming Australia when comparing headline reductions to 2005 levels.
- Comparing headline reductions does not provide the full picture however, as the level of effort required to reduce the same level of emissions between countries is different. There are a number of ways of assessing headline contributions to the Paris Agreements temperature goals.
- New Zealand has an atypical emission profile for a developed country, with significant proportion of emissions from both the transport and agriculture sector. These are difficult sectors to address for all OECD countries, and a large part of the reason why meeting the Commission's demonstration pathway is challenging. We expect we will need to rely on international action more than most other countries.
- 33 OECD countries have committed to or signalled greater NDC ambition over 2020/21. This includes those who have established programmes to secure offshore mitigation towards their NDCs (such as Japan and Switzerland).
- There is limited information currently available on how different countries plan to meet their NDCs, but we have no evidence countries are not going to meet their commitments. We expect this to become much clearer as countries are required to report on progress towards achieving their NDCs under the Paris Agreement.



Headline NDC targets relative to 2005 gross emissions for a range of OECD countries. For countries adopting a budget approach, their target has been converted to a point year, with the headline number represented by black diamonds.

The countries included in this chart are UNFCCC Annex 1 and/or OECD countries reflecting a geographic spread s 6(a)

2.4 There are practical limits to the level of offshore mitigation New Zealand may be able to purchase towards an updated NDC1

- International carbon markets under the Paris Agreement are emerging and require individual countries and organisations to work together to develop programmes or projects for trading or links through existing systems.
- The Government has made a commitment that only offshore mitigation with demonstrable environmental integrity would be considered for use towards New Zealand's targets.
- ETS linking is currently the most viable option for New Zealand to access offshore mitigation with environmental integrity. 9(2)(j)
- The amount we can access in this way, however, is limited by the maximum number of units that can be allowed into the NZ ETS within our ETS cap.
- s 9(2)(f)(iv)

2.5 Fiscal and Economic Costs of meeting NDCs'

- As the ambition of NZ's NDC increases, the fiscal and economic costs of meeting that target will also increase. Although the Government will have options around how it chooses to fund and finance that NDC commitment over time, this does not fundamentally change the size of the commitment that NZ would be making in enhancing the NDC.

Updating New Zealand's Nationally Determined Contribution

*Following direction from Ministers, for slides 3 & 4 officials have deliberately canvassed a very broad range of conceptual options to support Ministerial discussion

3A Conceptual options* - Delivering on New Zealand's NDC (current or enhanced) #1

s 9(2)(j)

Proactively released

3B

Conceptual options* - Delivering on New Zealand's NDC (current or enhanced) #2

*Following direction from Ministers, for slides 3 & 4 officials have deliberately canvassed a very broad range of conceptual options to support Ministerial discussion

s 9(2)(j)

Proactively released

Updating New Zealand's Nationally Determined Contribution

*Following direction from Ministers, for slides 3 & 4 officials have deliberately canvassed a very broad range of conceptual options to support Ministerial discussion

4 Conceptual options* - Enhancing the Ambition of New Zealand's NDC1

Conceptual Option

What is this option?

What are benefits of this option?

What are the risks and downsides of this option?

s 9(2)(j)

s 9(2)(f)(iv)

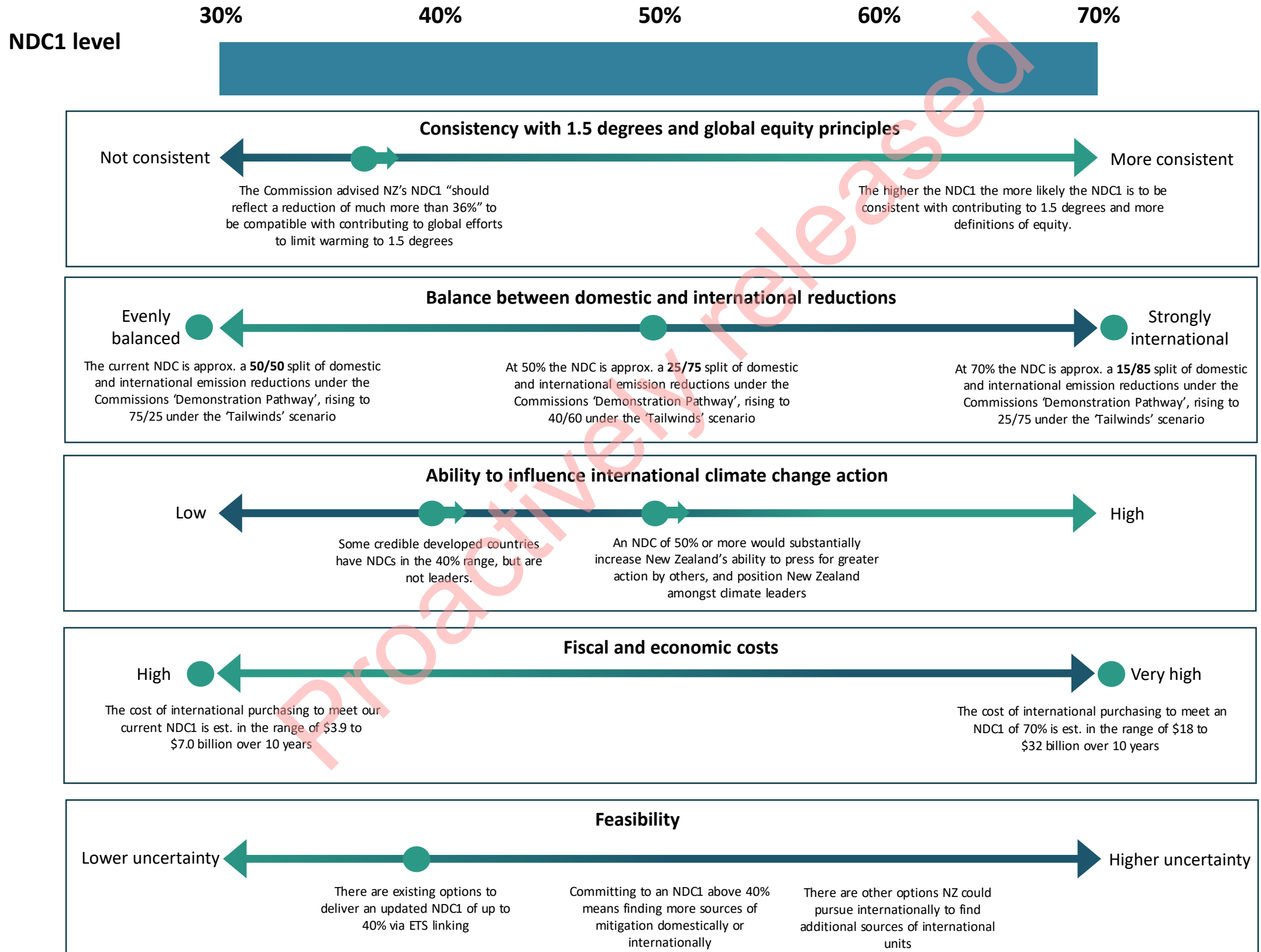
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Updating New Zealand's Nationally Determined Contribution

5

Key trade-offs

5.1 Updating the level of New Zealand's NDC1 can be summarised as making trade offs across five high-level factors set out below.



Updating New Zealand's Nationally Determined Contribution

6

Key choices and next steps

5.1 Officials are seeking agreement to consult on updating NZ's NDC1 to enable a decision ahead of COP26

- The 26th Conference of the Parties to the United Nations Framework Convention on Climate Change (COP26) starts the first week of November
- Officials see this meeting as the key opportunity for New Zealand to announce an updated NDC1, noting there is not a requirement to do so

s 9(2)(g)(i)

- To enable a decision by COP26, Cabinet would ideally approve a paper seeking to consult on updating NZ's NDC1 on 23 August at the latest.
- Timing is tight. To prepare and lodge the Cabinet paper and associated discussion document, officials will need the CRMG to indicate its preference for public consultation at the 27 July meeting

Process to get to a final decision on enhancing New Zealand's NDC1

27 July	CRMG meeting – discuss NDC issues paper
16 August	Cabinet committee (CBC) – paper seeking approval to consult on NDC1
23 August	Cabinet – paper seeking approval to consult on NDC1
24 August – 21 September	Public consultation on NDC1 (4 week period)
September – early October	Officials analyse submissions and prepare summary of consultation process
20 October	Cabinet committee (DEV) – agreement to final decision on an updating NDC1
26 October	Cabinet – confirming final decision on updating NDC1
1 November	COP26 begins in Glasgow

Proactively released

7 Appendix 1 - Details of an alternative NDC approach to focus on our energy system

s 9(2)(f)(iv)

Proactively released