

19 July 2018

Ministry for the Environment  
PO Box 10362  
Wellington 6143  
By email: [ZCB.Submissions@mfe.govt.nz](mailto:ZCB.Submissions@mfe.govt.nz)

### Submission on the Zero Carbon Bill

Thank you for the opportunity to have input into the Zero Carbon Bill<sup>1</sup>. This submission was prepared by representative members of OraTaiao: The NZ Climate and Health Council below.

As New Zealand's premier climate change NGO focused on wellbeing and equity, we would also welcome the opportunity to have further input into the drafting and form of the eventual Zero Carbon Act and the Climate Change Commission.

We welcome the Bill, which is not just crucial to reducing New Zealand emissions, but is also some of the most important health legislation of our generation. OraTaiao, alongside other experts in climate change and health, considers that tackling climate change is potentially the greatest global health opportunity this century<sup>2</sup>. With that in mind, our submission is focused on the potential health gains and the other co-benefits from New Zealand reducing its emissions.

Yours sincerely



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OraTaiao: The New Zealand Climate and Health Council

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<sup>1</sup> Ministry for the Environment. Our Climate, Your Say: Summary document on Zero Carbon Bill, June 2018. <http://www.mfe.govt.nz/news-events/zero-carbon-act>, <http://www.mfe.govt.nz/have-your-say-zero-carbon>

<sup>2</sup> Watts N, Adger WN, Agnolucci P, Blackstock J, et al., Montgomery H, Costello A, for The 2015 Lancet Commission on Health and Climate Change. Health and climate change: policy responses to protect public health. Lancet 2015. doi: 10.1016/S0140-6736(15)60854-6. <http://www.thelancet.com/commissions/climate-change-2015>

## About OraTaiao

- Climate change is increasingly recognised as the biggest global health threat of the 21st Century,<sup>3,4</sup> as well as the greatest opportunity to improve health.<sup>5</sup>
- OraTaiao: New Zealand Climate & Health Council has about 650 health professional members. Our [Health Call to Action on Climate Change](#) is supported by [17 leading health professional organisations](#) including the New Zealand Medical Association, the New Zealand Nurses Organisation and the Public Health Association, as well as a number of Specialist Colleges and the leaders of both New Zealand's Faculties of Medical and Health Sciences. All New Zealand's climate change and health experts are members, including eminent international climate change and health experts.
- OraTaiao is part of a worldwide movement of health professional authorities urgently focusing on the health challenges of climate change ([The Global Climate and Health Alliance](#)).
- As senior doctors, nurses and other health professionals, we are advocating on behalf of our patients and communities.
- OraTaiao is a politically non-partisan incorporated society, emphasising science, evidence, health, health and social equity, and resilience. We regard climate change adaptation and mitigation as New Zealand health priorities.
- We understand that health and wellbeing includes physical, mental, social, cultural, environmental and spiritual wellbeing. Health is impacted by what happens in people's homes, communities, schools, workplaces, and societies; natural and built environments; the economy; and internationally. Public policies can protect, enhance and shape the building blocks of health and wellbeing, or undermine, damage and even destroy those building blocks. Many of the building blocks of health are distributed unjustly as a result of public policy and investment
- We honour Māori aspirations, are committed to the principles of Te Tiriti o Waitangi, and strive to reduce inequities between Māori and other New Zealanders. We are guided in our practice by the concepts of kaitiakitanga (guardianship), kotahitanga (unity), manaakitanga (caring), and whakatipuranga (future generations).

## Our Vision: fast, fair, firm, Tiriti-based transition to net zero NZ by 2040

We consider that a healthy, fair, net-zero NZ economy with high quality of life is possible, but will now require more rapid and deep change because of our collective continued inaction. Unfortunately the delays in taking action mean that the required changes required have to be deeper and faster. The longer we wait, the more urgent and demanding and difficult it will be to make the changes needed to avoid catastrophic damage to people's health and wellbeing (see Figure below).

We envision pathways to a stable, net zero-emissions economy built on Te Tiriti o Waitangi, the development of a shared set of values for wellbeing, and participative processes backed by integrated, dynamic impacts modelling of policy options.

We consider the communication of short-term, and long-term, health, wellbeing and fairness co-benefits; the leadership of government and the health sector; and a move from GDP as a measure of progress towards wellbeing economics to be fundamental to achieving this vision.

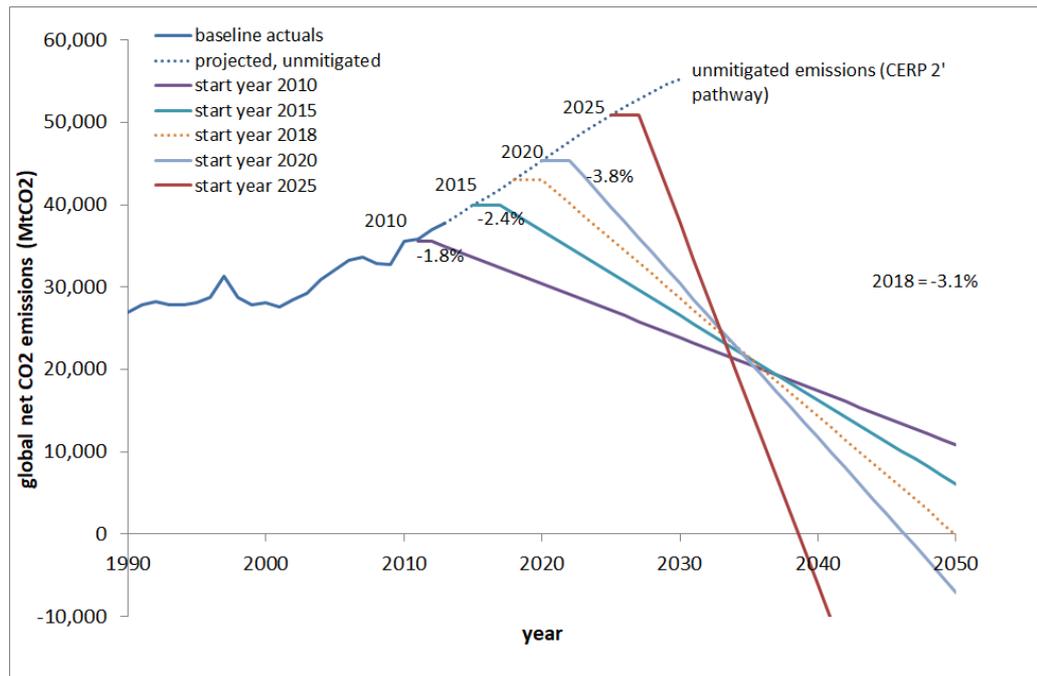
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<sup>3</sup> Costello A, Abbas M, Allen A, et al. Managing the health effects of climate change: Lancet and University College London, Institute for Global Health Commission. Lancet 2009,373:1693–1733.  
[http://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(09\)60935-1/fulltext](http://www.thelancet.com/journals/lancet/article/PIIS0140-6736(09)60935-1/fulltext)

<sup>4</sup> World Medical Association. WMA Declaration of Delhi on Health and Climate Change,  
<https://www.wma.net/policies-post/wma-declaration-of-delhi-on-health-and-climate-change/>

<sup>5</sup> Watts N, Adger WN, Agnoletti P, Blackstock J, et al., Montgomery H, Costello A, for The 2015 Lancet Commission on Health and Climate Change. Health and climate change: policy responses to protect public health. Lancet 2015. doi: 10.1016/S0140-6736(15)60854-6.  
<http://www.thelancet.com/commissions/climate-change-2015>

**Figure. Staying within budget – the later we start, the harder it gets.**



Key: The percentage figures indicate the amount (relative to 1990) by which global emissions would need to be reduced, per year, every year, after their peak to remain within the same cumulative emissions budget. In this particular modelling, all scenarios meet the same cumulative emissions budget of 1010 Gt CO<sub>2</sub> between 2012 and 2100 (CERP <https://climateequityreference.org/> had based this on RCP2.6, as used by IPCC AR5 WG1, which gives a roughly 2/3rds chance of limiting long-term temperature increase to 2°C. Note this has not been updated for the necessary 1.5°C global trajectory).

## Introduction

OraTaiao: The New Zealand Climate and Health Council welcomes the Zero Carbon Bill, including having an independent Climate Change Commission.

**A healthy Zero Carbon Act is an essential prescription for New Zealand’s health and well-being, and we strongly support it. Health workers call for a Zero Carbon Act that’s fast, fair, firm and founded on Te Tiriti – with health at its heart.**

In **summary**, we want the **target** of net zero emissions across **all** greenhouse gases **by 2040** set in law now.

- This target must be met from domestic emissions reductions only (with some clearly delimited domestic offsetting from reforestation, planting and improved soil health).
- The emissions budgets must cover all gases and all sectors, as NZ’s main greenhouse gases (carbon dioxide, methane and nitrous oxide) all cause long-lasting damage.
- Although any government can enable NZ to emit less, the target can only be changed by changing the Act. We want three **emissions budgets** of 5 years each (covering the following 15 years) to be in place at any given time.
- These budgets should be set by the Climate Commission by considering:
  - scientific knowledge about climate change, with sea level rise and ocean acidification
  - obligations under Te Tiriti o Waitangi
  - global leadership and international fairness

- Although any Government can act so NZ emits less than budgeted, emissions budgets should be able to be increased only by changing this law.

This is to give **certainty and transparency** for NZ (businesses, iwi, communities, whānau, households, and the health sector) to act quickly and decisively now.

The Zero Carbon Act must require **the Government to respond** by publishing plans to stay within budget - no later than 6 months after the Climate Commission has set a new emissions budget. Global emissions must peak by 2020 if we are to safely reverse the effect of human activity on the climate.<sup>6,7,8</sup> NZ's high international reputation (and reliance on climate and ocean stability) means we have a critical opportunity and responsibility to be an influential and credible global leader and role model. Healthy climate action must be fast, fair, firm and founded on Te Tiriti o Waitangi.

The Government must:

- adhere to Te Tiriti o Waitangi
- consider health equity and the substantial health co-benefits from well-designed climate change mitigation
- act in solidarity with our Pacific neighbours and others who are being hit first and worst by the effects of climate change.<sup>9,10</sup>

#### **New Zealand's Climate Change Commission should:**

- set NZ's emissions budgets – based on climate science to stay within 1.5°C
- recommend policies that support NZ staying well within emission budgets (including ETS settings)
- monitor and report annually and publicly on NZ's progress on staying within budget
- advise on adaptation policies, but mitigation is the Commission's primary focus
- have membership that reflects a partnership founded on Te Tiriti o Waitangi
- include expertise in health, wellbeing, social justice and social change

The Commission would advise on policies for **adapting to the impacts** of climate change, sea level rise and ocean acidification – **but mitigation must be the Commission's primary focus**. We agree that the proposed new functions will help NZ adapt. We support setting up targeted adaptation reporting power so some organisations share information on their exposure to climate risks.

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<sup>6</sup> Schaeffer M, Rogeli J, Roming N, Sferra F, Hare B, et al; for Climate Analytics. Feasibility of limiting warming to below 1.5°C. 2015. [http://climateanalytics.org/files/feasibility\\_1o5c\\_2c.pdf](http://climateanalytics.org/files/feasibility_1o5c_2c.pdf)

<sup>7</sup> Climate Analytics. Input to the Talanoa Dialogue from Climate Analytics, April 2018. [http://climateanalytics.org/files/ca\\_input\\_talanoa\\_dialogue\\_april\\_2018\\_final.pdf](http://climateanalytics.org/files/ca_input_talanoa_dialogue_april_2018_final.pdf)

<sup>8</sup> <https://www.carbonbrief.org/mission-2020-new-global-strategy-rapidly-reduce-carbon-emissions>, [http://www.mission2020.global/wp-content/uploads/COP23\\_Mission-2020-Press-Release-NOV13.pdf](http://www.mission2020.global/wp-content/uploads/COP23_Mission-2020-Press-Release-NOV13.pdf), <http://www.mission2020.global/>

<sup>9</sup> Kim R, Costello A, Campbell-Lendrum D. Climate change and health in Pacific island states. Bull World Health Organ. 2015;93(12):819. <http://www.who.int/bulletin/volumes/93/12/15-166199/en/>

<sup>10</sup> Climate Analytics. Pacific marine climate change report card reveals full regional impacts. June 2018. <http://climateanalytics.org/latest/pacific-marine-climate-change-report-card-reveals-full-regional-impacts>

**Responses to the discussion questions:**

**2050 target**

*1. What process should the Government use to set a new emissions reduction target in legislation?*

*Answer:*

The government should set the target in law now, with the ability to make the target stronger in response to the Commission’s early advice. The target should be based on the most up to date climate science, on our international obligations and on principles of global equity. New Zealand is a wealthy, high emitting country and should do its fair share. New Zealanders should not avoid our responsibility by discounting the significance of our emissions.

*Comment:*

NZ (businesses, iwi, communities, whānau, households, and health and other sectors) need **certainty** and **transparency** to act fast now.

NZ is a signatory to the 2015 Paris Agreement, through which all countries committed to limiting average temperature rise to well below 2°C – pursuing efforts to limit temperature increase to 1.5°C.

Pacific island countries, in the frontline of climate change,<sup>11,12</sup> have a close relationship with NZ and advocated strongly for the 1.5° target in the Paris Agreement. We have a moral obligation to support their call, not only in the spirit of our shared humanity, but also because of past migration patterns those in low-lying nations are whānau. Limiting temperature increase is important to the wellbeing of people in NZ, which cannot be separated from the wellbeing of people in the Pacific.

Per capita, Pacific Islands emit very little already, and New Zealand has emitted large amounts especially historically – yet Pacific Islands will be hit first with sea level rises and more tropical cyclones, their \$2700 per capita GDP being at the level of Nigeria (less than India’s) and being 1/9th of New Zealand’s.<sup>13</sup> These differences are perverse.

**Table: population, GDP and 2013 gross greenhouse gas emissions, New Zealand and Pacific Islands**

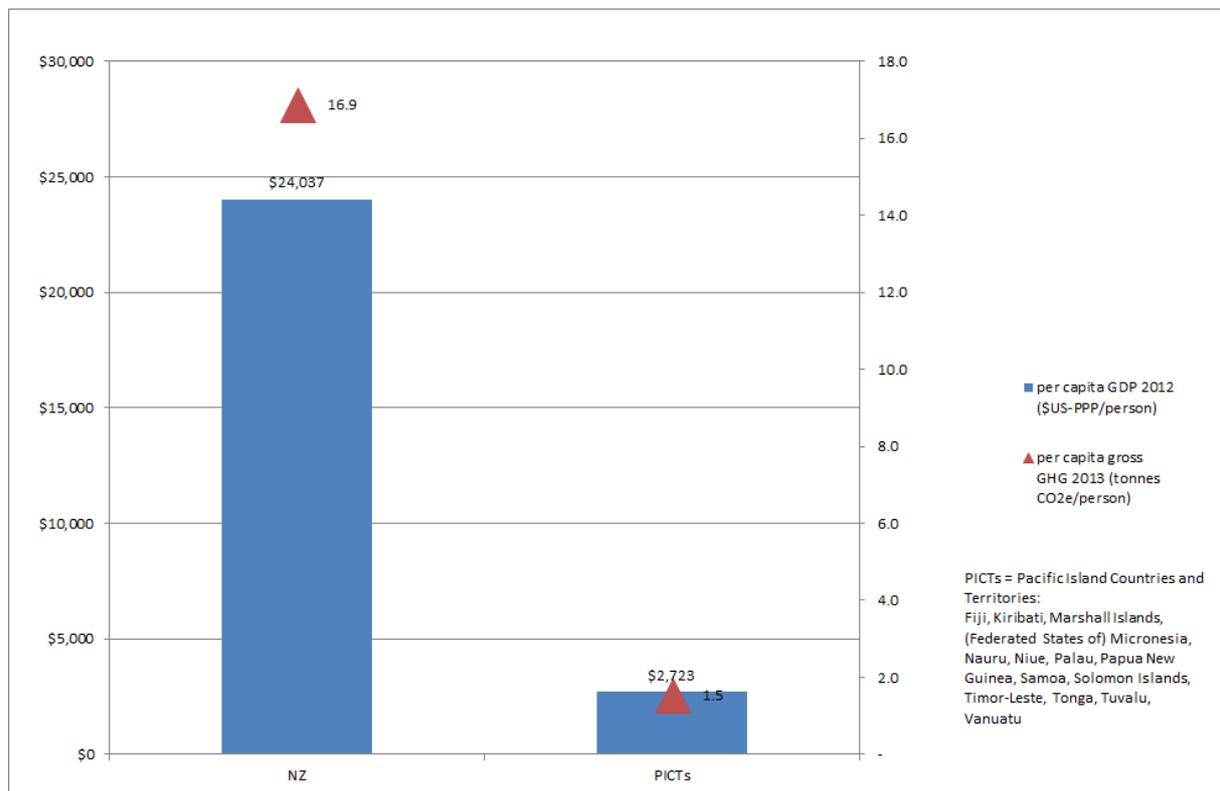
	population 2014 (million)	GDP 2012 (billion \$US- PPP)	gross GHG 2013 (MtCO2e)
NZ	4.551	\$109.402	76.93
PICTs	10.967	\$29.858	16.98

**Figure: per capita GDP and 2013 gross greenhouse gas emissions, New Zealand and Pacific Islands**

<sup>11</sup> Kim R, Costello A, Campbell-Lendrum D. Climate change and health in Pacific island states. Bull World Health Organ. 2015;93(12):819. <http://www.who.int/bulletin/volumes/93/12/15-166199/en/>

<sup>12</sup> Climate Analytics. Pacific marine climate change report card reveals full regional impacts. June 2018. <http://climateanalytics.org/latest/pacific-marine-climate-change-report-card-reveals-full-regional-impacts>

<sup>13</sup> analysis of CERP calculator data <http://calculator.climateequityreference.org/>, <http://www.mfe.govt.nz/climate-change/reducing-greenhouse-gas-emissions/new-zealand%E2%80%99s-post-2020-climate-change-target>; Metcalfe S, Jones R, Macmillan, A, Springford L, for Ora Taiao: The NZ Climate & Health Council and NZ College of Public Health Medicine. Sharing our global carbon budget. WISE RESPONSE Workshop, Wellington, 13 February 2017. [PowerPoint Slides](#)



Since the Paris agreement, the second draft of the IPCC Special Report on Global Warming of 1.5°C details **substantial differences in the harmful effects** of global warming limited to 1.5°C compared to 2°C above pre-industrial levels<sup>14</sup> – where the 0.5°C warming difference is critical for vulnerable regions.<sup>15</sup> Rapid action now to limit global warming to 1.5°C, also increases the likelihood of limiting warming below 2°C to odds that are better than two-thirds. Meeting the global climate challenge, needs global cooperation – including from nations who will be hit first and worst.

To sensibly limit global warming to **1.5°C**<sup>16,17</sup> will require global anthropogenic CO2 emissions to reach **net-zero before 2040**, together with rapid reductions in other emissions, particularly methane.<sup>18</sup>

Within these limits, we need to distribute efforts across countries fairly.<sup>19</sup>

<sup>14</sup> Intergovernmental Panel on Climate Change. Special Report on Global Warming of 1.5°C (SR15), draft 2.

<http://www.ipcc.ch/report/sr15/>, annotated Draft 2 Summary for Policy Makers <http://www.climatechangenews.com/2018/06/27/new-leaked-draft-of-un-1-5c-climate-report-in-full-and-annotated/>

<sup>15</sup> Schleussner C-F, Lissner TK, Fischer EM, Wohland J, Perrette M, et al. Differential climate impacts for policy relevant limits to global warming: the case of 1.5°C and 2°C. *Earth Syst. Dyn.* 2016;7(2):327-51. <https://www.earth-syst-dynam.net/7/327/2016/esd-7-327-2016.pdf>, <https://www.earth-syst-dynam.net/7/327/2016/esd-7-327-2016-discussion.html>, summary at [http://climateanalytics.org/files/2016\\_06\\_01\\_esd\\_schleussner\\_briefing\\_note.pdf](http://climateanalytics.org/files/2016_06_01_esd_schleussner_briefing_note.pdf)

<sup>16</sup> Rockström J, Gaffney O, Rogelj J, Meinshausen M, Nakicenovic N, Schellnhuber HJ. A roadmap for rapid decarbonization. *Science.* 2017;355(6331):1269-71. <http://science.sciencemag.org/content/355/6331/1269.full>

<sup>17</sup> <https://www.carbonbrief.org/mission-2020-new-global-strategy-rapidly-reduce-carbon-emissions>, [http://www.mission2020.global/wp-content/uploads/COP23\\_Mission-2020-Press-Release-NOV13.pdf](http://www.mission2020.global/wp-content/uploads/COP23_Mission-2020-Press-Release-NOV13.pdf), <http://www.mission2020.global/>

<sup>18</sup> Intergovernmental Panel on Climate Change. Special Report on Global Warming of 1.5°C (SR15), draft 2.

<http://www.ipcc.ch/report/sr15/>, annotated Draft 2 Summary for Policy Makers <http://www.climatechangenews.com/2018/06/27/new-leaked-draft-of-un-1-5c-climate-report-in-full-and-annotated/>

<sup>19</sup> Metcalfe S, for the New Zealand College of Public Health Medicine and OraTaiao: The New Zealand Climate and Health Council. Fast, fair climate action crucial for health and equity. Editorial. *N Z Med J* 2015;128(1425):14-23. [http://www.nzma.org.nz/\\_data/assets/pdf\\_file/0011/45929/Ed-Metcalfe-FINAL1425.pdf](http://www.nzma.org.nz/_data/assets/pdf_file/0011/45929/Ed-Metcalfe-FINAL1425.pdf)

- Due to previous inaction and delay (alongside inaction by other countries), New Zealand needs to work hard to meet our commitments under the Paris Agreement and make a fair contribution to limit warming below 1.5°C. The Paris Agreement included the principle of ‘common but differentiated responsibilities and respective capabilities’. Least developed and developing nations are disproportionately affected by climate change, to which they have contributed least, and have least capacity to adapt. Meanwhile, established economies, like New Zealand, historically have had high greenhouse gas emissions and have benefited from activities that cause high emissions. We are responsible, and are in the position, to mitigate past actions and contribute rapidly and proportionately more reductions, than nations with historically lower emissions. Established economies, like New Zealand, also have greater economic ability to make the adjustments that are needed to reduce emissions.
- There are many models and ways to share emissions and efforts to get to net zero safely across countries that account for historical emissions and wealth. Such modelling (see Attachment 1) , using frameworks like the Climate Equity Reference Project (where NZ is wealthy and has benefited from large historic emissions), with 72+ ‘fairness’ scenarios, indicates general timelines for New Zealand of year 2022 to 2038 to reach net zero emissions. This is based on both our historical responsibilities and obligations, and our capacity to adapt and mitigate, when compared with other countries.

For content, rationale, sources, modelling assumptions, see **Attachment 1** ‘Setting ambitious greenhouse gas emissions targets for New Zealand – the case for international fairness/equity’.

The IPCC’s Special Report on Global Warming of 1.5°C (due this October 2018) must also guide NZ’s Zero Carbon Act.

## *2. If the Government sets a 2050 target now, which is the best target for New Zealand?*

*Answer:*

The 2050 target set in the submission question is now out of date. We submit that net zero emissions across all greenhouse gases must be by **2040**, or earlier if the IPCC’s October 2018 report provides guidance that global emissions need to be reduced faster.

*Comment:*

What matters is **total net emissions** into our atmosphere and oceans – so that we do **not** breach crucial ecological tipping points.

The final version of the Zero Carbon Act must align with the IPCC’s **Special 1.5°C report**<sup>20</sup> due this October.

NZ’s three main greenhouse gases, **carbon dioxide, nitrous oxide and methane**, continue to damage our climate and/or oceans for **hundreds** of years or more.<sup>21</sup> In the NZ context, the distinction between short and long acting GHGs is therefore artificial.<sup>22</sup>

Keeping within the safer, healthier, global warming limit of **1.5°C**, requires global anthropogenic CO<sub>2</sub> emissions to reach net-zero **by 2040**, together with rapid reductions in other emissions, particularly methane.<sup>23,24,25</sup> And within these limits, we need to distribute efforts across countries fairly.<sup>26</sup>

<sup>20</sup> Intergovernmental Panel on Climate Change. Special Report on Global Warming of 1.5°C (SR15), draft 2.

<http://www.ipcc.ch/report/sr15/>, annotated Draft 2 Summary for Policy Makers <http://www.climatechangenews.com/2018/06/27/new-leaked-draft-of-un-1-5c-climate-report-in-full-and-annotated/>

<sup>21</sup> Zickfeld K, Solomon S, Gilford DM. Centuries of thermal sea-level rise due to anthropogenic emissions of short-lived greenhouse gases. Proc Natl Acad Sci U S A. 2017;114(4):657-62. <http://www.pnas.org/content/pnas/early/2017/01/03/1612066114.full.pdf>

<sup>22</sup> Hare B, Schlessner C-F, Schaeffer M, Nauels A. New Zealand’s Zero Carbon Bill – getting the Paris Agreement right. Berlin: Climate Analytics, 2018. <http://climateanalytics.org/>

### 3. How should New Zealand meet its targets?

*Answer:*

**Domestic** net emissions reductions only (with clearly de-limited domestic offsetting contributions from reforestation, horticultural planting and improved soil health).

*Comment:*

International emissions units will be **volatile** in price – and relying on these undermines decisive domestic investment here in NZ.

Relying on international tradable emissions units means NZ misses out on opportunities for wellbeing and equity co-benefits of reducing our domestic emissions. It also means delaying the essential and needed real changes for later, when increasing urgency may result in rapidly executed poorly planned measures, with fewer co-benefits and greater likelihood for negative unintended consequences. Well thought out plans – starting now – with actual reductions in emissions, are more likely to provide greater co-benefits and less likely to have unintended negative and highly regressive consequences.

**Reforestation, horticultural planting** and improved soil health (which will absorb some of New Zealand's carbon dioxide emissions), can be part of meeting our domestic net zero emissions target.

But our **main focus** must be **rapidly reducing NZ's greenhouse gas emissions** - all gases, all sectors. NZ (inclusive of businesses, iwi, communities, whānau, households, and all sectors including the health sector) needs **certainty and transparency** to act decisively now.

### 4. Should the Zero Carbon Bill allow the 2050 target to be revised if circumstances change?

*Answer:*

The target should only be altered to **increase or tighten** climate action ambition in response to updated scientific recommendations. There must be no backsliding (i.e. weakening of the target).

*Comment:*

NZ (businesses, iwi, communities, whānau, households, and all sectors including the health sector) needs **certainty and transparency** to act now.

All Acts in NZ can currently be changed through due process under exceptional circumstances.

A key recommendation from the Productivity Commission's draft report (April 2018)<sup>27</sup> was the importance of **long term climate policy commitments** through institutional, including statutory legal and regulatory, structures and processes.

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<sup>23</sup> Rockström J, Gaffney O, Rogelj J, Meinshausen M, Nakicenovic N, Schellnhuber HJ. A roadmap for rapid decarbonization. *Science*. 2017;355(6331):1269-71. <http://science.sciencemag.org/content/355/6331/1269.full>

<sup>24</sup> <https://www.carbonbrief.org/mission-2020-new-global-strategy-rapidly-reduce-carbon-emissions>, [http://www.mission2020.global/wp-content/uploads/COP23\\_Mission-2020-Press-Release-NOV13.pdf](http://www.mission2020.global/wp-content/uploads/COP23_Mission-2020-Press-Release-NOV13.pdf), <http://www.mission2020.global/>

<sup>25</sup> Intergovernmental Panel on Climate Change. Special Report on Global Warming of 1.5°C (SR15), draft 2. <http://www.ipcc.ch/report/sr15/>, annotated Draft 2 Summary for Policy Makers <http://www.climatechangenews.com/2018/06/27/new-leaked-draft-of-un-1-5c-climate-report-in-full-and-annotated/>

<sup>26</sup> Metcalfe S, for the New Zealand College of Public Health Medicine and OraTaiao: The New Zealand Climate and Health Council. Fast, fair climate action crucial for health and equity. Editorial. *N Z Med J* 2015;128(1425):14-23. [http://www.nzma.org.nz/\\_data/assets/pdf\\_file/0011/45929/Ed-Metcalfe-FINAL1425.pdf](http://www.nzma.org.nz/_data/assets/pdf_file/0011/45929/Ed-Metcalfe-FINAL1425.pdf)

<sup>27</sup> New Zealand Productivity Commission. Low-emissions economy: Draft report. Wellington: NZPC, 2018. [www.productivity.govt.nz/inquiry-content/3254](http://www.productivity.govt.nz/inquiry-content/3254)

## Emissions budgets

*5. The Government proposes that three emissions budgets of five years each (ie, covering the next 15 years) be in place at any given time. Do you agree with this proposal?*

*Answer:*

Yes

*Comment:*

Three 5-year emissions budgets covering the next 15 years, with our “legislated net zero emissions by 2040 target”, gives the **certainty and transparency** needed for action and investment now.

Given the urgent need for global emissions to peak by 2020,<sup>28,29</sup> the Act could also include the requirement for the Commission to urgently set **an initial 2-year Emissions Budget**. This 2-year Budget would fit within the first 5-year Emissions Budget.

*6. Should the Government be able to alter the last emissions budget (ie, furthest into the future)?*

*Answer:*

The last budget should be able to be reduced if needed to respond to emerging international evidence. The Zero Carbon Act should also permit any Government to act so NZ **can emit less** than budgeted.

*Comment:*

However, emissions budgets must not be able to be **increased**, unless the Government **changes the Act** through the usual Parliamentary process.

*7. Should the Government have the ability to review and adjust the second emissions budget within a specific range under exceptional circumstances?*

*Answer:*

The second budget should be able to be reduced if needed to respond to emerging international evidence. The Zero Carbon Act should also permit any Government to act so NZ **can emit less** than budgeted.

*Comment:*

If there are exceptional circumstances, the Government can change the Zero Carbon Act, to increase the emissions budget, through the usual Parliamentary process.

*8. Do you agree with the considerations we propose that the Government and the Climate Change Commission take into account when advising on and setting budgets?*

*Answer:*

No

*Comment:*

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<sup>28</sup> Schaeffer M, Rogeli J, Roming N, Sferra F, Hare B, et al; for Climate Analytics. Feasibility of limiting warming to below 1.5°C. 2015. [http://climateanalytics.org/files/feasibility\\_1o5c\\_2c.pdf](http://climateanalytics.org/files/feasibility_1o5c_2c.pdf); Climate Analytics. Input to the Talanoa Dialogue from Climate Analytics, April 2018. [http://climateanalytics.org/files/ca\\_input\\_talanoa\\_dialogue\\_april\\_2018\\_final.pdf](http://climateanalytics.org/files/ca_input_talanoa_dialogue_april_2018_final.pdf)

<sup>29</sup> <https://www.carbonbrief.org/mission-2020-new-global-strategy-rapidly-reduce-carbon-emissions>, [http://www.mission2020.global/wp-content/uploads/COP23\\_Mission-2020-Press-Release-NOV13.pdf](http://www.mission2020.global/wp-content/uploads/COP23_Mission-2020-Press-Release-NOV13.pdf), <http://www.mission2020.global/>

The **physics of climate change comes first** for setting Emissions Budgets – the bottom line is what ends up in our shared global atmosphere and oceans, and making sure ecological tipping points are **not** breached.

As the impacts of unmitigated climate change will be highly regressive on New Zealanders the priority must be robust emissions budgets. The physics of climate change is science that is immutable, but the measures applied to mitigate anthropogenic global warming must be considered through the prisms of the Tiriti and principles of equity.

The Climate Commission's **Emissions Budgets** must be consistent with the best possible chance of limiting global warming to **1.5°C degrees** and the **greater responsibility** of well-resourced nations like NZ, with Budget considerations limited to:

- A. Scientific understanding of the extent and impacts of climate change, sea level rise and ocean acidification
- B. Obligations under Te Tiriti o Waitangi
- C. Global leadership, including international equity<sup>30</sup>

The Commission then **advises the Government on mitigation policies** (including ETS settings) for the Government plans to keep NZ's future emissions within the Commission's budgets.

Te Tiriti O Waitangi obligations and fairness within New Zealand are top priorities for policy and planning.

Other considerations include substantial health co-benefits and technology relevant to climate change – in ensuring a fairer, just, sustainable Aotearoa-NZ.

## Government response

*9. Should the Zero Carbon Bill require Governments to set out plans within a certain timeframe to achieve the emissions budgets?*

*Answer:*

Yes

*Comment:*

The Zero Carbon Act must require the **Government to respond** to emissions budgets set by the Climate Commission **by publishing plans** to stay within budget as rapidly as feasible within a set time limit that is certainly less than 12 months.

*10. What are the most important issues for the Government to consider in setting plans to meet budgets? For example, who do we need to work with, what else needs to be considered?*

*Answer:*

The most important issues to consider are Te Tiriti o Waitangi obligations and fairness within Aotearoa-NZ.

This means **health equity**<sup>31</sup> is essential in planning and monitoring - all regressive policies (including ETS settings) must be effectively offset for vulnerable communities.

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<sup>30</sup> Metcalfe S, for the New Zealand College of Public Health Medicine and OraTaiao: The New Zealand Climate and Health Council. Fast, fair climate action crucial for health and equity. Editorial. N Z Med J 2015;128(1425):14-23.  
[http://www.nzma.org.nz/data/assets/pdf\\_file/0011/45929/Ed-Metcalfe-FINAL1425.pdf](http://www.nzma.org.nz/data/assets/pdf_file/0011/45929/Ed-Metcalfe-FINAL1425.pdf)

The **substantial co-benefits to health**<sup>32</sup> from well-designed reduction and mitigation must be considered.

Other considerations include **sustainable economic opportunities** and **technology** relevant to climate change, to grow a fairer, just, sustainable Aotearoa-NZ.

The Government must work in Te Tiriti partnership, and with NZ's most vulnerable and directly affected communities – those already disadvantaged (such as children, elderly, Māori, Pasifika, people living with low incomes and disabilities or who are ill) – and those currently working in high-emissions industries, to create a **hopeful, fairer future**.

*Comment:*

### **Win-wins with health co-benefits**

The co-benefits to health from well-designed reduction and mitigation will be substantial.<sup>33</sup> Leading medical journal *The Lancet* has described tackling climate change as potentially the greatest global health opportunity of the 21st century.<sup>34</sup> These co-benefits will include reductions in cardiovascular and respiratory disease, cancers, obesity, food insecurity, and child poverty, as well as an easing of the financial pressures on the health sector.

These co-benefits arise as measures to reduce emissions have significant positive impacts on important determinants of health, especially energy intake (nutrition) and expenditure (physical exercise). For example:

- Active transport (walking, cycling, public transport) in addition to reducing CO<sub>2</sub> emissions, improves physical activity and can reduce air pollution and road traffic injuries. Walking and cycling are inexpensive. In addition, public transport is used proportionately more by people with lower incomes. Thus supporting active transport and improving public transport infrastructure has the potential to benefit health, climate and equity.
- In New Zealand healthy eating, including increased plant and less red meat and animal fat consumption, particularly highly processed animal products, would, despite the slight reduction in NZ agricultural greenhouse gas (GHG) emissions, lead to significant improvements in health co-benefits by reducing rates of bowel cancer and heart disease ie. significant health sector and productivity outcomes.
- Improving indoor environments (eg. energy efficiency measures such as home insulation) can reduce illnesses associated with cold, damp housing (eg. childhood asthma and chest infections, and rheumatic fever, which are leading causes of hospital admissions, particularly for Māori and Pacific children).<sup>35</sup>

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<sup>31</sup> Marmot M, Friel S, Bell R, Houweling TA, Taylor S. Commission on Social Determinants of Health. Closing the gap in a generation: health equity through action on the social determinants of health. *Lancet*. 2008;372(9650):1661-9.

<http://www.sciencedirect.com/science/article/pii/S0140673608616906>; New Zealand College of Public Health Medicine / New Zealand Medical Association. NZCPHM Policy Statement on Health Equity (adopting the NZMA Position Statement on Health Equity 2011). Wellington: NZCPHM, 2016. [https://www.nzcphm.org.nz/media/58923/2016\\_11\\_17\\_nzcphm\\_health\\_equity\\_policy\\_statement.pdf](https://www.nzcphm.org.nz/media/58923/2016_11_17_nzcphm_health_equity_policy_statement.pdf)

<sup>32</sup> Wang H, Horton R. Tackling climate change: the greatest opportunity for global health. *Lancet*. 2015;386(10006):1798-9. <https://www.thelancet.com/climate-and-health/2015>

<sup>33</sup> Bennett H, Jones R, Keating G, Woodward A, Hales S, Metcalfe S. Health and equity impacts of climate change in Aotearoa-New Zealand, and health gains from climate action. *N Z Med J*. 2014;127(1406):16-31. <http://www.nzma.org.nz/journal/read-the-journal/all-issues/2010-2019/2014/vol-127-no-1406/6366>

<sup>34</sup> Watts N, Adger WN, Agnolucci P, Blackstock J, et al. Health and climate change: policy responses to protect public health. *Lancet* 2015. <http://www.thelancet.com/commissions/climate-change-2015>

<sup>35</sup> Howden-Chapman P, Matheson A, Viggers H et al. Retrofitting houses with insulation to reduce health inequalities: results of a clustered, randomised trial in a community setting. *BMJ*. 2007;334:460-464. <http://www.bmj.com/content/334/7591/460>; Howden-Chapman P, Pierse N, Nicholls S, Gillespie-Bennett J, Viggers H, et al. Effects of improved home heating on asthma in community dwelling children: randomised controlled trial. *BMJ*. 2008 Sep 23;337:a1411. <https://www.bmj.com/content/337/bmj.a1411.long>; Chapman R, Howden-Chapman P, Viggers H, et al. Retrofitting houses with insulation: a cost-benefit analysis of a randomised community trial. *J Epidemiol Community Health*. 2009;63:271-7; Wilkinson P, Smith KR, Davies M et al. Public health benefits of strategies to reduce

Further detail, with references, is available in **Attachment 2** 'Health benefits and savings of equitable climate mitigation in New Zealand'.

Well-designed climate action could contribute to significant reductions in the large burden of chronic disease and health inequity in NZ, leading to large cost savings for the health sector and society. This could offset a great deal of the early costs associated with climate change mitigation measures.

Further, government communication about climate change that focuses on win-wins and multi-solving for wellbeing and fairness is likely to build public will for the significant social and structural changes that are needed for NZ to meet its Paris obligations.

This involves proactively addressing climate change across NZ's main climate polluting sectors, both those included in the Paris agreement – particularly land use (agriculture), transport, industrial processes, housing and energy production – but also those not included eg. tourism.

### **Equity**

Outside the health sector, effective public policies are required that both lessen climate risk, and improve population health and health equity. These policies should include an effective carbon pricing system, while ensuring that financial costs do not adversely affect those on low incomes.

- The direct and indirect health effects of climate change will have a **greater impact** on those already suffering from disadvantage and poorer health in NZ – children, elderly, low-income, Māori and Pacific populations, and people living with disabilities, acute or chronic illnesses.
- Climate action that **prioritises health equity** has significant potential to reduce existing, and prevent future health inequities (e.g. retrofitting insulation to make homes warm and dry can reduce childhood asthma and chest infections – as leading causes of hospital admissions, particularly for Māori and Pacific children).
- Thus it is essential that planning prioritises those population groups most in need of health support in the face of climate change – Māori, Pacific, people on low incomes, migrants, rural people, children, and the elderly. Other events (eg. the Christchurch earthquakes, Hurricane Katrina, Hurricane Maria) have shown that planning is also required to avoid an inverse equity pattern in post-disaster responses and outcomes, including those resulting from extreme weather events.
- We must strive to **reduce inequalities** between Māori and other New Zealanders, and **value** the concepts of kaitiakitanga (guardianship), aroha (love/compassion), manaakitanga (caring), whakatipuranga (future generations), hauora (health and wellbeing), and tika (integrity/doing what's right).
- Overall, mitigation strategies must **contribute to achieving equity** by improving outcomes for Māori and other groups experiencing disadvantage and discrimination.

Financial costs of meeting our obligations under the Paris agreement and mitigating climate change threats can be **offset by the cost-savings of health co-benefits**. For example, health benefits from zero-carbon public and active transport, as part of changes to the built environment, result in increased physical activity, improved social connections, and more affordable and equitable access to schools, jobs and healthcare.<sup>36</sup>

Further detail on climate-health win-wins from healthy climate action is available in Attachment 2 'Health benefits and savings of equitable climate mitigation in New Zealand'.

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greenhouse-gas emissions: household energy. Lancet. 2009;374:1917-29. <http://www.thelancet.com/journals/lancet/article/PIIS0140-6736%2809%2961713-X/fulltext>

<sup>36</sup> New Zealand College of Public Health Medicine. NZCPHM Policy Statement on Physical Activity and Health. Wellington: NZCPHM, 2014. [https://www.nzcp hm.org.nz/media/81766/2014\\_11\\_28\\_physical\\_activity\\_and\\_health\\_policy\\_statement.pdf](https://www.nzcp hm.org.nz/media/81766/2014_11_28_physical_activity_and_health_policy_statement.pdf) section 'Co-benefits of good urban planning and transport systems'.

## Climate Change Commission

*11. The Government has proposed that the Climate Change Commission advises on and monitors New Zealand's progress towards its goals. Do you agree with these functions?*

*Answer:*

Yes, but it is critical that the Commission also sets NZ's Emissions Budgets – like the Reserve Bank independently sets NZ's Official Cash Rate – and that there is regular and transparent monitoring and review of progress, together with mechanisms for remedial action when plans are not properly implemented and/or emissions are over budget. This would be independent of influence or interference by the Government of the day. We believe that this model is one that provides both certainty and transparency but is also accepted as such by policy makers and the financial sector.

*Comment:*

The Commission can also advise how NZ stays within these budgets, how NZ can best adapt to climate change, and monitor progress on NZ's emissions reductions.

*12. What role do you think the Climate Change Commission should have in relation to the New Zealand Emissions Trading Scheme (NZ ETS)?*

*Answer:*

The Commission should advise the Government on ETS policy settings so that New Zealand emits within budget.

*Comment:*

The Commission must also identify the extent of regressive impacts from proposed ETS settings, and propose effective complementary policies which fairly compensate vulnerable households through "Whole of Government" policies and actions.

*13. The Government has proposed that Climate Change Commissioners need to have a range of essential and desirable expertise. Do you agree with the proposed expertise?*

*Answer:*

Yes, but equity and health expertise amongst Commissioners and staffing is needed too. It is also essential that the Commission is founded on partnership with tāngata whenua and upholds obligations under Te Tiriti o Waitangi. All Commissioners must have equity expertise as an essential qualification for this role.

*Comment:*

We propose a larger pool of Climate Commissioners so that Commissioners can be called in according to the focus area - for example, adaptation policy recommendations would require the oversight of Commissioners with Tiriti expertise, local government, community and adaptation experience.

In addition to climate science, we see mātauranga Māori; Te Tiriti O Waitangi, te reo me ona tikanga Māori and Māori interests as high priority essential expertise amongst Commissioners. Health expertise must also be included, and it is essential that all Commissioners have equity expertise, and that equity issues are not marginalised. Finally, we consider that expertise in achieving social change is also important.

It is important that vested interests are not part of the Commission, particularly those with a financial interest in maintaining the health-harming status quo. In health, we have seen too many

crucial policy processes derailed by those who have a financial stake in continuing to do harm, e.g. tobacco and alcohol.<sup>37,38,39</sup>

The Commissioners should be sector experts, and community representatives, with equity expertise, mana and a high level of standing in society.

## **Adapting to the impacts of climate change**

*14. Do you think the Zero Carbon Bill should cover adapting to climate change?*

*Answer:*

Yes

*Comment:*

Adaptation must be a separate advisory work stream, to avoid distracting from the Commission's top priority of climate change mitigation

*15. The Government has proposed a number of new functions to help us adapt to climate change. Do you agree with the proposed functions?*

*Answer:*

Yes

*Comment:*

We support the following adaptation provisions (which include the health sector):

- a national climate change risk assessment
- a national climate adaptation plan
- regular review of progress towards implementing the national adaptation plan
- an adaptation reporting plan

Mitigation and adaptation are often deeply interlinked - so often mitigation and adaptation can be addressed together in the same policy (eg. housing). But care must be taken in designing adaptation policies to ensure that climate-damaging emissions are not increased.

Adaptation must be dealt with by a separate working group, to avoid distracting from the top priority of mitigation.

A health adaptation plan must be put in place that covers both health sector adaptation and health-protecting adaptation in other sectors.

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<sup>37</sup> Diethelm P, McKee M. Denialism: what is it and how should scientists respond?. Eur J Public Health. 2009;19:2-4. <http://eurpub.oxfordjournals.org/cgi/content/full/19/1/2>

<sup>38</sup> Assunta M, Chapman S. "The world's most hostile environment": how the tobacco industry circumvented Singapore's advertising ban. Tob Control. 2004;13 Suppl 2:ii51-7. [https://tobaccocontrol.bmj.com/content/13/suppl\\_2/ii51](https://tobaccocontrol.bmj.com/content/13/suppl_2/ii51)

<sup>39</sup> Babor T, Hall W, Humphreys K, Miller P, Petry N, West R. Who is responsible for the public's health? The role of the alcohol industry in the WHO global strategy to reduce the harmful use of alcohol. Addiction. 2013;108(12):2045-7. <https://onlinelibrary.wiley.com/doi/abs/10.1111/add.12368>

16. *Should we explore setting up a targeted adaptation reporting power that could see some organisations share information on their exposure to climate change risks?*

*Answer:*

Yes

*Comment:*

A targeted adaptation reporting power could start with voluntary reporting in the first year, and require compulsory reporting in subsequent years.

## Conclusion

In conclusion, OraTaiao welcomes the opportunity to submit on the Zero Carbon Bill. We call for a Zero Carbon Act that's fast, fair, firm, and founded on Te Tiriti o Waitangi, with health at its heart.

The science is clear that the longer the delay until global emissions peak – and the slower the initial downward trajectory of global emissions – the faster New Zealand will need to act to reach net zero emissions. “Adequate” ambition is more than just the deadline for net zero NZ. It is also NZ's net emissions declining now (preferably from 2018/19, to support global peaking by 2020), and continuing to drive a decisive decline, despite exotic forest harvesting in early 2020s. NZ needs to focus on sharp emissions decline over the next few years, as well as determining our ultimate target a scant few decades hence. This makes the role of short-lived gases like methane more important.

This Bill is named for carbon but, in reality, it is about health and fairness. The latest reported draft of the Intergovernmental Panel on Climate Change's (IPCC) Special Report on Global Warming of 1.5°C strengthens growing certainty that 2°C of warming is a dangerous step for humanity, and for the health and wellbeing of New Zealanders.

Measures that prevent further warming also have poorly recognised benefits for health. A warming climate will impact most severely on those in our communities least able to adapt and manage: Māori and Pacifica; low-income households; children and the elderly. However, measures that decrease New Zealand's contribution to global warming have the potential to directly benefit the health of all New Zealanders. This Act may be the most important piece of health legislation for our generation and for generations to come.

Well-designed climate action can multi-solve for better health and fairness, with tangible gains that can be measured and communicated in the short- as well as the long-term. Energy efficient homes can be warmer, drier and directly improve health; low carbon transport can clear the air and encourage more activity improving health; and shifting towards a plant-based food system can reduce cancer and fix our freshwater crisis. The Zero Carbon Bill can and should multi-solve for health and fairness.

Healthy climate law is fast, fair, firm, and founded on te Tiriti . This is about all of us working together for fairness, justice, better health and wellbeing, and economic resilience for everyone.

## Attachments

1. Setting ambitious greenhouse gas emissions targets for New Zealand – the case for international fairness/equity
2. Health benefits and savings of equitable climate mitigation in New Zealand