Zero Carbon Bill or Zero Impact Bill?
New Zealand's Climate Change Mitigation Law and Agriculture

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Introduction

An estimated 170,000 people around New Zealand took part in the Strike for Climate Action last Friday, 27 September 2019.[1] The New Zealand cohort were part of an estimated six million people around the world, who took to the streets to demand urgent action on the escalating climate change crisis.[2] Protestors echo the cry of climate strike instigator, Greta Thunberg:[3]

> Solving the climate crisis is the greatest and most complex challenge that homo sapiens have ever faced. The main solution, however, is so simple that even a small child can understand it; We have to stop our emissions of greenhouse gases.
> And either we do that or we don't. … We can create transformational action that will safeguard the living conditions for future generations. Or we can continue with our business as usual, and fail.

There is a widespread and dangerous myopia surrounding climate change mitigation policy that must first be recognised, and then swiftly overcome. Despite the rapid worsening of our ecological emergency, a majority of governments and individuals struggle to process climate change as an imminent threat. The world is now into its third decade of legal thinking about climate change mitigation, and so far this has been almost completely ineffectual.

New Zealand's overall greenhouse gas contribution may be small, but our emissions are among the highest per person in the world. The agricultural sector, in particular the dairy, lamb and beef industries, are responsible for nearly half of New Zealand's total emissions.[4] In spite of this, policy attempts to mitigate on-farm emissions have been met with strong opposition and consequently have been weak to non-existent. Agricultural emissions have

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[1] Georgia Forrester "School climate strike: Adults join with kids in huge day of national protest" (27 September 2019) Stuff <https://www.stuff.co.nz/environment/climate-news/116156233/school-climate-strike-adults-join-with-kids-in-huge-day-of-national-protest>.

[2] Matthew Taylor, Jonathan Watts and John Bartlett "Climate crisis: 6 million people join latest wave of global protests" (27 September 2019) *The Guardian* (online ed, London, 27 September 2019).

[3] Greta Thunberg "The 1975" (An essay read in The 1975 single, released 24 July 2019).

[4] The Productivity Commission *Low-emissions Economy* (August 2018) at 2.

been left out from the New Zealand Emissions Trading Scheme (NZ ETS), and methane targets are to have special treatment under the proposed Zero Carbon legislation.

This dissertation assesses how climate change laws and mitigation mechanisms have lacked the strength to make a durable impact in New Zealand. It will provide an analysis of the proposed Zero Carbon legislation and holds that without further strengthening, this legislation is likely to have a similarly minimal impact. Particular focus will be given to the agriculture sector which is a crucial component to both ineffectual policies past and the transition to a low-emissions future.

Chapter I assesses the specific relationship that New Zealand has with climate change emissions. The science behind why agricultural practices are such an issue is explained, as is the responsibility on New Zealand to take action. Once the critical need to mitigate emissions is established, Chapter II then looks to the how the law has attempted to deal with mitigation so far, and where it has gone wrong. Next, due to the prominent controversy surrounding agriculture in New Zealand, Chapter III outlines the common arguments made in protest against any mitigation stringency. Conclusions drawn from these chapters illustrate that New Zealand is in need of an ambitious, inclusive legal framework, that provides certainty and accountability.

On 8 May 2019, the Climate Change Response (Zero Carbon) Amendment Bill 2019 (Zero Carbon Bill) was introduced.[5] Chapter IV sets out and examines this proposed mitigation tool and looks to the United Kingdom's Climate Change legislation in comparison. Chapter V then addresses ways in which New Zealand's Zero Carbon legislation ought to be strengthened. If it is to truly be the game-changing climate legislation that we so desperately need, brave changes must be incorporated.

[5] Climate Change Response (Zero Carbon) Amendment Bill 2019 (136-1) (Zero Carbon Bill).

Chapter I The Science

A Climate Change

The potential impacts of climate change are far-reaching and catastrophic. The seriousness, and gravitas of the threat of climate change is well-articulated by the female contingent of our New Zealand Supreme Court, relating these potential impacts to our basic human rights:[6]

> Various aspects of human security are implicated by climate change. This in turn implicates human rights. The impact of climate change on ecosystem engages the rights to water and sanitation, to health, to life, to food, to an adequate standard of living, to housing, to property, and even to self-determination. The impact of climate change on physical infrastructure and human settlements engages similar rights, with people who live in informal settlements and hazardous areas, as well as people vulnerable because of their age, income, or disability, more affected. People who live in rural areas are also likely to be adversely affected, which has implications for human health, livelihoods, incomes and migration patterns. Climate change will also exacerbate other stressors which threaten human rights, such as political instability, and increase in prices of food, water and energy. Moreover, poverty and political instability undermine the ability of individuals and communities to adapt to climate change.

The Intergovernmental Panel on Climate Change (IPCC) is a scientific body established in 1988 under the United Nations, and the World Meteorological Organisation. The Panel assesses and publishes reports on the latest climate change information, and these are widely deemed the most comprehensive and accepted assessments of scientific knowledge. This science has been aptly accepted by the New Zealand Government and our interim Climate Change Committee.[7] In 2018 the IPCC released a special report on the 1.5°C target; urging that humanity need avoid exceeding this level of warming.[8] The report submits that should

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[6] Hon Chief Justice Helen Winkelmann, Hon Justice Glazebrook and Hon Justice Ellen France "Climate Change and the Law" (Given at the Asia Pacific Judicial Colloquium, held in Singapore, 28-30 May 2019) at [20].

[7] See Interim Climate Change Committee (ICCC) *Action on Agricultural Emissions: Evidence, Analysis and Recommendations* (30 April 2019).

[8] Intergovernmental Panel on Climate Change (IPCC) *Special Report; Global Warming of 1.5°C* (8 October 2018).

emissions continue to increase at the current rate, global temperature warming is likely to reach 1.5°C between 2030 and 2052.[9]

It is crucial to note, that because the IPCC is a peer-reviewed UN body, it represents a conservative consensus of the relevant scientific community. For a conservative body, 1.5°C is an incredibly ambitious target. According to a recent NGO report, New Zealand's emissions are currently on track for a "3 degree world".[10]

Evidence of the warming of the climate system is unequivocal and, since the mid-20th century, many of the observed changes are unprecedented over decades to millennia. It is extremely likely that human influence has been the dominant cause of this observed warming, and it is now imperative that we mitigate any further warming. The global nature of climate change requires the widest possible cooperation by all countries; if individual states simply advance their own interests independently, effective mitigation cannot be achieved, and emissions will reach irreversible levels.[11]

B Climate Change and New Zealand

Though New Zealand is a small country making up just 0.16 per cent of global emissions, the 'small emitting' countries calculated together, make up about 30 per cent of total global emissions.[12] In 2012, New Zealand's gross emissions per person were the 5th highest among the 41 Annex 1 countries at 17.2 tonnes (in carbon dioxide equivalent) per person.[13] These emissions per person statistics are disproportionately high for our small population size,

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[9] IPCC *Summary for Policymakers of IPCC Special Report on Global Warming of 1.5°C* (8 October 2018) at 4.

[10] Climate Action Tracker *Climate crisis demands more government action as emissions rise* (June 2019) <https://climateactiontracker.org>. Climate Action Tracker is an NGO conducting independent scientific analysis of countries' carbon emissions.

[11] IPCC *AR5 Climate Change 2014 Synthesis Report Summary for Policymakers* (November 2014) at 17. This Synthesis Report is based on the reports of the three Working Groups of the IPCC including relevant Special Reports. It provides an integrated view of climate change as the final part of the IPCC's Fifth Assessment Report (AR5).

[12] The Productivity Commission, above n 4, at 2.

[13] Catherine Leining and Suzi Kerr "Lessons Learned from the New Zealand Emissions Trading Scheme" (Motu Working Paper 16-06, Motu Economic and Public Policy Research, April 2016) at 11.

particularly due to the non-carbon dioxide emissions from the agriculture sector.[14] Greenhouse gas emissions have risen significantly in the past few decades, a rise that can be attributed to steady population growth, economic growth resulting in larger than anticipated transport emissions, high levels of deforestation, a significant growth in the number of ruminant livestock, and insufficient planting of new forest.[15] Limiting climate change in time to avoid irreversible damage to the earth, requires timely, substantial and sustained attention to be given to these areas.

Despite New Zealand's overall physical contribution being minimal, our political responsibility to address emissions mitigation is also greater than the 0.16 percentage suggests. Developed countries are currently emitting, and have historically emitted, the largest share of global emissions. As an economically developed country, New Zealand therefore has a moral responsibility to be among those leading the way.[16] Any thinking to the contrary exemplifies a 'tragedy of the commons' situation, where individuals acting in their own interests, damage the resources of wider society.[17] Regarding the climate crisis, the 'commons' is the shared atmosphere upon which life is dependent.[18]

The devastating results of climate change are already being observed around the world, and they are not evenly distributed. In countries at all levels of development, disadvantaged people and communities are generally those the most at risk.[19] New Zealand has acknowledged that developed countries should take the lead in combating climate change.[20] In accordance with their responsibilities, respective capabilities, and social and economic

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[14] Alexander Gillespie, *Burning Issues: The Failure of New Zealand Resins to Climate Change* (The Dunmore Press, Palmerston North, 1997) at 28.

[15] Jonathan Boston "The Nature of the Problem and the Implications for New Zealand" in Alistair Cameron (ed) *Climate Change Law and Policy in New Zealand* (LexisNexis NZ Ltd, Wellington, 2011) 87 at 100.

[16] Gillespie, above n 14, at 28.

[17] The Productivity Commission, above n 4, at 2.

[18] At 2.

[19] IPCC *Climate Change 2014; Impacts, Adaptation, and Vulnerability Summary for Policymakers* (January 2014). Working group 11 contribution to AR5 Report.

[20] Article 3(1).

conditions, all countries need to participate in an effective and appropriate response to climate change.[21] New Zealand's small size does not, and can not, justify inaction.

C Agricultural Emissions

New Zealand's emissions profile is rare and complex in comparison to the other Annex 1 countries in that a predominant number of our reported greenhouse gas emissions derive from agriculture.[22] The energy sector in New Zealand is already heavily reliant on renewables and accounts for only 40 per cent of emissions.[23] The two main drivers of on-farm emissions are methane and nitrous oxide, accounting for 43 per cent and 11 per cent of gross emissions respectively.[24]

Methane, or CH_4, is a naturally occurring greenhouse gas produced when certain bacteria break down organic materials without air.[25] Near three quarters of the reported agricultural emissions in New Zealand come in the form of methane from ruminant animals.[26] Ruminant animals are those which have a digestion process that uses microbes to break down and extract nutrients from grass and other fibrous plants for example cows, sheep and deer.[27] Methane is produced in their stomachs as part of this complex digestion process, and emerges into the atmosphere when the animals burp or break wind.[28] Human activity has significantly contributed to the amount of methane being emitted into the atmosphere, through industrialised farming and increased numbers of livestock.

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[21] United Nations Framework on Climate Change Convention (UNFCCC) 1771 UNTS 107 (opened for signatures 4 June 1992, entered into force 21 March 1994), Preamble.

[22] ICCC, above n 7, at 19.

[23] Parliamentary Commissioner for the Environment *A Zero Carbon Act for New Zealand: Revisiting Stepping stones to Paris and beyond* (March 2018) at 15.

[24] At 16.

[25] Gillespie, above n 14, at 23.

[26] ICCC, above n 7, at 19.

[27] Gillespie, above n 14, at 23.

[28] At 23.

One tonne of methane emitted today will stay in the atmosphere for about a decade. Although this is a significant amount of time, methane has a shorter residence time in the atmosphere than carbon dioxide and nitrous oxide, and is therefore deemed a 'short-lived gas'.[29] By way of comparison, emissions from long-lived greenhouse gases, can trap heat in the atmosphere for thousands of years. Methane differs in not having a cumulative effect; if it is emitted at a constant rate, each new emission should theoretically replace a previous emission that is in the process of decaying.[30] It is therefore agreed that methane concentration can be stabilised, and so methane emissions are not required to drop to *zero* to prevent irreversible warming.[31]

The difference in lifespan however, should not be used as a tool to downplay nor disregard the importance of methane emissions as and when it suits the political environment. Methane emissions may not need to reach zero to be sustainable, but they are certainly not sustainable at present. In fact, methane is a more potent warming agent than carbon dioxide, and it is methane emissions that will be causing the most warming over the next few decades.[32] Furthermore, methane is known to oxidise through chemical processes, giving rise to carbon dioxide as a product.[33] Therefore the emission of methane can have far-reaching impacts beyond the residence of the gas in the atmosphere. If we continue to emit methane at, or near to, the current rate, global warming will be significantly more intense than it otherwise would be.[34] This additional warming in the short-term can lead to further warming in the long-term due to positive climate feedbacks.[35] It is the *combined* impact of all greenhouse gases contributing to the dangerous levels of warming that the earth is experiencing. Therefore, a prompt reduction of all three gases is of great importance.

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[29] Generation Zero "Frequently Asked Questions - Zero Carbon Act" <https://zerocarbonact.nz/faq/>.

[30] ICCC, above n 7, at 25.

[31] Generation Zero "Frequently Asked Questions - Zero Carbon Act", above n 29.

[32] ICCC, above n 7, at 24.

[33] Oliver Boucher, Pierre Friedlingstein, Bill Collins and Keith P Shine "The indirect global warming potential and global temperature change potential due to methane oxidation" (2009) 4(4) Environmental Research Letters 044007 at 1.

[34] At 25.

[35] Parliamentary Commissioner for the Environment, above n 23, at 16.

Nitrous oxide, or N_2O emissions, derive from the amount of nitrogen added to the land through urine, dung and synthetic fertilisers. Since 1990, there has been a seven-fold increase in nitrogen fertiliser use in New Zealand.[36] Some of the nitrogen in soil is taken up by plants as they grow, some is lost through leaching,[37] and a fixed proportion is emitted as nitrous oxide.[38] Nitrous oxide is a 'long-lived gas', with a lifetime of more than a century. It is extremely powerful, being approximately 300 times more potent than carbon dioxide.[39] The slow rate of breakdown of long-lived greenhouse gases, means that every emission has a cumulative effect. In other words, every emission of nitrous oxide, adds to the overall concentration of nitrous oxide in the atmosphere.[40] Reducing the emissions will therefore not be enough to cease the detrimental contribution of these gases to global warming. Nitrous oxide and other long-lived greenhouse gases must be reduced to zero.[41] The use of synthetic fertilisers on livestock, arable and horticultural farms is a significant and increasing contributor to New Zealand's emissions situation, and must be limited.[42]

Fortunately in New Zealand, sceptics of climate science do not seem to be a political threat. However the subsequent failure to respond to these well-established issues makes the situation almost more concerning. Climate change mitigation is not a new issue for the Government, and yet carbon dioxide, methane and nitrous oxide emissions all remain on an upward trend in New Zealand.

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[36] ICCC, above n 7, at 28.

[37] At 32.

[38] Leaching is where something is drained away from soil usually by rainfall.

[39] Parliamentary Commissioner for the Environment, above n 23, at 16.

[40] ICCC, above n 7, at 24.

[41] Parliamentary Commissioner for the Environment, above n 23, at 16.

[42] At 16.

Chapter II *Legal Mechanisms to Date*

> *"We must admit that we are losing this battle. We have to acknowledge that the older generations have failed. All political movements in their present form have failed. But homo sapiens have not yet failed. Yes, we are failing, but there is still time to turn everything around. We can still fix this. We still have everything in our own hands. But unless we recognise the overall failures of our current systems, we most probably don't stand a chance."*
>
> *Greta Thunberg (2019)*[43]

A The UNFCCC

The first international agreement to represent a collective response to climate change was the United Nations Framework Convention on Climate Change (UNFCCC).[44] The UNFCCC's ultimate objective is to achieve: "stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system".[45] The Convention sets out guiding principles and establishes commitments that apply specifically to developed countries. Though effective in creating a degree of transparency by requiring countries to publicly report on their emissions, the Convention is deliberately a framework, and as such it does not contain any binding emissions reductions and there is no compliance mechanism.

In signing the UNFCCC, New Zealand joined other developed nations, in agreeing to various non-binding objectives.[46] In Article 4 for example, Parties are required to recognise the need to return emissions "to earlier levels", but no date is given.[47] Further ambiguity can be found in the UNFCCC where it acknowledges the need to take into account the differences between Parties. Developed countries, have then used their 'reliance on industry' to say that they cannot make reductions.[48] By the late 1990s it was clear that the mere encouragements in the

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[43] Greta Thunberg above n 3.

[44] UNFCCC, above n 21.

[45] Article 2.

[46] Ceri Warnock "Global Atmospheric Pollution: Climate Change and Ozone" in Peter Salmon and David Grinlinton (eds) *Environmental Law in New Zealand* (2nd ed, Thomson Reuters, Wellington, 2018) 837 at 842.

[47] UNFCCC, above n 21, art 4(2).

[48] Article 4(2).

UNFCCC were not alone enough to have any substantial effect on emissions levels.[49] Subsequent clarity for nation states was necessary, and negotiations lead to the development of the Kyoto Protocol.

B The Kyoto Protocol

Of the 197 parties to the UNFCCC, 192 became parties to the Kyoto Protocol as a way to fix targets and incentivise emissions reductions through a cap and trade scheme.[50] The Kyoto Protocol contains binding quantified emission limitations and reductions obligations (QELROs) for developed nations, and provides a framework for international emissions trading. It is important to note that as the Kyoto Protocol was only intended to be the first part of a longer process; its targets were not very ambitious. The first compliance period was 2008-2012, and technically most developed countries, including New Zealand, met their targets for this.[51] Despite this seeming positive, the Kyoto Protocol was not an effective global response to climate change.

New Zealand's target was to return to its 1990 emissions levels, and we met our commitment through a combination of domestic emissions reductions, carbon removal by forests and international carbon trading.[52] In reality however, by 2012, our emissions had increased and were significantly above the amount that we were allowed.[53] This illustrates a key weakness of the Kyoto Protocol; there was no real pressure for developed countries to change from business as usual. Instead, there were various ways, or loopholes, that meant nations could meet their targets without making reductions domestically.

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[49] Ceri Warnock "Global Atmospheric Pollution: Climate Change and Ozone", above n 46, at 842.

[50] Kyoto Protocol to the United Nations Framework Convention on Climate Change 2303 UNTS 162 (opened for signatures 16 March 1998, entered into force 16 February 2005).

[51] *Thomson v Minister for Climate Change* [2017] NZHC 733 (2 November 2017) at [30].

[52] At [28].

[53] Ministry for the Environment "New Zealand's final position under the Kyoto Protocol Ministry for the Environment" <https://www.mfe.govt.nz/climate-change/climate-change-and-government/emissions-reduction-targets/reporting-our-targets/new-1>.

First, QELRO operated as a measure of net emissions, so states could offset emissions by the amount sequestered in qualifying land use change and forestry practices.[54] Second, under the rationale that that it does not matter where in the world emissions reductions take place, the Protocol permitted flexible mechanisms of international emissions trading. This meant that where a nation's net emissions were to exceed its assigned amount, that government were able to acquire additional Kyoto units from overseas to cover the shortfall.[55] Both of these methods are concerning regarding credibility, and in that they do not tackle the emissions problem directly. Third, the Kyoto Protocol gave its signatories a significant amount of autonomy regarding how to meet their targets, and therefore any combination of gases could be addressed to meet their QELRO. For example, if New Zealand found it difficult to reduce methane, it could focus on carbon dioxide instead.[56] This allowed for the avoidance of addressing certain emitters, and any postponement of widespread action allows for the problem to intensify over time. Delay in mitigating climate change is highly likely to result in higher mitigation costs and fewer mitigation options.

It has been argued that the Kyoto Protocol was flawed for excluding developing countries. In fact, commitments taken under the agreement covered less than 12 per cent of global emissions.[57] Most significantly, it is further critiqued in prioritising stringency over participation.[58] The US never ratified the Protocol, and Canada withdrew in 2011, and overall not enough developed countries participated. It is further criticised for excluding developing countries. The second commitment period from 2013-2020, as set by the Doha Amendment, was ratified by New Zealand but it had insufficient ratifications for the treaty to come into force. Participation is crucial to the effectiveness and status of international agreements. By way of contrast, when the Paris Agreement[59] entered into force in November 2016, it

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[54] Ceri Warnock "Global Atmospheric Pollution: Climate Change and Ozone", above n 46, at 842.

[55] At 842.

[56] At 842. This was based off the basket approach that worked successfully in the Montreal Protocol.

[57] Ministry for the Environment *New Zealand's Climate Change Target* (Discussion Document, May 2015) at 6.

[58] See *Thomson v Minister for Climate Change,* n 51, at [30].

[59] Paris Agreement (opened for signatures 22 April 2016, entered into force 4 November 2016).

accounted for an estimated 55 per cent of the total global greenhouse gas emissions.[60] The Paris Agreement is more flexible than the Kyoto Protocol, and this greater flexibility enabled greater agreement.

C The Paris Agreement

The Paris Agreement is a collection of commitments that builds on the UNFCCC and aims to address mitigation, adaptation, finance, and technology transfer. New Zealand is among 185 countries to have ratified the Paris Agreement. In doing so each country has committed to keep the increase in global average temperature well below 2°C above pre-industrial levels, while pursuing efforts to limit it to 1.5°C.[61] The Paris Agreement emphasises that developed countries should continue to take the lead by undertaking economy-wide absolute emissions targets, but it then leaves these matters to be nationally determined.[62] Parties are to put forward their own Nationally Determined Contributions (NDCs) and these contributions should represent the "highest possible ambition" and be updated every five years.[63] In order to enhance transparency and political accountability, all Parties are required to report regularly on both their emissions and their mitigation efforts.[64] The broad diversity of national interests and circumstances made the reaching of the Paris Agreement a considerable achievement, and a turning point in international climate change law.[65]

The Paris Agreement marked a transition in global cooperation away from a top-down binding regime focused on developed country mitigation, to a bottom-up and substantively non-binding approach.[66] Justice Mallon in *Thomson v Minister for Climate Change* examines

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[60] United Nations Climate Change "Paris Agreement - Status of Ratification" (2018) <https://unfccc.int/process/the-paris-agreement/status-of-ratification>.

[61] Paris Agreement, above n 59, art 2.

[62] Article 4.

[63] Article 4(3).

[64] Ceri Warnock "Global Atmospheric Pollution: Climate Change and Ozone", above n 46, at 848.

[65] Meinhard Doelle "The Paris Agreement: Historic Breakthrough or High Stakes Experiment?" (2015) 6(1-2) Climate Law 1 at 1.

[66] At 1.

New Zealand's commitments under the Paris Agreement.[67] She notes the great flexibility in the Paris Agreement in that it does not stipulate any specific criteria about how a country is to set its targets.[68] Furthermore, Mallon J emphasises that a country's NDC is not binding at international law.[69]

New Zealand's current NDC target is to reduce greenhouse gas emissions to 30 per cent below 2005 levels by 2030 (although this target is set to increase under the upcoming Zero Carbon legislation).[70] Our most recent National Communication under the UNFCCC, states that the New Zealand Emissions Trading Scheme is the country's "principal policy tool underpinning New Zealand's domestic emissions reduction action".[71] Unfortunately, New Zealand is not on track to even make its 2030 target under the current framework.[72]

D The New Zealand Emissions Trading Scheme (NZ ETS)

To ratify the UNFCCC and its Kyoto Protocol, the Climate Change Response Act 2002 was enacted. The Climate Change Response (Emissions Trading) Amendment Act 2008 then enacted the NZ ETS, and set out its statutory framework.[73] The NZ ETS is a flexible cap and trade scheme.[74] It prices emissions from electricity and gas, transport, industry, waste, and forestry.[75] Being the main policy tool for emissions reductions, the scheme has proved extremely disappointing. It was originally designed to include all sectors and all gases, but

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[67] *Thomson v Minister for Climate Change,* above n 51. This was a 2017 judicial review case where a law student challenged the Minister for Climate Change on their efforts to meeting New Zealand's Paris Commitments.

[68] At [139].

[69] At [38].

[70] New Zealand *Submission under the Paris Agreement; New Zealand's Nationally Determined Contribution* (4 October 2016).

[71] Ministry for the Environment *New Zealand's Seventh National Communication - Fulfilling reporting requirements under the UNFCCC and the Kyoto Protocol* (December 2017) at 21.

[72] *Thomson v Minister for Climate Change,* above n 51, at [70].

[73] Climate Change Response Act 2008, Part 4.

[74] Ceri Warnock "Global Atmospheric Pollution: Climate Change and Ozone", above n 46, at 850.

[75] Climate Change Response Act, Part 4 and Schedule 3.

over a decade after its creation, agricultural emissions are yet to be priced. Additionally, the effect on the sectors that are included has been minimal, largely due to low-emissions prices.[76]

Emissions prices have been low, mainly as a result of the NZ ETS allowing an unlimited purchase of international units.[77] Not only have the integrity of such units often been questionable, but as with Kyoto, it allows for the avoidance of direct domestic reductions. The Ministry for the Environment are attempting to address this issue and have proposed improvements to the NZ ETS.[78] In 2019 the price 'recovered' to $25 per tonne of carbon dioxide equivalent.[79] However, this remains far short of the price needed to drive transformational change consistent with the Paris temperature target. According to the High-Level Commission on Carbon Prices, supported by the World Bank, the prices need to be an estimated USD 40–80 per tonne by 2020 and USD 50–100 per tonne by 2030.[80]

E Conclusions Drawn on Past Inadequacies

The Productivity Commission in 2018 assessed the existing climate change regulatory framework and concluded that it is not underpinned by a credible commitment to a domestic low-emissions transition. In its place:[81]

> New Zealand needs a reformed statutory framework that requires long-term thinking, promotes policy stability and provides signalling. … A new architecture for New Zealand's climate change legislation should be built on principles of transparency and accountability, with a backbone based on mandatory processes.

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[76] ICCC, above n 7, at 16.

[77] At 16.

[78] Ministry for the Environment "Proposed improvements to the NZ ETS" <https://www.mfe.govt.nz/climate-change/proposed-improvements-nz-ets>.

[79] ICCC, above n 7, at 16.

[80] The World Bank "Carbon Pricing" (1 December 2017) <https://www.worldbank.org/en/results/2017/12/01/carbon-pricing>.

[81] The Productivity Commission, above n 4, at 204.

The NZ ETS has been ineffectual, and the forthcoming Zero Carbon legislation must address and close the loopholes that have caused this lack of impact. It must include agricultural emissions, limit overseas emissions trading and incentivise New Zealand to reduce emissions by including strong accountability mechanisms. New Zealand needs a clear framework that sets binding targets, effectively signals policy intentions and provides a credible commitment to such intentions.

The flexibility under the Paris Agreement is based on the idea that self-imposed, voluntary commitments are more likely to be met than those imposed by the global community.[82] While this managerial, non-binding approach attracted participation, it is important to note the differences between the international and domestic contexts when analysing climate change law. The Kyoto approach proved elusive and unpopular at an international level, but there are effective mechanisms to implement a top-down command and control approach in a domestic context, that do not exist in the international context.[83] New Zealand should note the aforementioned weaknesses of the Kyoto Protocol, but not shy away from codifying binding targets and limiting ambiguity in its legislative response to the Paris Agreement.

[82] Doelle, above n 65, at 2.

[83] At 3.

Chapter III *The New Zealand Response*

In order to establish the most effective way forward for our climate change law, it is important to look at how the agriculture sector in New Zealand generally responds. With almost half of our emissions coming from agriculture, and the majority of our electricity being renewable, it is challenging for New Zealand to find cost-effective options for cutting emissions that do not rock the political boat too dangerously. In the words of Sir Geoffrey Palmer, time and time again, "[p]olicymakers have discounted the future in favour of the present, not wishing to face up to the real and adverse political consequences that effective action will require."[84]

The Government's policy response to agriculture so far, has to been to focus on funding research to develop technological solutions.[85] Agricultural emissions are a particularly contentious topic in New Zealand, and there are certain arguments that are repeatedly raised in opposition to their inclusion in mitigation laws and more demanding policies. Such arguments have been raised in public submissions, in the media and are used by opposition parties in Parliament. That environmental issues and policy discussions surrounding water, fertiliser, run-off and now the NZ ETS all specifically target farmers has not gone unnoticed. This is not coincidental, but rather it reflects the fact that that our industrialised animal agriculture practices are largely unsustainable.

An interim Climate Change Committee (ICCC) was established in April 2018 in New Zealand, pre-empting the Independent Climate Change Commission that the Zero Carbon Act proposes to establish. The ICCC presented a report to the Minister for Climate Change in April 2019 titled *Action on agricultural emissions: Evidence, analysis and recommendations*. The report was written with the Zero Carbon legislation in mind, reflects on many of the common controversies, and gives a strong indication as to how future agriculture policy is going to evolve.

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[84] Sir Geoffrey Palmer "Can Judges Make a Difference? The Scope for Judicial Decisions on Climate Change in New Zealand Domestic Law" (2018) 49 VUWLR 191 at 193.

[85] Ceri Warnock "Global Atmospheric Pollution: Climate Change and Ozone", above n 46, at 863.

A Efficiency and the Risk of Emissions Leakage

New Zealand farmers have proved adaptive and efficient many times throughout our history. Over the last 25 years in particular, New Zealand farmers have noticeably improved the efficiency of their farming operations. Due to selective breeding, animals are growing faster, producing more milk and having more offspring.[86] Farmers have been able to make optimal use of these changes with improved pasture and feed management, improved animal health, and a more effective use of fertiliser.[87] These changes have resulted in the intensity of agriculture emissions intensity falling by about 20 per cent over the last 25 years. Alas, this reduction in emissions *intensity* has not seen a reduction of our *total* emissions. On the contrary, New Zealand's agricultural emissions have increased 13.5 per cent since 1990 with emissions from the dairy sector alone more than doubling over that period.[88] Emissions per kilogram of milk may have decreased, but the dairy sector is now producing significantly more milk. This 13.5 per cent is out of the total 23 per cent that New Zealand's gross emissions increased after 1990, showing once again how significant the agriculture sector is to our greenhouse gas crisis.

New Zealand farming practices being renowned for their efficiency has given rise to the loud concern regarding 'emissions leakage'. Emissions leakage is the idea that if fewer livestock products are exported from New Zealand, agricultural production will be pushed overseas to less efficient countries and subsequently result in higher global emissions. In other words, farmers and processors have submitted that a forced reduction in New Zealand farming production, will result in an increase in overseas output in its place.[89] If overseas production grows, the argument goes that so too will overseas greenhouse gas emissions.[90]

In the context of dairy, the ICCC concluded that if New Zealand dairy exports were to decrease, the regions that could increase dairy production are mostly in Western Europe or

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[86] ICCC, above n 7, at 28.

[87] At 28.

[88] At 28.

[89] At 82.

[90] At 82.

North America. The report states: "These regions also have highly efficient, export-oriented production systems with emissions footprints of dairy production similar to ours."[91] Furthermore, the agricultural sectors in these areas are subject to stringent environmental regulations themselves, including economy-wide emissions caps. If their agricultural emissions were to increase in place of New Zealand's, other sectors of their economies would be required to reduce their emissions to counter this. The risk of emissions leakage for dairy therefore appears to be of little concern at present.[92]

The risk of emissions leakage for meat looks to be more significant, because New Zealand's competitors in the meat industry are not all developed countries, and do not have equivalent emissions targets and environmental regulations in place. The shift over the last few decades from beef and lamb farming to dairying in New Zealand, did show however, that a reduction in greenhouse gas emissions does not necessarily align with a reduction in product volume, nor with profits. Lamb production reduced by a mere eight per cent despite a 50 per cent reduction in the number of sheep. Moreover, due to more integration between the beef and dairy sectors, beef production increased by 46 per cent, despite a 35 per cent reduction in the number of beef cattle.[93] Correspondingly, if New Zealand producers increase their efforts to differentiate Kiwi products based on quality, environmental credentials and provenance, this leakage risk could be limited.[94]

In summary of this argument however, it must be pointed out that at both a legal and moral level, one party's bad behaviour cannot be justified by highlighting the lower standards of another. The concern of emissions leakage is thus a poor argument. New Zealand should stand by its goal of being a world leader in climate action, and not use the inadequacies of policies from other countries as an excuse for inaction. It should also be noted that the rise of synthetic and plant-based proteins, means that potential changes in consumer demand may more quickly influence product volumes than domestic climate change policy anyway.[95]

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[91] ICCC, above n 7, at 82.

[92] At 82.

[93] At 28.

[94] At 82.

[95] At 82.

B Including Agricultural Emissions in the NZ ETS

As the country's largest contributor of total emissions, the agricultural sector needs to be held accountable under the NZ ETS. One reason for this is so that taxpayers can cease subsidising agricultural emissions.[96] By continuing to exclude agriculture from the Scheme, the burden of meeting targets falls disproportionately on other sectors of the economy.[97] It was also argued in the past, that the early inclusion of agriculture into the NZ ETS was necessary to prevent further dairy conversion of land.[98] We thus have an example of a mitigation measure being delayed, and an increased pressure on future generations resulting; dairy conversion has been massive, and dairy emissions have doubled since 1990 levels.[99] Farmers on the other hand, have argued against NZ ETS inclusions, submitting that technology is not sufficiently advanced enough to enable them to mitigate their emissions without onerous costs to the industry.[100]

Whether or not to include agriculture in the NZ ETS has always been a contentious political issue. In 2019, amendments to the NZ ETS have been recommended by the ICCC, and a 'historical consensus' has been met to begin including agricultural emissions.[101] The Government has stated that it will assist farmers and rural communities by providing 95 per cent free allocation, to help manage the social and employment impacts of emissions pricing.[102] The Government has also said that it intends to reduce this level of allocation through a well-signalled phase-out over time.[103] The ICCC found that it will take about five

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[96] Allison Arthur-Young "Climate Change" in Derek Nolan (ed) *Environmental and Resource Management Law* (6th ed, LexisNexis NZ Ltd, Wellington, 2018) at 17.27.

[97] ICCC, above n 7, at 6.

[98] Arthur-Young, above n 96 at 17.27.

[99] ICCC, above n 7, at 28.

[100] Arthur-Young, above n 96 at 17.27.

[101] Hon Damien O'Connor and Jon James Shaw "Consensus reached on reducing agricultural emissions" (press release, 16 July 2019).

[102] ICCC, above n 7, at 51.

[103] ICCC, above n 7, at 79.

years to successfully implement a credible and effective farm-level levy/rebate scheme for livestock emissions.[104]

This 95 per cent free allocation for farmers is environmentally unsatisfying. It fails to sufficiently penalise new ruminant methane emissions, and provides little disincentive for the agriculture sector to seriously change their behaviour. There is a theme of reassurance by Government, that farmers will not necessarily be hit with additional costs, but rather this policy will incentivise and reward those who are becoming more efficient. This sentiment however, implies that while the advanced will be in a position to advance further, the penalties will not be high enough to require a change in behaviour otherwise.

The NZ ETS broadening to include agriculture is necessary and overdue. However the NZ ETS alone, especially with the free-allocation proposed, is unlikely to provide a meaningful incentive for the agricultural sector to change behaviour in a way that would cause methane emissions to adequately reduce. The need for more stringent legal incentive remains.

C Anticipated Emissions Reduction Technologies

Throughout the history of agricultural emissions policy in New Zealand, it appears developing technology has been a core, if not *the* core theme. In short, it has repeatedly been argued, that "technologies now or soon to be available have the potential to reduce methane emissions".[105] This was written in Alexander Gillespie's book, *Burning Issues: The Failure of the New Zealand Response to Climatic Change*, in 1997. Anticipated technologies are a component of our most recent National Communication under the UNFCCC,[106] have a place in New Zealand's official Budget,[107] are repeatedly factored into the ICCC report,[108] and are

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[104] ICCC, above n 7, at 70.

[105] Gillespie, above n 14, at 84.

[106] Ministry for the Environment *New Zealand's Seventh National Communication - Fulfilling reporting requirements under the UNFCCC and the Kyoto Protocol*, above n 67.

[107] Treasury *Budget at a Glance* (30 May 2019).

[108] ICCC, above n 7.

expressly mentioned in the current wording of the Zero Carbon Bill.[109] For 22 years at the very least therefore, agricultural policy has been relying on the promise of non-existent technologies.

New Zealand is at the forefront of "world-leading research exploring how to reduce emissions on farms".[110] We have committed $45 million to the Global Research Alliance on Agricultural Greenhouse Gases, a further $48.5 million thought the New Zealand Agricultural Greenhouse Gas Research Centre, for research into agricultural emissions reductions.[111] The Ministry of Primary Industries website presents this research as a promising climate action and posts about certain procedural break-throughs that have occurred. It does acknowledge however, that "much more work is required before we can turn these scientists' discoveries into safe and reliable on-farm options".[112]

The ICCC discusses the potential technological methods of agricultural emissions reduction, those most notable being low-emissions animals, methane inhibitors, a methane vaccine, and genetically modified ryegrass. Scientists are looking at the potential to breeding low-emissions animals, whereby a low methane trait is added to breeding indexes.[113] Low methane sheep are currently being tested, and this has the potential to reduce emissions by about five per cent.[114] Even then, it will take several generations for this genetic trait to filter through the population of sheep. Selective breeding for low methane cattle is even further off.[115] A methane inhibitor has been developed in Europe and has the potential to reduce methane by a minimum of 30 per cent, *if* it is present in *every* mouthful of feed that an animal

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[109] Zero Carbon Bill, cl 5Z(2)(b).

[110] Ministry for the Environment *Deparmental Disclosure Statement: Climate Change Response (Zero Carbon) Amendment Bill* (3 May 2019) at 15.

[111] *Thomson v Minister for Climate Change,* above n 51, at [70].

[112] Ministry for Primary Industries "Agriculture and greenhouse gases" <https://www.mpi.govt.nz/protection-and-response/environment-and-natural-resources/emissions-trading-scheme/agriculture-and-greenhouse-gases>.

[113] ICCC, above n 7, at 37.

[114] At 37.

[115] At 37.

consumes.[116] In a New Zealand farming context it has been estimated that this could potentially reduce methane emissions by about five per cent.[117] A similar percentage of reduction has been estimated for a methane vaccine.[118] Research into this vaccine is in the early stages and has not so far been proven to work in animals. There is "low confidence that a vaccine will be available by 2030" and "medium-high confidence that a vaccine will be available by 2050".[119] Finally, genetically modified ryegrass has been developed,[120] but there are yet to be results confirming its efficacy from actual farm trials, and current GMO laws in New Zealand would prevent its use.[121]

In summary, extensive (and expensive) research is taking place and there is a potential for emissions reductions technology to eventually exist, but any success remains uncertain. Even if these technologies did come into fruition, it would be costly, difficult and timely to implement them into on-farm practice.

D A Reduction in Livestock Numbers; the Impact on Rural Communities

The ICCC report suggests that existing on-farm practice changes could reduce emissions *on some farms* by up to 10 per cent now, while still maintaining profitability. But for the larger reductions in agricultural emissions to result, they conclude that farmers need to combine these existing on-farm practice changes with major land-use change and/or new technologies such as the methane inhibitor.[122] As these new technologies do not yet exist, major land-use change is clearly the most, if not the only, sustainable option for farmers.

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[116] ICCC above n 7, at 39.

[117] At 39.

[118] At 40.

[119] At 40.

[120] At 40.

[121] Hazardous Substances and New Organisms Act 1996.

[122] ICCC, above n 7, at 41.

New Zealand ecologist Mike Joy describes a reduction in farming intensity to be “the perfect example of a single solution to multiple problems”.[123] Exemplified by the shift away from beef and lamb farming in New Zealand, was the inevitable fact that reductions in livestock are an effective and sure-fire way to reduce greenhouse gas emissions. Reductions in the number of sheep and beef cattle livestock saw sheep and beef emissions decreasing by about a third from 1990 levels.[124] Land-use change resulting in a reduction to livestock numbers would automatically equate to a reduction of New Zealand agricultural emissions. This would also result in better health, cleaner air and water, and a safer environment for our native plants and animals. Not to mention it would begin to terminate an industry that relies on the inhumane exploitation and killing of hundreds of sentient beings.

However, the strengthening of agricultural policy accompanied by the thought of culling livestock is met with a concern that it will negatively impact New Zealand’s rural communities. Chief Executive of the Meat Industry Association, Tim Ritchie has stated that the target "will impose enormous economic costs on the country and threaten many regional communities who depend on pastoral agriculture”.[125] This concern reflects the experience felt by many when agricultural subsidies were removed in the 1980s, and wholesale and rapid land-use change eventuated.[126] The policy changes in the 1980s lacked the just transition principles required, and rural communities faced reductions in employment and population, and demographic changes that impacted schools and other key social institutions.[127]

The potential for negative impacts on rural communities is a very possible result of climate change policy. However, these potential impacts should not prevent the implementation of policies to reduce agricultural emissions. On the contrary, these impacts reinforce the need for communities to start reducing emissions from agriculture now, in order to avoid the need

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[123] Mike Joy “Reduction in farming intensity a single solution to multiple problems” (14 December 2018) Stuff <https://www.stuff.co.nz/environment/climate-news/116156233/school-climate-strike-adults-join-with-kids-in-huge-day-of-national-protest>.

[124] ICCC, above n 7, at 28.

[125] Praveen Menon “New Zealand targets agricultural emissions in climate change bill” *Reuters* (online ed, Wellington, 8 May 2019).

[126] ICCC, above n 7, at 81.

[127] At 81.

for more rapid change later. It is understood that a reduction in livestock may well equate to a reduction in income for individual farmers, but any delayed action will almost certainly cost communities, the economy and the planet more overall. The removal of agricultural subsidies and other policy changes in the 1980s lacked the adequate just transition principles, but this can be avoided if action is gradual and starts today.[128] Considering the distributional effects across regions and society will be critical when developing transitional policies.[129] The agriculture sectors need to start reducing their emissions now in order to allow for a just transition and avoid any abrupt and disruptive changes.[130]

The ICCC report stipulates that the industry can and must begin to reduce their emissions *today*, by changing the land-use of farms, or parts thereof.[131] Numerous farmers have already implemented mixed land-use systems, diversifying into lower emissions land-uses such as horticulture or crops. In theory, New Zealand has around two million hectares of land suitable for horticulture and growing vegetable/plant protein crops.[132] This is 10 times the land area currently contributing to horticulture's $8 billion industry.[133] A Plant and Food Research report in May 2018 stated that on an areal basis, earnings before interest and tax per hectare of horticulture, exceed those of livestock and dairy farming.[134] Farmers can also offset their emissions by planting trees (ideally native forest) on their land to store carbon. Though these changes may be disruptive, expensive and unappealing, in order to make the meaningful changes necessary, people will, inevitably, have to make sacrifices.

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[128] ICCC, above n 7, at 51.

[129] Ministry for the Environment *Regulatory Impact Statement: Zero Carbon Bill* (28 January 2019) at 35.

[130] At 51.

[131] At 51.

[132] Kevin Sutton and others *Opportunities for plant-based foods: PROTEIN* (Plant & Food Research, SPTS No. 15748, May 2018) at 7. Research prepared for the Ministry of Primary Industries and Plant & Food Research.

[133] At 7.

[134] At 6.

E Implications for Mitigation Policy Moving Forward

Emissions reductions in the animal agriculture sector is a hotly contentious topic. There have been many arguments raised as to why affirmative action should be delayed or avoided, including the risk of emissions leakage, the world-class efficiency of New Zealand farmers, and the anticipated technologies that may come into play. These arguments are weak and should not be barriers to mitigation policy coming into effect. Future New Zealand law needs to reflect the fact that this is a highly political arena that will incite pushback. Consequently the Zero Carbon legislation needs to set unambiguous and legally binding targets grounded firmly in science.

The impact that a reduction in livestock production will likely have on rural communities is a substantially more credible concern. However, though it may not be welcome, it is *not* a new concept that unsustainable or outdated industries can diminish and be forced to adapt over time.[135] In order to support this transition, New Zealand law needs to obligate the Government to aid the society and the economy through a transparent, pre-empted, and just transition. This requires stable and credible settings for climate policy. The private sector and civil society must be able to plan and make long-term decisions with confidence. New Zealand farmers are innovative and well-placed to take advantage of the opportunities that will arise in the course of a well-managed transition.

[135] Tobacco, coal, film, record sales to name a few.

Chapter IV *The Zero Carbon Bill*

Despite New Zealand's international commitments and existing mitigation efforts, it is evident that our legal and practical responses have, so far, been insufficient. The issue is not that New Zealand has been without a legal and policy framework in place to combat climate change; on the contrary it has had one for years. The issue is that this framework has failed to generate the effective action required to reduce emissions. Next in line to give this task a go is the Climate Change Response (Zero Carbon) Amendment Bill (Zero Carbon Bill).

A Development of the Zero Carbon Bill

The regulatory impact statement prepared for the Zero Carbon Bill acknowledges that the underlying problem behind our insufficient action, is that the current framework lacks a stable and credible policy environment to enable long-term planning, decision-making and investment by the private sector and civil society.[136] The proposed Zero Carbon legislation is thus the result of a call for long-term action, certainty and accountability, to be set out in primary legislation.

In order to tackle the intergenerational challenge of climate change, it has been crucial that the Zero Carbon Bill be met with broad, cross-party support. For long-term reorientation away from our dependency on greenhouse gas emitters, policy stability must be "decoupled from the short-term ebb and flow of politics".[137] Therefore, the Zero Carbon Bill has been developed through the combined efforts of environmental organisations, industry bodies, iwi and Māori organisations and others, working constructively with both the Government and the Opposition.[138] The Climate Change, has submitted that he believes the Bill meets the goal of staying with 1.5°C of global warming and represents "the broadest possible consensus across New Zealand society about how to get there".[139]

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[136] Ministry for the Environment *Regulatory Impact Statement: Zero Carbon Bill,* above n 129, at 24.

[137] Parliamentary Commissioner for the Environment, above n 23, at 17.

[138] Ministry for the Environment *Climate Change Response (Zero Carbon) Amendment Bill: Summary* (May 2019) at 5.

[139] At 5.

The resulting Zero Carbon Bill that was introduced 8 May 2019, puts quantified targets for emissions reductions into primary legislation. It sets up a framework of five-year emissions budgets to act as stepping stones towards the long-term targets, and establishes an independent Climate Change Commission to advise on climate change policy and hold this Government and successive governments to account.

The Bill is based on the United Kingdom's Climate Change Act (the UK Act) that was passed with near unanimity by the UK Parliament in 2008.[140] The UK Act has, thus far, proved successful in driving action, with UK greenhouse gas emissions falling since it was passed. In 2018 the UK's greenhouse gas emissions were 44 per cent below their 1990 levels.[141] The UK Government has accepted all of its Committee on Climate Change's recommended targets, and has met all of its carbon budgets (interim targets) to date.[142] It is important that New Zealand learns from what has worked successfully in the UK Act, and what has not. Knowing that the New Zealand Bill is based on this legislation, means that any departures the UK Act become interesting areas to analyse. It is also important to recognise that due to our agriculture-heavy emissions profile, New Zealand will not have the benefit of the relatively simple carbon focus that the UK was able to adopt in 2008.[143]

B The Commission

Part 1A of the Zero Carbon Bill establishes the Climate Change Commission (the Commission), which will be an independent Crown entity under the Crown Entities Act 2004.[144] The Commission will be a body of experts appointed by Parliament to provide

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[140] Climate Change Act 2008 (UK). Passed with only 5 votes against the Bill.

[141] Committee on Climate Change "Ten years of the Climate Change Act" <https://www.theccc.org.uk/our-impact/ten-years-of-the-climate-change-act/>. The Committee on Climate Change is the independent advisory body that was set up by the Climate Change Act (2008) UK.

[142] Generation Zero *Zero Carbon Act: International case studies and lessons for New Zealand* (April 2017) at 10.

[143] Parliamentary Commissioner for the Environment, above n 23, at 16.

[144] Zero Carbon Bill, cl 5A. This independent nature of the Commission places certain constraints on Government, similarly to other independent Crown entities such as the Commerce Commission, the Financial Markets Authority and the Electricity Authority.

ongoing, independent advice to the Government on both mitigating emissions and adapting to the effects of climate change.[145] It will then monitor the progress of successive governments toward their mitigation and adaptation goals.[146] Whilst the Commission has many significant advisory functions it is important to note that it has no executive functions. That is, in setting budgets and policy plans for example, the Minister for Climate Change must take into account the relevant advice from the Commission, but their advice is not binding, and the Minister remains the ultimate decision-maker. As climate change policies are of a macro-level (likely to have significant impacts on society and the economy), it makes sense that the elected government is the body that is then able to be held to account.[147]

An independent entity was considered to be the most appropriate body to achieve transparency and political accountability.[148] Advice from the Commission is required under the Zero Carbon Bill to be presented to the House of Representatives and to be made public.[149] The Minister must then present their response to the Commission's advice to the House of Representatives, explaining any departure from the Commission's advice.[150] It is promising that the UK equivalent, the Committee on Climate Change, is highly regarded and that their recommended targets have all been implemented thus far. Furthermore, the regular reporting to the UK Parliament on their emissions situation has been successful in enhancing transparency and accountability.[151]

As introduced in Chapter III, an interim Climate Change Committee (ICCC) has been established in New Zealand and it has already released in-depth reports collating evidence, analysis and recommendations on action on agricultural emissions, and on accelerated electrification. The complexities of climate change mean that having a politically neutral,

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[145] Zero Carbon Bill, cl 5B(a).

[146] Clause 5B(b).

[147] Teresa Weeks *Examining the UK Climate Change Act 2008* (The Productivity Commission, September 2017) at 13.

[148] Zero Carbon Bill (explanatory note) at 5.

[149] Clause 5X.

[150] Clause 5Y.

[151] Weeks, above n 147, at 1.

expert body to guide the Government is an essential part of New Zealand's pathway to a low-emissions future.

C Target for 2050

The Zero Carbon Act will put quantified targets for emissions reductions, into New Zealand's primary legislation. The existence of these duties in statute will instigate political accountability and a greater permanence. Where simple policy statements announcing reduction targets can be readily changed or compromised, changing or removing a statutory target would require new legislation and the public and parliamentary scrutiny that accompanies this process.[152] The targets are set out in Part 1B of the Bill:[153]

5O Target for 2050

(1) The target for emissions reduction (the 2050 target) requires that—

(a) net emissions of greenhouse gases in a calendar year, other than biogenic methane, are zero by the calendar year beginning on 1 January 2050 and for each subsequent calendar year; and

(b) gross emissions of biogenic methane in a calendar year—

(i) are 10% less than 2017 emissions by the calendar year beginning on 1 January 2030; and

(ii) are at least 24% to 47% less than 2017 emissions by the calendar year beginning on 1 January 2050 and for each subsequent calendar year.

A key difference between the New Zealand Bill and the UK Act is that the Zero Carbon Bill sets a separate target for biogenic methane.[154] This 'two-basket approach' reflects our unique emissions profile, and the difference between short-lived gases and long-lived gases discussed in Chapter I. The 2050 domestic target is the result of extensive consultation with New Zealanders, economic analysis and the latest climate science; in particular the IPCC's special report on 1.5°C.[155]

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[152] Weeks, above n 147, at 17.

[153] Zero Carbon Bill, cl 5O.

[154] Biogenic means that the methane has come from a living organism.

[155] Zero Carbon Bill (explanatory note) at 4.

A separate and lesser target for methane is one thing, but this target being a range, 24 per cent to 47 per cent, is not inline with the call for certainty. In order to promote long-term certainty the short-lived gas target needs to be specific rather than a range, and it must align with the Zero Carbon Bill's 1.5°C purpose. The IPCC's Special 2018 Report on warming above 1.5°C found that global methane emissions must reduce by 35 per cent by 2050, with an interquartile range of 24-47 per cent. The choice of a specific target is arguably one of equity rather than science. To behave in-line with our equitable obligations, as New Zealand is a wealthy nation, our fair target would arguably be in excess of the required world average.

D Emissions Budgets

To stay on track to meeting the 2050 target, the Zero Carbon Bill next sets up a framework for five-year emissions budgets (binding interim targets). The Minister is required under cl 5U to set an emissions budget for each emissions budget period, and there must be three consecutive budgets in place at any given time.[156] Clause 5U also imposes an obligation on the Minister to *ensure* that the net budget emissions do not exceed the emissions budget for each relevant period. Budgets must set out the quantity of all greenhouse gas emissions permitted in that period, biogenic methane included.[157] The Commission is required to advise the Minister in setting budgets, and both the Minister and the Commission are to have regard to specified matters in doing so.[158] These mandatory considerations, will be discussed further in Chapter V. Binding interim targets should allow governments to manage the transition to a low-emissions economy, and provide a stable policy that households, businesses and industry can rely on.[159]

The Bill encourages that budgets will be met 'as far as possible' through domestic emissions reductions and domestic removals, but it remains possible for overseas emissions reductions to be purchased in order to meet each target.[160] As discussed in Chapter II, a reliance on

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[156] Clause 5U.

[157] Clause 5V.

[158] Clause 5X requires the Commission to advise on certain matters and 5Z lists the matters they both must have regard to.

[159] Zero Carbon Bill (explanatory note) at 5.

[160] Clause 5W(1).

international carbon credits trading has been acutely detrimental to New Zealand's domestic mitigation in the past. Furthermore, the UK Committee has recommended an absolute prohibition on using international credits under the UK Act.[161] Though less than ideal, the Government have shown an intention to place primary reliance on reducing emissions at home, and a failure to take adequate steps to meet targets through domestic means, could provide an avenue for judicial review.[162] Furthermore, where international trading is permitted, it will be limited by the Commission.[163] There is also a potential that this will be revisited when the upcoming amendments are made to the NZ ETS.[164]

E Policy Plans

A lack of success in mitigation policy to date has made it clear that the setting of ambitious targets is only the first step to reducing emissions. The Zero Carbon Bill therefore requires policy plans to be prepared and published by the Minister, setting out the policies and strategies capable of meeting an emissions budget.[165] The policies are to include sector specific policies, and "a strategy to mitigate the impacts that reducing emissions and increasing removals will have on workers, regions, iwi and Māori, and wider communities, including the funding for any mitigation action".[166] These regulations are inline with, if not crucial for, the need to work towards a just transition.

Unfortunately however, the effectiveness of being prescribed a policy plan by Government in advance, could be jeopardised by the lack of a legislated timeline to do so. The Zero Carbon Bill reads that policy plans are to be prepared and published after the relevant emissions budget has been published, but "before" the commencement of the relevant emissions budget

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[161] Generation Zero "Submission to the Environment Select Committee on the Climate Change Response (Zero Carbon) Amendment Bill 2019" at 15.

[162] Simon Watt and Claire Harmsworth "The Zero Carbon Bill - a closer look" (9 May 2019) Bell Gully <https://www.bellgully.com/publications/the-zero-carbon-bill-a-closer-look>.

[163] Zero Carbon Bill, cl 5X(1)(e).

[164] Ministry for the Environment "Proposed Improvements to the NZ ETS" <https://www.mfe.govt.nz/climate-change/proposed-improvements-nz-ets>. This is indicated in the tranche one decisions on NZ ETS improvements, announced 12 December 2018.

[165] Zero Carbon Bill, cl 5ZD(1).

[166] Clause 5ZD(3)(c).

period.[167] This differs from the UK Act where policy plans must be released "as soon as is reasonably practicable" after setting a budget.[168] The lack of a specific timeframe has been identified as an issue for the UK model, and the current UK Government are being criticised for their being behind in releasing policy plans to move forward.[169] Is appears the ambiguity of this wording is a weakness of the UK Act, but even then the UK Act's provision is far more stringent than ours. The Zero Carbon Bill's completely ambiguous "before" requirement could technically accept a policy plan the day before the budget period begins. One submission made by Generation Zero was to codify a timeframe, and require plans to be published no later than five years before the relevant budget commences.[170] In light of both the importance of a just transition for New Zealanders, and how useful the UK experience is in guiding the Zero Carbon Bill's development, amending this part of the Act seems thoroughly appropriate.

F Opportunities for Legal Intervention

The Zero Carbon Bill imposes various prescriptive obligations on the Government which could expose it to judicial review. There are many procedural requirements that must be met in relation to the setting of budgets for example; A failure to sufficiently comply with the mandatory considerations under cl 5Z(2) could provide an avenue for a judicial review challenge.[171] As previously mentioned, a failure by the Government to take adequate steps to ensure that domestic reductions and removals can be used to meet targets in place of international reductions, could also be the subject of legal discourse.[172] Though it has not been a focus of this dissertatioin, New Zealand is also lacking a nationwide approach to drive effective and coordinated action on climate change adaptation.[173] The Zero Carbon Bill thus

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[167] Zero Carbon Bill, cl 5ZD(3)(c).

[168] Climate Change Act 2008 (UK), s 14(1).

[169] Ashley Cowburn "Theresa May announces legal commitment to end UK's global warming contributions by 2050" *The Independent* (online ed, UK, 11 June 2019).

[170] Generation Zero "Submission to the Environment Select Committee on the Climate Change Response (Zero Carbon) Amendment Bill 2019" at 18.

[171] See Zero Carbon Bill, cl 5Z(2).

[172] Watt and Harmsworth, above n 162.

[173] Ministry for the Environment *Regulatory Impact Statement: Zero Carbon Bill,* above n 118, at 24.

establishes a framework for the preparing and implementing of adaptation plans also. Failures to take the relevant factors in to account or failures to make adequate implementation progress could see the Government susceptible to judicial challenge.[174]

There are two particular provisions that expressly limit the ability for judicial intervention. The first relates to breaches of legislated targets, and the second regards the addressing of legislated targets by wider decision-makers. The Zero Carbon Bill sets a 2050 target, a rigorous framework for creating emissions budgets and policies to meet this target, but then provides that targets are not enforceable in a court of law. The exception to this is that a court may make a declaration together with costs if a target or budget is not met:[175]

5ZJ Effect of failure to meet 2050 target and emissions budgets

(1) No remedy or relief is available for failure to meet the 2050 target or an emissions budget, and the 2050 target and emissions budgets are not enforceable in a court of law, except as set out in this section.

(2) If the 2050 target or an emissions budget is not met, a court may make a declaration to that effect, together with an award of costs.

(3) If a declaration is made and becomes final after all appeals or rights of appeal expire or are disposed of, the Minister must, as soon as practicable, present to the House of Representatives a document that—

  (a) brings the declaration to the attention of the House of Representatives; and

  (b) contains advice on the Government's response to the declaration.

This is a privative clause that does not exist in the UK Act. It is inappropriate and will be analysed further in Chapter V.

2 The 2050 Target and Emissions Budgets as Permissive Considerations

Clause 5ZK establishes that the 2050 target and current budget are to be permissive considerations for government bodies when undertaking public functions. It then emphasises

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[174] Watt and Harmsworth, above n 162.

[175] Zero Carbon Bill, cl 5ZJ.

that individuals and public bodies are immunised from judicial review for failing to take these matters into account:[176]

5ZK 2050 target and emissions budget are permissive considerations

(1) A person or body may, if they think fit, take the 2050 target or an emissions budget into account in the exercise or performance of a public function, power, or duty conferred on that person or body by or under law (subject to other requirements that apply by or under law).

(2) However, a failure by any person or body to take the 2050 target, an emissions budget, or guidance issued under section 5ZL into account does not invalidate anything done by that person or body.

The referenced section, 5ZL, provides that the responsible Minister may issue guidance for departments on how to take these matters into account in the performance of their public duties.[177] The targets could feature as relevant considerations and generate implications on decisions being made by bodies such as the Overseas Investment Office.[178] But this uncertain and permissive nature is far from adequate. The whole Zero Carbon Bill is centred around the establishment of these targets and public bodies should be required to give effect to their country's mitigation efforts. Again, Chapter V will further discuss the unsuitability of this provision.

G Likely Impact of the Current Zero Carbon Legislation

The future Zero Carbon Act has the potential to be game-changing for New Zealand's preparedness to mitigate emissions. It cannot be denied that the designing of such political architecture is difficult, especially in a society that is arguably not feeling immediately incentivised to do so. But continuing with our business as usual is simply not an option, and this legislation needs to ensure transformational action. Potential weaknesses have been outlined, and those deemed most threatening to the Act's impact are discussed further below. Presently, the Bill does not adequately commit the country to its ambitious intentions.

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[176] Zero Carbon Bill, 5ZK.

[177] Clause 5ZL.

[178] Watt and Harmsworth, above n 162.

Chapter V *Discussion and Recommendations*

Climate change law and policy has thus far failed at its duty to mitigate emissions, and it will continue to do so if not significantly strengthened. The barriers to the success of New Zealand's Zero Carbon legislation found most pressing are outlined in this Chapter. The Zero Carbon Bill includes provisions that cushion the Government from being held to account, and in turn portray a concerning lack of commitment to the targets. Furthermore, effective agricultural emissions mitigation is threatened by possible emissions reduction technology being inordinately used as an excuse for inaction.

A Express Incorporation of the Precautionary Approach

As discussed in Chapter III, for decades now, agricultural policy has been funding and delaying practical action due to the supposed imminence of emissions reduction technology development. The exact technologies at the forefront of this research, are neither fully developed nor anywhere near ready to be implemented in New Zealand. In the words of Chlöe Swarbrick MP: "Presently, unfortunately, banking on the development of some silver bullet in order to maintain business as usual is akin to believing in the tooth fairy."[179] Reliance on these technologies to prevent mitigation action is in breach of the precautionary approach, and should be recognised as such.

New Zealand has an international obligation to apply the precautionary approach to environmental decision-making. The 1992 'Earth Summit', saw the creation of the Rio Declaration on Environment and Development (the Rio Declaration) that set out guiding environmental principles.[180] The precautionary approach at Principle 15 reads:[181]

> In order to protect the environment, the precautionary approach shall be widely applied by states according to their capabilities. Where there are threats of serious or irreversible damage,

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[179] Chlöe Swarbrick MP "Trying to negotiate a Climate Emergency declaration and plan like:" <www.facebook.com/chloeNZgreens/photos/a.299302383738741/986492378353068/?type=3&theater>.

[180] *Rio Declaration on Environment and Development (Rio Declaration)* GA Res 47/190 (22 December 1992).

[181] Principle 15.

> lack of full scientific certainty shall not be used as a reason for postponing cost effective measures to prevent environmental degradation.

The precautionary approach is also included in the UNFCCC, both being multi-lateral environmental agreements that New Zealand has endorsed.[182] Though left undefined in New Zealand case law, the Supreme Court in *Sustain our Sounds Inc v New Zealand King Salmon Company Ltd* (*King Salmon*), referred to the International Union for the Conservation of Nature Report that stated a common element common of the various formulations of the precautionary principle to be "recognition that lack of certainty regarding threat of environmental harm should not be used as an excuse for not taking action to avert that threat".[183] *King Salmon* also recognises that the principle may require the prohibition of activities where urgent measures are needed to avert imminent potential threats where potential damage is likely to be irreversible and where particularly vulnerable ecosystems are concerned.[184] The Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 (EEZ Act)[185], and the Fisheries Act 1996 have both codified the principle into primary legislation.[186]

Anticipated technology is highly likely to be used as a reason to prevent implementation of the measures necessary to mitigate our agricultural emissions. As previously discussed, this is evident when looking to past policy, the ICCC Report on Agricultural Emissions, and the Zero Carbon Bill itself. The trend in agriculture policy to rely on anticipated technologies is arguably in breach of the precautionary approach. To follow the Rio Declaration wording above, New Zealand is facing a 'threat of serious of irreversible damage', being that of the greenhouse gas emissions that livestock are releasing into the atmosphere. The severity of this threat is then being questioned due to the prospect of new technologies such as methane inhibitors coming into play. We are thus seeing the threat of livestock to the environment,

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[182] UNFCCC, above n 21, art 3(3).

[183] *Sustain our Sounds Inc v New Zealand King Salmon Company Ltd* (*King Salmon*) [2014] NZSC 40; BC201461722 at [109].

[184] At [111].

[185] Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012, s 61(2).

[186] Fisheries Act 1996, ss 10(d) and 13(2A)(a).

being deemed scientifically uncertain, and effective measures to deal with the issue continuing to be postponed. Under New Zealand's international obligations, lack of full scientific certainty should not be used as a reason for postponing effective measures to prevent environmental degradation. The possibility of future methane inhibiting technology should not be used as a reason to prevent the push toward land-use change and a reduction in livestock numbers.

Mandatory regard to anticipated technological developments is legislated in the Zero Carbon Bill, under cl 5Z: 'Matters relevant to advising on, and setting, emissions budgets'. Under cl 5Z(2)(b)(iii), the Commission and the Minister must 'have regard' to existing technology and anticipated technological developments, including the costs and benefits of early adoption of these in New Zealand.[187] This list of considerations is later cross-referenced so as to be taken into account by the Commission when preparing advice to the Minister on emission reduction plans, and by the Minister when determining whether to revise a budget. To clarify, the Commission must have regard to anticipated technological development when preparing advice to the Minister on both budget and policy plan setting. This gives rise to the potentiality of non-existent methane inhibitors being included in policy action plans and being used as a reason for why lower emission reductions now, followed by greater reductions in the future, would be more cost effective.[188] Once again, delayed action will almost certainly cost communities, the economy and the planet more overall, and leave future generations with fewer mitigation options.

To supper the risk of potential outcomes such as this, the precautionary principle should be expressly included in the Zero Carbon Bill. As it stands, the list of considerations discussed above, under cl 5Z(2), also includes, 'New Zealand's relevant obligations under international agreements'.[189] Parliament has chosen to incorporate its obligation to apply the precautionary approach into a grouping, that is then under a list, of numerous considerations. As aforementioned the principle has been legislated expressly in New Zealand law in both the

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[187] Compare 'have particular regard' in cl 5Z(2)(a).

[188] This argument was presented and rejected in the Netherlands case, *Urgenda Foundation v The Netherlands* [2015]. Due to the uncertainty of future technological advances, it was held they could not be relied upon.

[189] Zero Carbon Bill, cl 5Z(2)(b)(xi).

EEZ Act, and the Fisheries Act. As a core environmental Act (to be), the principle should similarly be incorporated into the Zero Carbon legislation as an express obligation. Though the principle may be beneficial to the adaption part of the Zero Carbon Act also, as this dissertation has focused on mitigation, the suggested appropriate and effective place for it is in cl 5W(2). Clause 5W(2) establishes mandatory considerations for both the Commission and Minister in considering how emissions budgets are to be met. It is then cross-referenced in cl 5Z(2)(a) being something the Commission and Minister must 'have *particular* regard to' when advising on and setting budgets.[190]

A way in which the principle could effectively be incorporated is suggested:

5W How emissions budgets to be met

(1) Emissions budgets must be met, as far as possible, through domestic emissions reductions and domestic removals.

(2) In considering how an emissions budget may realistically be met, the Commission and the Minister must include consideration of the following:

  (a) the amount by which each greenhouse gas must be reduced to meet the emissions budget and the 2050 target:

  (b) the amount by which greenhouse gas emissions must be removed to meet the emissions budget and the 2050 target:

  (c) identification of key opportunities for emissions reductions and removals in New Zealand, and the principal risks and uncertainties involved with emissions reductions and removals**:**

  (d) that the lack of full scientific certainty shall not be used as a reason for postponing preventive action to reduce greenhouse gas emissions.

This wording omits any reference to the purpose of the Act, the capability of the actors, or the cost-effectiveness of the measures; aspects that have been used elsewhere to weaken the wording of the principle.[191] It replaces the Rio Declaration's 'should' with 'shall', and

[190] Compare 'have regard to'.

[191] See Rio Declaration above n 180 and Fisheries Act 1996, s 13(2A)(a).

specifics greenhouse gas emissions similarly to the way specifics are incorporated into the Fisheries Act provision regarding a total allowable catch.[192]

Express incorporation of the precautionary principle would prevent policymakers from using the prospect of new technologies as an excuse to disregard alternative mitigation methods, such as land-use change. Technology has been, and will continue to be, a crucial element to climate change mitigation, especially regarding the transition to new energies. There is always the potential for a breakthrough in science to be positively support agricultural emissions reductions. However, the cost and the time technology takes to both test and implement, not to mention the plausible detriment to animal welfare, still points to the reduction of livestock and land-use change being the most widely beneficial way forward for agriculture.

The precautionary principle would also apply to any dubiety surrounding the impact of methane to the environment, including uncertainties around the on-farm measurement methods of exact greenhouse gas sums. It would be similarly beneficial to a potential over-reliance on the introduction and distribution of electric vehicles. The precautionary principle reflects the urgency and forward-looking nature of the Zero Carbon Bill. It should be given the substantial weight appropriate, by being expressly incorporated into the wording of the legislation.

B 2050 Target and Budgets as Permissive Considerations

Currently, at cl 5ZK of the Zero Carbon Bill it is clearly stated that there is no legal obligation on broader Government decision-makers to take the 2050 target nor the emissions budgets into account.[193] Due to the nature and urgency of climate change, making the nation's emissions efforts a permissive consideration for persons exercising or performing a public function, power, or duty, is far from adequate. In order to transition to a low-emissions economy in a timeframe consistent with the 1.5°C limit, the required shift will be “profound

[192] Fisheries Act 1996, s 13(2A)(a).

[193] Zero Carbon Bill (explanatory note) at 11.

and widespread".[194] It is imperative that our government is coordinated in this transition; the Bill's targets and budgets should be a mandatory consideration for decision-makers at the very least.[195] More ideally, the Zero Carbon Act would legislate a requirement for decision-makers 'to give effect to' the emissions budgets and 2050 target.

CREEDNZ Inc v Governor-General established the reality of it being very easy to satisfy the requirement of a mandatory consideration.[196] Should the budgets and targets be made mandatory to consider, decision-makers would need just genuinely address themselves to the criteria, and consider the factors required with "minds open to persuasion".[197] There is no doubt this requisite would be stronger than the current permissive provision, but explicit codification of the weight to be given to targets, would be more appropriate. The whole mitigation basis of the Paris Agreement was that countries would set caps of their "highest possible ambition".[198] The 2050 target and budgets under the Zero Carbon Bill will therefore be purposefully ambitious, and as such they will require widespread attention *and* effort. There is arguably little effect to setting emissions caps if our relevant decision-makers are not then required to give effect to them.

It is acknowledged that even amending the section allowing the consideration of the budgets from 'may' to 'must' would require readdressing the Resource Management Act 1991 (RMA). In 2004, an amendment to the RMA removed the power of local authorities to consider the effect of greenhouse gas emissions on climate change when determining air discharge consents.[199] The purpose of the 2004 Amendment was to recognise the preference for national co-ordination of controls on greenhouse gas emissions, where the RMA is

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[194] The Productivity Commission, above n 4, at 1.

[195] Generation Zero "Submission to the Environment Select Committee on the Climate Change Response (Zero Carbon) Amendment Bill 2019" at 14.

[196] *CREEDNZ Inc v Governor-General* [1981] 1 NZLR 172 at 179 per Cooke J, 194 per Richardson J and 214 per Mcmullen J.

[197] At 172.

[198] Paris Agreement Article 4(3).

[199] Resource Management (Energy and Climate) Amendment Act 2004.

designed for decentralised decision-making.[200] In *Genesis Power Ltd v Greenpeace New Zealand Inc* the Supreme Court, clarified this restriction on decision-makers, re-emphasised that reasoning, and held that this interpretation is not inconsistent with the s 7(i) requirement to take 'the effects of climate change' into account, because the RMA refers to the effects of climate change rather than *on*.[201] Commentary on this topic accepts that 'in isolation', and 'absent significant amendments to the statute', climate change mitigation would be difficult to keep consistent under the existing RMA framework.[202]

The RMA constraint on decision-makers having regard for greenhouse emissions should be removed. The RMA is the principal statute for managing the use of resources in New Zealand, and many activities that affect New Zealand's emissions arise a result of planning decisions made under the RMA.[203] A comprehensive review of the resource management system has been proposed by the Minster for the Environment, the Hon David Parker. Mr Parker intends to consider RMA changes relating to both climate change adaptation *and* mitigation.[204] The proposal notes that addressing climate change is a high priority for the Government, and that there could be significant benefits in "elevating the importance of climate change within the RMA framework, so that decision-makers are able to fully consider … the effects of development on climate change (mitigation)".[205]

With regard to inconsistencies at local government level, the Zero Carbon Bill provides a clear national framework to guide emissions reductions, with mechanisms in place to issue further guidance to departments. At present the Minister issuing specific guidance on how to take the targets and budgets into account is drafted cl 5ZL.[206] Clause 5ZL could correspondingly be amended to provide for guidance to departments on how 'to give effect

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[200] Resource Management (Energy and Climate) Amendment Bill 2003 (46-1), (commentary) at 2.

[201] *Genesis Power Ltd v Greenpeace New Zealand Inc* [2008] NZSC 112 at [19].

[202] Ceri Warnock and Maree Baker-Galloway *Focus on Resource Management Law* (LexisNexis NZ Ltd, Wellington, 2015) at 100.

[203] Cabinet Paper "Proposed Resource Management Amendment Bill" (November 2018) at 12.

[204] At 13.

[205] At 13.

[206] Zero Carbon Bill, cl 5ZL Titled 'Guidance for departments'.

to' targets and budgets. Accordingly, if the potential for inconsistencies at local government level remains a concern for the Government, giving guidance is at the Minister's discretion. Furthermore, local government has the benefit of being the level closest to citizens and having an ability to facilitate decisions through long-term plans driven by community rather than political terms and agendas. Councils are able to focus on the priorities and vulnerabilities of their relevant locality, and have up to date knowledge on the changing environment of the area. Local authorities have a key role to play in climate change efforts.

Guided consideration of climate change and how to give effect to the New Zealand targets, can be effectively implemented under the RMA, and should not only be re-allowed, but made mandatory:

5ZK 2050 target and emissions budget are permissive considerations

(1) ~~A~~ Every person or body ~~may, if they think fit,~~ must give effect to ~~take~~ the 2050 target ~~or an~~ and emissions budgets ~~into account~~ in the exercise or performance of a public function, power, or duty conferred on that person or body by or under law (subject to other requirements that apply by or under law).

(2) ~~However, a failure by any person or body to take the 2050 target, an emissions budget, or guidance issued under section 5ZL into account does not invalidate anything done by that person or body.~~

An example of this requirement having effect in practice would be in considering an application for resource consent to use, or convert, land for dairying. Local authorities would be required to give effect to New Zealand's emissions reductions targets; the introduction of additional methane emitters would arguably not be seen as giving effect to the emissions budgets and 2050 target under the Zero Carbon Bill. It would also mean that in developing regional or district plans, emissions-heavy activities would be easier to restrict, for example a cow cull per hectare could be set under a distinct unitary plan. Some regional councils are requiring farmers to use farm environment plans to manage nutrient losses.[207] Most in use are about improving water quality but there is talk of farm environment plans being broadened to incorporate management of greenhouse gas emissions.[208] Local authorities could theoretically include rules for less intensive farming in their plans. The recommended codification would

[207] ICCC, above n 7, at 44.

[208] At 44.

be consistent with the RMA regime, where numerous decision-makers have a requirement 'to give effect to' national planning standards.[209]

To ensure a united effort by the Government to reduce emissions, giving effect to budgets and the 2050 target needs to be mandated, guidance should be issued on how local authorities are to do this, and a failure to follow this guidance should have the capacity to invalidate decisions.

C The Privative Clause; An Inappropriate Restriction on Enforceability

The Zero Carbon Bill establishes a 2050 target, and a detailed framework as to how the country will achieve this target, through interim budgets. It then states at cl 5ZJ that in the event of failing to meet a target or budget, no legal remedy is available other than a declaration of the breach. To significantly deprive the courts from being able to hold the Government to its statutory obligations is fundamentally inappropriate both constitutionally and symbolically. This attempt to limit judicial discretion should to be removed in its entirety, ensuring that the courts retain the ability to remedy any breached budget on a case-by-case basis.

As covered in Chapter II, key problems with environmental law efforts past include that accountability and certainty have been lacking. The Productivity Commission in their 2018 Report on transitioning into a low-emissions economy, emphasised that accountability for action is crucial to combating climate change.[210] While it is acknowledged that legal action after the breach of a budget is retrospective, and that judicial review may be more effective earlier in the mitigation law process, issues of justiciability are more likely to arise when review is sought prematurely. A poorly set budget or an inadequate policy plan may lack the legal foothold a court needs to intervene. Furthermore if the permissive considerations provision is upheld, wider public actors will be significantly immunised from judicial challenge.[211] The Zero Carbon Act will however, establish unambiguous duties on the

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[209] See for example, RMA, s 58C(1)(a).

[210] The Productivity Commission, above n 4, at 3.

[211] Zero Carbon Bill, s 5ZK.

Minister to achieve certain emissions reductions by a certain time.[212] To show and ensure commitment, it is crucial that these incontrovertible duties to meet the 2050 target and budgets are capable of effective legal enforcement.

Attorney-General, the Hon David Parker assessed the consistency of the proposed Act with s 27(3) of the New Zealand Bill of Rights Act; the right to bring civil proceedings against the Crown and have those proceedings heard in the same way as proceedings between individuals.[213] His response considers that a restriction on the range of available remedies, as is proposed at cl 5ZJ, can have the effect of rendering proceedings irrelevant. He concludes however, that the remedy of a declaration and costs is appropriate, because the clause is dealing with issues of substantive, rather than procedural rights, and substantive issues of such "macro-level" public policy at that.[214]

The Climate Change Act (UK) does not contain any such privative clause. A breach is yet to occur in the UK, but due to the statutory basis of their budgets and 2050 target, the failure to meet one carries, in theory, the risk of judicial enforcement and remedies available at the court's discretion. A New Zealand Productivity Commission Research Note assessing the UK Act in 2017, acknowledged that there are potential obstacles to judicial enforcement of these obligations, including the challenge in finding an effective and appropriate remedy, and the mindful role the courts must take in complex policy and resource allocation matters.[215] The potential for justiciability challenges to arise are credible predictions, but this provides no convincing reason for Parliament to limit the judiciary's sound ability to address these challenges should and when they become an issue.

The author of the above mentioned Productivity Commission Research Note, also wrote that wrote that a mere declaration of a breach would be "something of a pyrrhic victory".[216]

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[212] Clause 5U. Titled 'Duty of Minister to set emissions budgets and ensure they are met'.

[213] New Zealand Bill of Rights Act 1990, s 27(3).

[214] David Parker *Report of the Attorney-General under the New Zealand Bill of Rights Act 1990 on the Climate Change Response Zero Carbon Amendment Bill* (23 April 2019).

[215] Weeks, above n 147, at 16.

[216] At 16.

Indeed, not only is it inappropriate to disallow alternative remedies to be imposed, but a declaration as a remedy is ineffective here, and should in fact be avoided. There are reporting provisions in the proposed Act that require the Commission to prepare a report evaluating the progress of each emissions budget period, and this report is to be made publicly available.[217] Moreover, the Minister must present a response to that report to the House of Representatives, and the Bill specifically states that where a budget has not been met, the Minister must explain why.[218] It appears therefore, that a declaration would add very little to the existing reporting provisions, and the court would risk looking impotent in delivering a judgment accompanied by an ineffectual remedy.[219]

CREEDNZ Inc v Governor-General long ago established that a court must never substitute its own decision in place of the decisions-maker's. Yes, there is a point where judicial remedies can be overly intrusive, but this by no means limits the judiciary to the issuing of a mere declaration. Parliament is aware that it is well within the judiciary's capacity to have the discretion to order a remedy, regarding government accountability, both constitutionally appropriate and genuinely effective.[220] This is evident in the explicit availability of the 'extraordinary remedies' for judicial review cases under s 16(1)(a) of the Judicial Review Procedure Act 2016 (JRPA).[221]

Political decision-making is at the heart of decisions on climate change mitigation, and it is therefore plausible that the issue of justiciability will be used in defence of the Zero Carbon Bill's privative clause. On the issue of justiciability, the likely position of New Zealand courts can be found looking to *Thomson v Minister for Climate Change*.[222] This is arguably New Zealand's most significant judicial decision on climate change as it involved a direct

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[217] Zero Carbon Bill cl 5ZI(2).

[218] Clause 5ZI(5).

[219] Jonathan Church "Enforcing the Climate Change Act" (2015) 4(1) UCL Journal of Law and Jurisprudence 109 at 130.

[220] *CREEDNZ Inc v Governor-General,* above n 196, at 211.

[221] Mandamus, prohibition and certiorari.

[222] *Thomson v Minister for Climate Change,* above n 51.

challenge to government policy.[223] The judgment of Mallon J illustrates both the courts' willingness to give climate change policy a nudge, alongside the judicial reluctance to substitute one's own policy views for those of a Minister's. Her Honour looked to international decisions in her judgment, the majority of which echo this recognition of a judicial boundary, but an awareness of the severity of climate change and the fact that environmental laws are generally not well enforced.[224] Climate change policy was not ruled from being amenable to judicial review, and there are ways beyond the issuing of a declaration that the courts can impose a perfectly intra vires remedy.

In exploring potential remedies best suited to enforce the UK Climate Change Act, Jonathan Church suggests the following as most appropriate; the ordering of the Government to invest in appropriate infrastructure or mitigation policies, an amount of money equivalent to the cost of purchasing such emissions credits, in order to allow future budgets to be met.[225] This remedy has a clear and definable basis and is constructive rather than punitive. To avoid issues of non-justiciability, the court could apply a flexible approach by not ordering investment into a specific programme of action, but rather ordering the development of such a programme accompanied by a requirement to demonstrate at intervals how this programme was being implemented.[226] This is not the court creating policy, but simply ordering that the Government develop a policy in order to meets its legislated obligations. It would be a mandamus writ commanding the Minister to perform their statutory duty, and the real decisions of substance regarding the 'how to' would remain that of the Government's.

Church's suggestion also sees the court retain the ability to apply more punitive measures in a suspended form, for where the Government then fails to comply with any constructive remedial measures.[227] Remedies should be of course issued on a case-by-case basis, but this illustrates that there are remedies beyond that of a declaration that would be arguably intra vires and far more effective. Not to mention, that having the threat of litigation, encourages

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[223] Palmer, above n 84, at 200.

[224] *Thomson v Minister for Climate Change,* above n 51, at [105].

[225] Church, above n 219, at 131.

[226] At 133.

[227] Church, above n 219, at 133.

extra care to be taken and advice to be sought on decisions of high policy.[228] The constraint on this judicial discretion at cl 5ZJ should be removed.

[228] Palmer, above n 84, at 201.

Conclusion

Rt Hon Jacinda Ardern last week addressed the United Nations Climate Action Summit:[229]

> We are determined that New Zealand can and will play our part in the global effort. Mr Secretary General, the situation is stark. It will not be easy. But our generation, we, have it within our grasp, not just to prevent the worst, but to build the best possible world for the generations to come.

The Prime Minister is right in that it is not yet too late for humanity to prevent climate the worst of climate change, but if New Zealand is to have an effective part in this effort, we simply cannot continue as is.

Prima facie, New Zealand has, for decades, shown the dedication and commitment to climate change mitigation that Ms Adern portrays. We are ever vocal about our clean green identity, have ratified the UNFCCC, met our Kyoto Protocol QELROs (albeit through loopholes), and were early signatories of the Paris Agreement. But unfortunately this enthusiasm has not been reflected in our domestic laws, policies or mechanisms. As a result, it has certainly not been reflected in our increased emissions of greenhouse gases. New Zealand may be exemplary in that over 80 per cent of our electricity comes from renewable sources, but despite this we are the 5th highest gross emitters per person among Annex 1 countries. Our animal agriculture industries, responsible for near half of New Zealand's emissions, are our detriment.

This is not new information and the sector has shown some increased efficiency in on-farm practice, but it has simultaneously been excused from mitigation mechanisms, due to a deficit in urgency and a surplus in political pushback. The contention between the agriculture sector and mitigation policies comes down to a simple point; New Zealand's industrialised animal agriculture is not sustainable. Land-use change must occur and livestock numbers must reduce. It is the only credible way to reduce agricultural emissions within the Paris timeframe. Farming communities undoubtedly have reason to be concerned regarding the impact that the animal agricultural industry diminishing will have on regional societies. However it must be remembered, that a delay in change now will significantly increase the

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[229] Rt Hon Jacinda Ardern "Opening Address" (United Nations Climate Change Summit, New York, 24 September 2019).

costs later. A just transition away from a high emissions economy is needed, and powerful climate change legislation to ensure this, and protect New Zealand as a whole, is imperative.

A lack of legislative urgency has been illustrated through an absence of certainty, and effective accountability in New Zealand. Though it has been established that the cruciality of participation in international climate change treaties, conflicts with the kind of command and control approach we saw with Kyoto, this does not mean that a strict command and control approach should not be used in a domestic setting. On the contrary, New Zealand needs to set ambitious targets, have them placed in primary legislation, and introduce enforcement mechanisms that provide people with the adequate certainty as to how a low-emissions transition will occur. New Zealand has the opportunity to enact such necessities with the Zero Carbon legislation currently making its way through Parliament.

The Zero Carbon legislation will have cross-party support for longevity, establish an independent Climate Change Commission, set binding interim budgets as stepping stones to a 2050 target, and the Commission will advise the Minister both in setting these budgets and introducing policy plans to reach them. The bountiful successes that could occur as a result of this legislation are unfortunately weakened by certain provisions and omissions.

First there is nothing stopping the continued reliance on non-existent technologies excusing a continued period of mitigation stagnation. Such undue reliance on technology is extremely likely, and as such, the precautionary principle should be expressly included in the Zero Carbon Act. Second, wider decision-makers are immunised from having to even take the emissions targets into account, where they should instead be obligated to give effect to them, in performing their public duties. Third, the courts have been ousted from being able to legally enforce the budgets and 2050 target if breached, past the point of issuing a declaration. A declaration will be ineffective, and there is no good reason as to why the courts should not retain their discretion to select from a range of remedies on a case-by-case basis. This privative clause should be removed.

Ms Adern is right. Mitigation is within our grasp. So may New Zealand now have the bravery to implement the necessary changes, and put meaningful legislation in place.

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