The 1.5° Cuckoo In The Nest

The primary purpose of the Climate Change Response Act 2002 is "to enable New Zealand to meet its international obligations under the UNFCCC Treaty and the Kyoto Protocol". As yet, there is no reference to the country's more recent obligations under the 2015 Paris Agreement.

The 'Zero Carbon Bill' seeks to repair this omission by adding:

"provide a framework by which New Zealand can develop and implement clear and stable climate change policies that contribute to the global effort under the Paris Agreement to limit the global average temperature increase to 1.5° Celsius above pre-industrial levels;"

Curiously, the Bill omits all of New Zealand's international obligations under the 25-page Paris Agreement, except for one cherry-picked portion of one cherry-picked sentence.

The selected sentence is taken from Article 2 of the Agreement:

"This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

- (a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
- (b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and
- (c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development."

The Bill creates irreconcilable conflicts in that it implies that New Zealand need only comply with *part* of an international agreement that has been ratified by Parliament. A long-established principle of statutory interpretation holds that the express mention of only one part of a document denotes the exclusion of the rest of that document.

Few New Zealanders will understand why the Bill ignores (or implicitly repeals) the 2°C figure that has permeated climate diplomacy since 1996 and is the sole "target" mandated by the Paris Agreement. Despite the Agreement's lack of legal force, the international community has firmly declared that this level will be "held"

The contrasts with the reference to 1.5°C (a last-minute addition at COP21), which merely urges signatories to "pursue efforts" to do even better. It is not a target. It is merely aspirational and there is no language to suggest that anyone expects it to be achieved.

Wording conflicts

The Bill's wording causes drafting problems in that it relies upon terms such as "pre-industrial levels" and "global average temperature increase" that are not defined in the New Zealand Act and gain their meaning only by a reading of the Paris Agreement.

A further problem is that having two different sets of wording to describe what is presumably the same aspiration can only create future disputes and debates. If Parliament intends to respect the Paris Agreement, as it has previously averred, then the least confusing approach is to simply say so.

There can be no objection to New Zealand mimicking the 1.5°C aspiration in its domestic legislation, as long as its context remains unchanged. The way to do this is to amend clause 4 of the Bill to add "the Paris Agreement" into s 4(1)(a) of the existing Act and to replace the current wording of the Bill with:

"provide a framework by which New Zealand can continue to develop and implement clear and stable climate change policies that contribute to global efforts under the Paris Agreement;"

Zero prospects of 1.5°C

As the IPCC's SR1.5 finds the earth has already warmed by 0.87°C since pre-industrial times (ie 1875), it is currently some 0.6°C short of the aspired level of 1.5°C. Projecting forward the warming rate of 0.13°C/decade that has been observed over the past 40 years, one might expect this level to be reached around 2060.

However, assuming a combination of worst-case scenarios, SR1.5 points out that the GMST could increase by 0.6°C over the next 20-30 years. To permanently avert that possibility, CO2 emissions would need to decline by about 45% from 2010 levels by 2030. As pointed out <a href="https://example.com/her

- i) just three countries, China, USA and India, account for more than 50% of the world's emissions.
- ii) China has made it clear that its emissions will *increase* by 50-100% by 2030 and India's emissions are expected to treble during 2015-30. Both feel fully entitled to take these positions and will not be moved from them.
- iii) If China and India are to jointly produce about 65% of worldwide emissions by 2030, it is arithmetically impossible for the recommended 45% reduction to occur.
- iv) aggregate NDCs under the Paris Agreement amount to a 30% *increase* by 2030, which SR1.5 fears could eventually lead to 3°C warming but very few countries are even trying to meet their stated goals.
- v) SR1.5 models require clean energy investment of \$48 trillion by 2035. Even the interest bill (at 5%pa) on this unimaginable figure would exceed total world investment in childhood education and environmental protection combined. The costs would massively exceed the benefits.

Impact of 0.15°C

SR1.5 expects that the potential risks of species extinction and weather extremes, as well as decreases in food supply, health and economic growth, will be greater at the 1.5°C level than at the 2°C level. While this appears to be a commonsense conclusion, it does not appear possible to put any statistical probabilities on those risks.

Much of the media hype about SR1.5 is not borne out by its reported data. In regard to eustatic sea level rise, the climate change aspect which causes most concern:

"By 2100, global mean sea level rise is projected to be around 0.1 metre lower with global warming of 1.5°C compared to 2°C (medium confidence)." [0.1 m = 4 inches.]

Most integrated assessment models have concluded that relatively minor additions to the current GMST (up to about 2.2°C) would bring many additional benefits that would likely outweigh the additional costs. The SR1.5 report does not touch upon any of those benefits.

Some climate scientists, such as Dr Judith Curry have pointed out that:

"Over land, we have already blown through the 1.5C threshold if measured since 1890. Temperatures around 1820 were more than 2C cooler."

As the GMST rise of more than 2°C has already been experienced during the 1820-2000 period (according to Berkeley Earth) and coincided with unprecedented advances in human welfare, many feel that this hard empirical evidence is more persuasive than the predictions of unvalidated computer models.

Status of SR1.5

Insofar as the 2018 'Special Report' appears under the aegis of the IPCC it must be taken seriously. But its 'Summary for Policymakers' was not authored by scientists and appears in several important respects to conflict with "The Physical Science" (WG1) report of AR5 as well as the draft version of AR6. Nicholas Lewis discusses some of those differences here.

The Special Report was not peer-reviewed in the manner of Assessment Reports and its most extravagant claims are not supported by any cited authority.

The focus and flavour of the report might be gleaned by some of the following statistics from just one chapter¹:

- The word "poverty" appears 151 times (and another 94 times as page headers)
- The word "inequalities" appears 54 times (+ 94 page headers)
- The words "inequality" and "gender" each appear 45 times

Conclusion

In other countries, particularly the USA² and Australia, partisan lobbying for adopting 1.5°C as some form of target have proven to be highly divisive. If the New Zealand objective is to achieve an all-party consensus, it would seem vastly preferable to adhere to the 'official' target of 2°C.

¹ Chapter 5: "Sustainable Development, Poverty Eradication and Reducing Inequalities". Lead author, New Zealander Bronwyn Hayward, an academic political scientist.

² eg The Ocasio-Cortez "Green New Deal".