

## **Submission to the Ministry for the Environment: Climate Change Consultation**

**For decades we have read hundreds of scientific reviews that refine and define our understanding of climate change, until any doubt about its veracity is specious. We have watched as vested interests and curious belief systems strive to deny our responsibility for the effects we have caused, thus delaying a considered and effective response.**

Let's be clear: **More than 97% of peer-reviewed papers by climatologists between 1991 and 2011 agreed with the consensus that humans are causing global warming** (Skeptical Science's The Consensus Project 2013) (1). That is a ratio of 30:1 and that '1' is likely to be made up largely of industry-backed research. The 'human cause' position is also **backed by more than 80 national academies of science, including the Royal Society of NZ.** Despite letter-to-editor writers, or the likes of Australian PM Tony Abbott, the science is overwhelming.

Worryingly, the **International Panel on Climate Change estimates the average global temperature could increase by as much as 5.4C by the end of this century.** That portends of sea-level rise of 35m (some say enough, for example, to practically cleave Australia in two) and the abandonment, or relocation, of many of New Zealand's (and the world's) cities and towns. Shifting urban areas, town centres, sea and air ports, as well as vital infrastructure such as roads, sewerage and water will cost many, many billions of dollars, and at a time when the chances of human survival look bleak.

**The costs could be mitigated by setting firm and actionable limits now. As the Stern Review stated: 'The benefits of strong, early action on climate change outweigh the costs'. (2)**

**There is no point in giving people advice in how to cut their emissions if the Government doesn't take the lead. China and the United States led the way recently in a historic deal to curb their emissions.** The take-home point of this deal, though under-reported in the media, is that the Chinese Government fears global warming. Although estimates vary, some experts are predicting that the superpower's food production will plummet by 20-30% by 2050 - and that it will not be able to feed itself by 2030. Rightly, China does not want to face the prospect of a starving nation. To some, this might sound like a huge trade advantage to NZ and another potential bonus for the farm sector. But, **dairying will rapidly become more challenging** in the 'tropical' North Island and, with bananas and coconuts not quite reaching full production, it might not be the relentlessly optimistic picture being presented by some quarters. As well, **NZ's geographical shape and location present challenges to both agriculture, horticulture, viticulture, aqua-cultures**

**and biodiversity.** It is long and narrow, and covers a wide range of latitudinal zones, from subtropical to sub-Antarctic. This means the country offers narrow zones for growing specific produce, and will require an immense, rapid and unprecedented land-use change.

**There is no problem for us and our planet that is more important and urgent than this.**

A recent article (3) -- indicated that **in NZ there has been a 42% rise in net Greenhouse Gas (GHG) emissions between 1990 and 2013.** Gross GHG emissions for this same period rose 21% - the fifth highest per capita amongst 40 developed countries. The **incumbent government has pledged a 5% reduction in NZ's GHG emissions between 1990 and 2020,** a trivial figure, and it is very unlikely that they will even meet that, judging by the above figures.

In contrast the EU have pledged to cut their GHG emissions by “at least” 40% on their 1990 levels by 2030, and Switzerland by 50%. This “at least” 40% pledged by the EU is the minimum contribution required to keep the planet under 2 degrees C of global warming.

**We know of only one habitable planet: ours.**

**Climate change caused by humans has begun a process likely to turn our blue planet into a sterile, rock-covered sphere.**

**The sooner this problem is addressed, the less it will cost and the less injury to our biosphere will result.**

**There is nothing – not politics, not industries, not human wars and whims – more important than ensuring it remains habitable not just for humans but for the entire biosphere.**

**New Zealand, in the past a leader of nations, must act decisively now.**

1. <http://theconsensusproject.com/>
2. [http://www.wwf.se/source.php/1169157/Stern%20Report\\_Exec%20Summary.pdf](http://www.wwf.se/source.php/1169157/Stern%20Report_Exec%20Summary.pdf)
3. <http://www.popsci.com/technology/article/2010-09/can-you-save-house-end-world>
4. <http://cleanenergycanada.org/wp-content/uploads/2015/02/Clean-Energy-Canada-How-to-Adopt-a-Winning-Carbon-Price-2015.pdf>
5. [http://www.wwf.se/source.php/1169157/Stern%20Report\\_Exec%20Summary.pdf](http://www.wwf.se/source.php/1169157/Stern%20Report_Exec%20Summary.pdf)

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