



To: Professor Ross Garnaut
cc: Prime Minister Kevin Rudd
cc: The Hon Wayne Swan, Treasurer
cc: Senator the Hon Penny Wong, Minister for Climate Change and Water

Dear Professor Garnaut,

An Open Submission to the Garnaut Review

Climate change is the most important issue that our generation faces. The tide has turned and Australians are demanding action. The question that remains is how fast can we act?

CANA is a network of organisations working together to fight climate change. Established in 1998 our 50 member organisations now represent over 600,000 Australians. We work to encourage action to achieve the ultimate global objective of The United Nations Framework Convention on Climate Change, which Australia ratified in 1994:

“...stabilisation of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.”

Urgent action is needed in Australia and internationally if we are to achieve this. We urge you to approach your task with a vision of Australia leading the global efforts and doing everything within our power to address climate change. We note that the Garnaut Review Interim Report contained much that was positive. In particular the emphasis on the benefit that Australia would derive from a strong global response to climate change, and that by being a leader Australia could play a positive role in bringing this strong global response to climate change to fruition.

The IPCC has spelled out the consequences of not acting fast enough on climate change. Already the average world temperature has increased by 0.74°C above pre-industrial levels.¹ Droughts around the world have grown longer and more intense, there have been more heat waves, tropical cyclones have increased in intensity and severity, and the Arctic sea ice has begun to melt. Further warming of 1.1 to 6.4°C is expected to occur this century, if we don't take urgent action to reduce our emissions.²

If average world temperature is allowed to increase beyond 2°C above pre-industrial levels, billions more people will face water stress, bleaching of coral reefs will increase and floods and storms will threaten communities globally.³

The 2007 IPCC report shows an average temperature increase of just 2–3°C would result in:

- Melting glaciers increasing risks of flood during wet seasons and reducing water availability in dry seasons for one-sixth of the world's population, predominantly on the Indian sub-continent, parts of China and in the Andes in South America,

1 IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, AUTHORS?? p5

2 Ibid, p13, relative to 1980-1999 temperatures

3 IPCC, 2007: Summary for Policymakers. In: *Climate Change 2007: Impacts, Adaptation and Vulnerability. Contribution of Working Group II to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change*, M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden and C.E. Hanson, Eds., Cambridge University Press, Cambridge, UK, p7-22.

- Increased worldwide deaths from malnutrition and heat stress,
- Vector-borne diseases such as malaria and dengue fever becoming more widespread if effective control measures are not instituted,
- Population displacement due to rising sea levels, heavier floods and more intense droughts,
- Increased vulnerability of ecosystems, with as many as 15–40 per cent of species facing extinction.

Australia is the developed country most at risk of dangerous climate change. The CSIRO has warned that warming of between 2-3 °C could impact Australia negatively in many ways, including⁴:

- 97% of the Great Barrier Reef bleached every year,
- 80% loss of Kakadu freshwater wetlands,
- 40% reduction in livestock carrying capacity of native pasture systems,
- a 10%, or more than 10% in some regions, increase in fire danger across much of Australia,
- 20-30% increase in tropical cyclone rainfall,
- 5-10% increase in tropical cyclone wind speeds.

The impacts of a 2°C rise in temperature are clearly unacceptable. We must therefore commit to doing our fair share to keep global average surface temperature rises as far as possible below 2°C (relative to pre-industrial levels).

The European Union has acknowledged the need to keep warming below 2°C:

“Once the global temperature increase exceeds 2°C, climate impacts on ecosystems, food production and water supply are projected to increase significantly and unexpected response of the climate becomes more likely and irreversible catastrophic events may occur.”⁵

The EU has subsequently committed to reduce its emissions 30% below 1990 levels by 2020, provided other developed countries also adopt fair targets.

Our Pacific Island neighbours have also called for climate change to be kept below 2°C:

“Any package of mitigation-related activities must be sufficient to ensure that long-term temperature increases are stabilized well below 2 degrees Celsius. Even a 2°C increase compared to preindustrial levels would have devastating consequences on Small Island Developing States (SIDS) due to resulting sea level rise, coral bleaching, coastal erosion, changing precipitation patterns and the impacts of increasingly frequent and severe weather events.”⁶

In order to keep warming as far below 2°C as possible, we must have a long term goal of stabilising global concentrations of CO₂ equivalent at or below 400 parts per million (ppm) in the atmosphere. This will give us a good chance of avoiding 2°C ⁷.

Developed countries have been responsible for the bulk of greenhouse gas emissions to date and have the greatest capacity to act. Developed countries must therefore take the lead in reducing their emissions.

The IPCC has identified that in order to stabilise temperature rise between 2 and 2.4°C, and CO₂

⁴ Abridged from CSIRO's *Climate Change Impacts on Australia and the Benefits of Early Action to Reduce Global Greenhouse Gas Emissions*, Preston, BL and Jones RN, February 2006

⁵ European Union (2005) *Winning the battle against climate change*. MEMO/05/42 Page 4

⁶ AOSIS submission to the fourth workshop under the Dialogue on Long Term Cooperative Action to address climate change by enhancing implementation of the Convention

⁷ 43 – 92% change of avoiding 2°C increase, from the Stern Review, 2006, *The Economics of Climate Change*, HM Treasury, London, accessed at http://www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm, March 2007.

equivalent concentrations to between 445-490 ppm, developed countries must reduce emissions by between 25% and 40% below 1990 levels by 2020.

Table 1. Characteristics of greenhouse gas stabilization scenarios

Category	CO ₂ equivalent concentration (parts per million CO ₂ equivalent)	Global mean temperature increase above pre-industrial at equilibrium using 'best estimate' climate sensitivity ^a (°C)	Change in global CO ₂ emissions in 2050 (% of 2000 emissions)	Range of reduction in GDP in 2050 because of mitigation (%)	Allowed emissions by Annex I Parties in 2020 (% change from 1990 emissions)	Allowed emissions by Annex I Parties in 2050 (% change from 1990 emissions)
I	445–490	2.0–2.4	-85 to -50	Decrease of up to 5.5	-25 to -40	-80 to -95
II	490–535	2.4–2.8	-60 to -30			
III	535–590	2.8–3.2	-30 to +5	Slight gain to decrease of 4	-10 to -30	-40 to -90
IV	590–710	3.2–4.0	+10 to +60	Gain of 1 to decrease of 2	0 to -25	-30 to -80
V	710–855	4.0–4.9	+25 to +85			
VI	855–1,130	4.9–6.1	+90 to +140			

Source: IPCC. Fourth Assessment Report (AR4), Contribution of Working Group III. Columns 1–4, table SPM.5; column 5, table SPM.6, columns 6 and 7, box 13.7.

^a According to the AR4, the best estimate of climate sensitivity is 3 degrees Celsius.

Table source: UNFCCC, *Synthesis of information relevant to the determination of the mitigation potential and to the identification of possible ranges of emission reduction objectives of Annex I Parties*, FCCC/TP/2007/1, 26 July 2007

The IPCC has yet to establish a pathway to stabilise temperature rise below 2°C. In the absence of such a pathway Australia must aim for at least the top end of 25 to 40% emission reductions below 1990 levels by 2020. This pathway would place Australia in a position to be able to adjust its emissions trajectory further downward, if future science indicated that a more stringent target was required.

Whilst these emission reduction targets are ambitious, they are achievable without significant economic cost if we act quickly. The recent McKinsey report, *An Australian Cost Curve for Greenhouse Gas Reduction*, shows that:

- A significant reduction in Australian GHG emissions is achievable - 30% below 1990 levels by 2020 and 60% by 2030 without major technological breakthroughs or lifestyle changes,
- Reducing emissions is affordable - with an average annual gross cost of approximately \$290 per household to reduce emissions in 2020 to 30% below 1990 levels. This compares to an expected increase in annual household income of over \$20,000 in the same period.

The effects of climate change will, of course, impose a cost on our economy. The lower our efforts to mitigate, and the higher the temperature increase, the higher the costs of climate change will be. A recently released interim paper from ABARE supports this, showing that over time (before the end of this century) Australia's economic output will be 5% lower as a result of climate change if we take no mitigation action⁸. This is consistent with earlier reports, including one from The Allen Consulting Group⁹, that shows there are economic advantages in taking early, strong mitigation action, not least a substantial growth in employment.

⁸ In the context of overall economic growth, interim report, ABARE, Global Integrated Assessment Model, Gunasekera et al, in Australian Commodities, March Quarter 08.1

⁹ The Allen Consulting Group (2006), Deep Cuts in Greenhouse Gas Emissions. Economic, Social and Environmental Impacts for Australia, Report to the Business Roundtable on Climate Change, Melbourne

The CANA members listed overleaf therefore urge you to:

- Recommend that Australia take a leadership position in the global effort to keep the climate safe, by calling for a global commitment to keep the global temperature rise as far below 2°C as possible (compared with pre industrial temperatures) and commit to a long term target of keeping greenhouse gas concentrations at or below 400ppm of CO₂e.
- Create a pathway for Australia to reduce its own emissions by at least the top end of the 25-40% by 2020 range recommended by the IPCC (from 1990 levels).
- Ensure equity and justice are enshrined in the share of the global climate target that Australia adopts, and incorporated in the policies and programs that Australia adopts to implement its targets, ensuring that the burden is fairly shared between high and low income people.
- Focus on truly sustainable, long-term solutions like renewable energy and avoid false solutions, like nuclear, that have major negative environmental, social and economic impacts.
- Consider fully not only the costs of action but the cost of inaction. This should include non-market values, such as the value Australians place on healthy ecosystems such as the Great Barrier Reef and Kakadu.

In closing, on behalf of CANA members, I thank you for your valuable contribution to Australia's climate change analysis and response.

Yours sincerely



Julie-Anne Richards
Executive Officer
Climate Action Network Australia

Climate Action Network Australia members include:

Aidwatch	Locals Into Victoria's Environment (L.I.V.E)
Arid Lands Environment Centre	Mineral Policy Institute
Association for Berowra Creek	Moreland Energy Foundation
Australian Conservation Foundation	National Parks Association of NSW
Australian Marine Conservation Society	North Coast Environment Council
Australian & New Zealand Solar Energy Society	Oxfam Australia
Australian Student Environment Network	Queensland Conservation Council
Australian Youth Climate Coalition	Rainforest Information Centre
Cairns and Far North Environment Centre	Rising Tide Newcastle
Catholic Earthcare Australia	Sisters of the Good Samaritans
Central West Environment Council	Social Action Office
Climate Action Newcastle	Sunshine Coast Environment Council
Climate Action Now Wingecarribee	Sustainable Living Tasmania
Climate Change Australia	Tasmanian Conservation Trust
Conservation Council of the South East Region and Canberra	Tear Australia
Conservation Council of South Australia	The Wilderness Society
Conservation Council of Western Australia	Total Environment Centre
Edmund Rice Centre	Uniting Church, The Justice and International Mission
Environment Centre of the Northern Territory	Uniting Justice
Environment Victoria	Urban Ecology Australia
Greenpeace Australia Pacific	World Vision Australia
Institute for Sustainable Futures	WWF - Australia
Jubilee Australia	