3 July, 2015

Dear Senator Back and Senator Jensen,

We are writing to you with regard to your support for Parliament to "examine the evidence" on climate change before agreeing to any post-2020 emissions cuts.

The evidence of climate change has been available for all to see for a number of decades and as understanding increases, we are only becoming more acutely aware of the threat we face.

The time for delay is over. The question now is how we in Australia should act efficiently and decisively to rapidly cut carbon emissions and adapt to protect and strengthen our environment and economy.

In the next few weeks, the government will lay out its post-2020 climate policy. It is of great importance that the decisions taken are based on the best science available today. Not to, is to imperil our people and our country.

The most comprehensive ever assessment of climate change research was released in November 2014 by the Intergovernmental Panel on Climate Change (IPCC); the most authoritative international body on climate science, bringing together over 800 lead authors, from more than 80 countries.

It should be noted that Australia signed off on this report and the many previous IPCC Reports.

The IPCC does not ‘write the science’ but reviews all the available scientific literature to reach its conclusions and consensus. It is about the most robust scientific endeavour that human beings have ever undertaken.

Key findings from the IPCC’s latest report – the Fifth Assessment Report – include:

- Human influence on the climate system is clear, and recent anthropogenic emissions of greenhouse gases are the highest in history.
- The continued emission of greenhouse gases will cause further warming and long-lasting changes in all components of the climate system, increasing the likelihood of severe, pervasive and irreversible impacts for people and ecosystems.
- Problems such as ocean acidification are occurring at a rate that is faster than anything seen over the past 65 million years, and will take 10,000 years at least to reverse.
- To provide a two-in-three chance or higher of keeping warming below 2°C, most fossil fuels cannot be burned. This ‘guardrail’ has been adopted by the international community through the Copenhagen Accord.
- The impacts and serious risks for our people escalate beyond the 2oC guardrail.
In urban areas, climate change is projected to increase risks for people, economies and ecosystems, including risks from heat stress, storms and extreme precipitation, inland and coastal flooding, water scarcity, sea-level rise, and storm surges.

- Rural areas are expected to experience major impacts on water availability and supply, food security, infrastructure, and agricultural incomes.

- Without additional efforts to reduce emissions, global emissions growth will continue. If global emissions continue to rise on a "business as usual" basis global temperature will rise between 3.7 to 4.8 degrees C above preindustrial levels by 2100. This level of temperature increase would be catastrophic. That means we are heading towards catastrophic temperature rise.

- We have the ability to tackle climate change and to build a more prosperous, sustainable future.

The scientific consensus on climate change and the urgency of need to take action to avoid its worst impacts cannot be overstated. As outlined above, the scientific consensus is that we face dangerous and unmanageable risks if we continue on the current pathway. Any uncertainty is not whether or not it is occurring, but rather, the nature of when and where its impacts will be felt.

What many are now discussing is how much faster the forecast changes are unfolding around the world and the impacts that this is having on the intertwined global economy.

On 7 July, experts from around the world, including Australia, will gather at the “Our Common Future Under Climate Change” conference in Paris to discuss the most up-to-date science on the issue.

Rather than further delay much needed action by implementing an unnecessary re-examination of the evidence in Parliament, we, the Australian scientists attending this conference, and others with world-class expertise, would welcome the opportunity to instead brief you and your colleagues on the latest science and answer any questions you may have.

Dealing with climate change is one of the most significant challenges for Australia. As members of the scientific community, we are sincere in our desire to foster understanding of climate change and to provide the information which you, our representatives, require to shape evidence-based policy.

We look forward to your response.

Yours sincerely,
Professor Xuemei Bai, Professor of Urban Environment and Human Ecology, Fenner School of Environment and Society, ANU

Dr. Mark Diesendorf, Associate Professor and Deputy Director, Institute of Environmental Studies, UNSW.

Professor Dave Griggs, Director of the Monash Sustainability Institute.

Professor Ove Hoegh-Guldberg, Director of the University of Queensland Global Change Institute.

Professor Lesley Hughes, Distinguished Professor of Biology at Macquarie University and an expert on the impacts of climate change on species and ecosystems.

Professor Anthony Jakeman, Director, Integrated Catchment Assessment and Management (iCAM) Centre, Fenner School of Environment and Society, ANU College of Medicine, Biology and Environment.

Associate Professor Frank Jotzo, Crawford School; Director, Centre for Climate Economics & Policy; Director, Resources Environment and Development (RE&D) program; ANU Public Policy Fellow.

Professor David Karoly, Atmospheric Science in the School of Earth Sciences and the ARC Centre of Excellence for Climate System Science at the University of Melbourne.

Dr Lorrae Van Kerkhoff, Senior Lecturer and Research Fellow, Fenner School of Environment and Society, ANU College of Medicine, Biology and Environment.

Professor Peter Newman AO, Professor of Sustainability at Curtin University and Lead Author for Transport on IPCC WG3.

Professor Will Steffen, Adjunct Professor at the ANU and the University of Canberra.

Professor Ros Taplin, Research Director, The Australian Centre for Sustainable Mining Practices, ACSMP.

Dr. Bob Webb, Senior Fellow, ANU Climate Change Institute and Fenner School of Environment and Society.