

Science input 'a must' for climate-policy decisions

Climate change monopolised national media headlines in July, with the release of a draft emissions trading review report by Professor Ross Garnaut, the government's independent advisor on climate change, and the Federal Government's own Green Paper announcing plans for a carbon pollution reduction scheme.

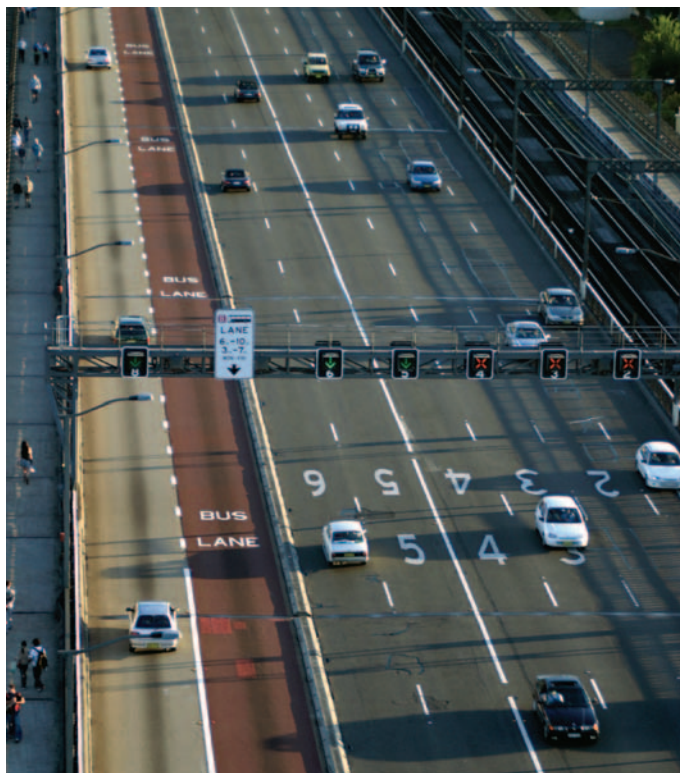
In his Draft Report,¹ Professor Garnaut warned that by 2100, under a business-as-usual scenario, Australia faced a 92 per cent reduction in irrigated agriculture in the Murray–Darling Basin, loss of the Great Barrier Reef, critical water shortages and significant economic impacts.

'Climate change is ... harder than any other issue of high importance that has come before our polity in living memory,' wrote Garnaut. 'We will delude ourselves if we think that scientific uncertainties are cause for delay.'

Dr Roger Jones from CSIRO Atmospheric and Marine Research said CSIRO researchers 'worked very hard with the Garnaut Review to help the secretariat get across the science – they had a terrifically steep learning curve to climb'.

'One of the key issues is the management of uncertainty: how the climate models work and what conclusions can be drawn from their results,' said Dr Jones.

'CSIRO scientists also helped update the review team on advances in our knowledge since the release last year of the IPCC Fourth Assessment Report,² in particular how temperature, sea level, emissions and atmospheric concentrations are increasing at the upper limit of the IPCC projections.'



The government says it will reduce fuel excise to counteract price rises caused by emissions trading, against advice from the Garnaut Review.

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The government's carbon pollution reduction scheme outlined in the Green Paper³ will cover about 75 per cent of Australia's emissions generated by the 1000 businesses that emit more than 25 000 tonnes of carbon a year. Under the scheme, most of these businesses will be required to buy permits and monitor and report their emissions.

While electricity generation, transport, emissions from oil and gas production, industrial processes and waste will be included in the scheme, environment groups were unhappy that aluminium and cement industries and coal-fired energy generators will receive assistance for the first few years of the scheme. Agriculture will not be included

until 2015, while deforestation was excluded altogether.

The media highlighted the government's decision to 'soften the blow' of including petrol in the scheme by reducing fuel excise to counteract price rises caused by emissions trading. The move went against the advice of Garnaut, who warned that 'if you start making exceptions, there is no logical boundary to end the exemptions.'

Climate Institute CEO John Connor praised the scheme's 2010 start date but said the government has 'fallen short at a few hurdles'.

'What is not welcome is ripping out billions of dollars from the Climate Change Action Fund by reducing the petrol excise and it's very unlikely this will ever be

replaced. This means losing key funds to invest in areas such as public transport.

'It sent the wrong signal to consumers and business at a time when there was a need to become more fuel-efficient.'

Deakin University's Dr Matthew Clarke – author of the forthcoming book *Post-Kyoto: Designing the Next International Climate Change Protocol* – says the international community's response to climate change 'must be based on scientific knowledge', and ensure that allocation of future emission rights is on a per-capita basis.

'If Australia used this approach, it would need to reduce its current emissions by over 90 per cent by 2050 – a far cry from that currently being recommended politically,' he said.

Climate scientist Professor Barry Brook from the University of Adelaide says that in the government's Green Paper 'some parts of the science are crudely handled.'

'For instance, the effect of methane as a climate forcing agent is downplayed. The agricultural sector will not initially be included – yet this is the sector that produces most of the methane, and will be responsible for more climate warming during the next two decades than all of Australia's coal-fired power stations.'

'If I had just one recommendation to make to the government before this evolves into a White Paper and is legislated, it would be this: get the Australian scientific community more actively and formally involved in the next stage of this crucial policy strategy.'

● **Mary-Lou Considine**

¹ 'Garnaut Climate Change Review: Draft Report,' June 2008, Commonwealth of Australia. www.garnautreview.org.au

² IPCC (2007) 'Climate Change 2007: Synthesis Report.' Contribution of Working Groups I, II and III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change. www.ipcc.ch/ipccreports/ar4-syr.htm

³ 'Carbon Pollution Reduction Scheme: Green Paper,' July 2008, Department of Climate Change, Commonwealth of Australia. www.climatechange.gov.au/emissionstrading