

## Climate Change and Australian Agriculture

This summer Australia broke over 157 climate records. In March 2014 the fifth Intergovernmental Panel on Climate Change (IPCC) report was released and stated that climate change has already caused “impacts on natural and human systems on all continents and across the oceans”. The IPCC’s five year study into global climate impacts message was clear: we need to rapidly cut pollution to avoid the worst impacts of climate change.

In regards to rural areas, the report found that there would be complex impacts that go well beyond decreases in yields and production. Rural areas of developing and developed countries share common features of remoteness, market pressure for productivity over resource conservation, and the reliance on sensitive natural resources and ecosystems. It is clear that agriculture and fisheries will feel the negative impacts of climate change, affecting food security and compounding existing issues such as resource degradation.

One of the IPCC’s key findings for Australia was the marked decrease in agricultural production in the Murray-Darling Basin, and south-western and south-eastern Australia, due to severe drying conditions. Reducing the risk in Australia of water shortages, bushfire weather, extreme heatwaves, and decreased agricultural production will depend on how rapidly we are able to reduce carbon emissions locally and globally, and on the how effectively we are able to implement adaptation measures.

As climate change impacts become more pronounced, there will be changes to the way food and fibre can be produced and managed. The impacts will be felt across Australia in varying degrees, and are expected to affect managerial and enterprise efficiencies. Projected impacts include changes to rainfall and temperature patterns, carbon dioxide levels and other climatic variables, that if realised are likely to affect forage, food and fibre yield, animal welfare, and proper ecosystem functioning. The magnitude of these effects emphasises the importance of developing a greater understanding of climate change, and adaptation and mitigation strategies that the Australian agricultural industry can embrace. A greater understanding of climate systems and their impacts will assist farmers in supporting animal welfare and reduce the risk of resource degradation.

As the adverse implications of climate change amplifies the environmental and socioeconomic drivers of food insecurity, it is imperative that we act as a global community to tackle this issue through the 21st century and beyond. Responsible governance will be required at multiple levels to encourage participation, education and longevity of reforms. To achieve food security whilst safeguarding ecosystem stability, there must be a widely shared appreciation of agriculture as a multifunctional strategic land use that can provide: nutritious food; rural development and employment; environmental management; and the sustaining of cultural heritage of agrarian communities.

The Climate Change Authority (CCA), said in February 2014 that Australia should adopt a minimum target of 19% by 2020 and that our current 5% target was out of step with countries including China and the US, who were setting more ambitious targets. The science says we need Australia to reduce our emissions by at least 40% by 2020. Politicians need to commit to a higher target for reducing carbon pollution, in line with the latest science, and to protect the future for generations to come.

The full IPCC reports can be accessed from this site: <http://www.ipcc.ch/report/ar5/wg2/>

Yours sincerely,  
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