

Working with the Queensland Government

Walker Institute partnerships

Climate in Australia— the Queensland Government seeks advice from the Walker Institute

Australia is in the grip of its worst drought on record. Drastic water restrictions are in place and the 2006/2007 winter crop yields were the lowest for over 10 years. Is this a sign of climate change?

The impacts of climate on sectors such as water and agriculture, and diverse business interests, have reached unprecedented levels in the last few years. Adapting to climate is now of pressing concern for the future of the country.

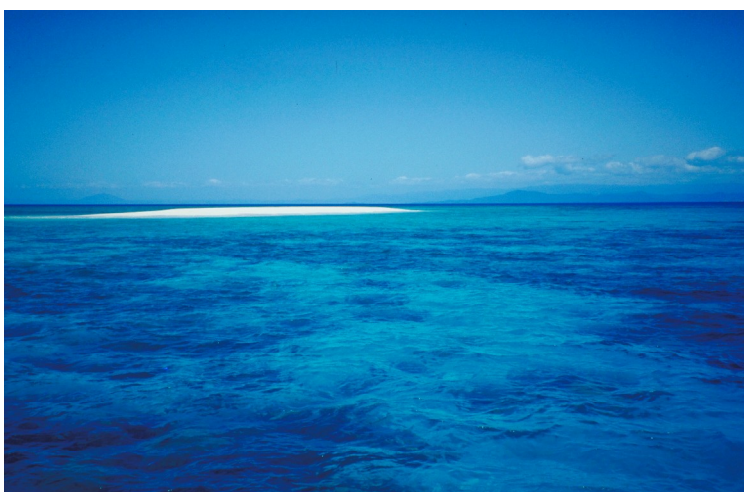
The State of Queensland has recognised the need for high-level expertise in climate science from the international scientific research community, and hence has formed a collaboration with the Walker Institute.

The Queensland Government has targeted the Walker Institute as an international partner because of its expertise on the impacts of climate on crops and water resources, in tropical weather systems, like El Niño and typhoons, and in the implications of hazardous weather for the insurance industry.

"This is a major step in addressing the critical issue of climate change. The objective of the collaboration is to support international research activities in climate, agricultural and hydrological systems." Premier Beattie.



Prof Gordon Marshall (left), Vice-Chancellor of the University of Reading and Mr Peter Beattie (right), Premier of Queensland, at the formal ceremony to agree research collaboration with the Walker Institute, March 2007.



Queensland's Great Barrier Reef: an important biological and ecological environment threatened by changes in climate.

Our expertise fits their needs:

- Impacts of climate on crops and water resources.
- Tropical weather systems.
- Extreme events implications.
- Modelling capabilities.

The Walker Institute contribution to this collaboration

Our scientists will be working with the Queensland Climate Change Centre of Excellence, recently established by the Queensland Government, to improve climate forecasts - for anything from a month to many decades ahead - and to develop the ability to cope with the impacts on agriculture, water resources and business sectors, like insurance.

Dr Tim Wheeler, who is leading the Walker Institute's involvement in the project says:

"Our expertise in climate and its effects on agriculture, land-use and water resources will be used to help manage the substantial risks of climate for society and businesses in Queensland. This research collaboration illustrates well the international standing of the University of Reading's Walker Institute.

We're improving climate models so they are more realistic in the tropics, from individual tropical rain clouds to the much larger scales of the Australian/ Asian monsoon and El Niño.

With improved models we can assess with more confidence whether man-made climate change is contributing to the current drought and improve the quality of climate forecasts for the coming season to many decades ahead.

Scientists involved will also be looking at flooding and drought risk under different climate conditions, the impact on water quality and the implications for water resources.

Agriculture is a major part of Queensland's economy. Experts from the Department of Agriculture, at the University of Reading, will work with climate modellers to assess the impact of climate on Queensland's crops.

The insurance industry are concerned with typhoons, high winds and flooding over northern Queensland. Higher resolution climate models, being developed at the Walker Institute, will be used alongside high resolution observational data to improve seasonal forecasts of the likely location, frequency and severity of a range of hazardous weather events and to assess how such events might change over the coming decades."



Dr Tim Wheeler is leading the Walker Institute involvement in the Queensland partnership.



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