



MEDIA RELEASE

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Australian first in climate projections

The results of fine-scale climate modelling by Tasmanian scientists will be launched today in a report that projects changes to the climate on a local scale out to the end of this century.

The *Climate Futures for Tasmania: General Climate Impacts Technical Report* is the first part of a project hosted by the Antarctic Climate and Ecosystems Cooperative Research Centre (ACE CRC), which is based at the University of Tasmania.

The State Climate Change Minister, Nick McKim, will launch the report at the Climate Futures for Tasmania Outcomes and Opportunities Summit.

An Australian first, the report's fine-scale climate modelling gives Tasmania the jump on the rest of Australia (and most of the world) in having realistic climate change projections to inform decisions about the future at a local scale. It is Tasmania's most important source of climate change data at a local scale.

Among the report's findings:

- Tasmania's temperature is projected to rise by about 2.9 degrees Celsius under high greenhouse gas emissions (the path that is being tracked at present) and 1.6 degrees Celsius under low greenhouse gas emissions. This is less than the projected global average temperature rise.
- There will be a steadily emerging pattern of increased rainfall over the coastal regions, and reduced rainfall over central Tasmania, but there is no significant change in the projected total annual rainfall for the state as a whole.
- A significant increase in pan evaporation of up to 19% is projected, which is likely to impact on aspects of water availability. The increase in evaporation is greater in the north and west, and lower in the south and east.
- Tasmanian temperatures have risen since the 1950s but at a slower rate than mainland Australia.
- Tasmanian rainfall has declined since the 1970s.

The *Climate Futures for Tasmania General Climate Impacts Technical Report* is the first of seven technical reports to result from the collaborative research project, Climate Futures for Tasmania. The remaining six will focus specifically on areas such as agriculture, water and catchments, impacts on tide and sea level events, severe wind hazards, and extreme events. The results of the scientific modelling will be presented in a way that can be used to guide future decisions for specific areas of the Tasmanian economy.



The CEO of the ACE CRC, Dr Tony Press, said the information from the reports allowed for judgments to be made about managing the impacts of climate change over this century, and the investments required in adaptation and mitigation.

" *Climate Futures for Tasmania* provides the first comprehensive, detailed, 'downscaled' climate projections for any state in Australia," Dr Press said.

In the course of the project, six global climate models were 'dynamically downscaled' to a 10-kilometre grid over Tasmania, so that the complex landscapes and their interactions with weather are taken into account in the modelling process. The models were then tested against real climate data (for example, temperature, rainfall, humidity and evaporation) from detailed weather observations taken across Tasmania since 1960.

The *Climate Futures for Tasmania* project was funded by a consortium of partners including the Australian and Tasmanian governments, and was carried out by scientists at the Antarctic Climate and Ecosystems Cooperative Research Centre at the University of Tasmania.

The Climate Futures for Tasmania project was funded primarily by the State Government of Tasmania, the Australian Government's Commonwealth Environment Research Facilities Program and Natural Disaster Mitigation Program. The project also received additional funding support from Hydro Tasmania.

Scientific leadership and contributions were made from a consortium of organisations including: Antarctic Climate & Ecosystems Cooperative Research Centre, Tasmania Department of Primary Industries and Water, Tasmanian State Emergency Service, Hydro Tasmania Consulting, Geoscience Australia, Bureau of Meteorology, CSIRO, Tasmanian Partnership for Advanced Computing, Tasmanian Institute of Agricultural Research and the University of Tasmania.

ACE Media Enquiries:

Monday, Oct 11: Miranda Harman 03 6226 2265

Tuesday Oct 12 at the Climate Futures for Tasmania Outcomes and Opportunities Summit: Suzie Gaynor 0427 801 899

The ACE CRC is a unique collaboration between core partners the Australian Antarctic Division, CSIRO, the University of Tasmania, the Australian Government's Department of Climate Change & Energy Efficiency, the Alfred Wegener Institute for Polar and Marine Research (Germany) and the National Institute of Water and Atmospheric Research Ltd (New Zealand) and a consortium of supporting partners. It is funded by the Australian Government's Cooperative Research Centre Program.

The ACE CRC's mission is to understand the crucial role played by Antarctica and the Southern Ocean in global climate, and the impacts of climate change on Australia and the world, and to inform governments, industry, the community and scientists about climate change to guide our future.