The Australian Community Climate Earth-System Simulator (ACCESS)

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The Australian Community Climate Earth-System Simulator (ACCESS) is a coupled climate and earth system simulator to be developed as a joint initiative of the Bureau of Meteorology and CSIRO in cooperation with the university community in Australia.

The key objectives of ACCESS are to create models and modelling outcomes that:

- Assist the Bureau of Meteorology in meeting its statutory requirements in providing the best possible meteorological services;
- Assist CSIRO by providing the best possible science for use in analyzing climate impacts and adaptation, and related fields;
- Meet policy needs in natural resource management and related fields for scientific information and analysis;
- Develop synergy with research in numerical weather prediction and seasonal forecasting;
- Enable climate change scenarios over the 50+ year horizon;
- Provide substantive linkages with relevant University research; and,
- Are world-class, and will enable Australia to meet the long lead-times necessary to contribute appropriate climate projections and scenarios to the Fifth Assessment by the Intergovernmental Panel on Climate Change, which is likely to report around 2012.

Further, ACCESS aims to:

- Focus on the strategic timeframe (typically 7 years) while recognising that decisions on the tactical timeframe (1 to 3 years) will need to meet immediate client needs and be consistent with the overall ACCESS planning;
- Include a fully coupled carbon-cycle model covering terrestrial, ocean and atmosphere systems (incorporating a dynamic vegetation model);
- Provide eventually the opportunity for incorporation of socio-economic processes;
- Meet the information needs of all those interested in impacts of and adaptation to climate change in Australia, such as model output at length and time scales appropriate for simulation of the behaviour of atmospheric, marine, and terrestrial systems;
- Be grounded on well-engineered and realistically achievable software and be supported by high quality IT infrastructure;
- Be flexibly engineered so as to be capable of allowing for fresh and new applications, within the context of a well-defined boundary; and
- Support fulfilling careers for Australian research scientists in related fields.

An ACCESS Blueprint and a Project Plan have now been prepared that define the scope and component of ACCESS. This presentation will provide the current status of the project and future plans.