

# IOCI Stage 3

## Milestone Report No. 2

(For research to the end of 2009)







### IOCI3 Milestone Report No. 2

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### INDIAN OCEAN CLIMATE INITIATIVE STAGE 3 (IOCI3)

#### MILESTONE REPORT 2

#### **FOREWORD**

The Indian Ocean Climate Initiative (IOCI) is a research partnership between the Government of Western Australia, the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and the Bureau of Meteorology (BoM). The Initiative, formed in 1997, investigates the causes of the changing climate in Western Australia and develops projections of its future climate. IOCI formally began its Stage 1 program in January 1998 and Stage 2 started in July 2003. The research agreement for IOCI Stage 3 (IOCI 3) was signed by all parties in March 2008.

The economically important north-west region of the State is a major focus of the research program for IOCI 3. Further work on the climate of the south-west is continuing to infill outstanding knowledge and data gaps identified by the State. For example, the program will draw heavily on the extensive modelling studies carried out as a part of the Fourth Assessment Report of the IPCC (CMIP3, IPCC AR4), and will produce climate change scenarios for both the south-west and north-west at spatial and temporal resolutions that are much finer than those for the CSIRO Climate Change Scenarios released in October 2007.

IOCI Stage 3 is a four-year research programme consisting of four themes:

- 1. Baselines, Predictability of Western Australian Climate and Attribution of Climate Change;
- 2. Current and Future Climate of the North-West, including Extreme Events;
- 3. Very-High Resolution Climate Change Projections for the south-west; and
- 4. Science Leadership and Support.

IOCI 3 is committed to establishing and maintaining state-of-the-art and regionally-specific knowledge of past and projected climate trends in the State of Western Australia, and making such knowledge available in a policy-ready form and for public information processes. The major objectives of the Initiative are:

- 1. To deliver climate research outcomes that will underpin sustainable development in the north-west and south-west regions of Western Australia;
- To enable the State to achieve economic, social and environmental benefits by drawing upon the strategic knowledge and technologies derived from the national climate science programs of BoM and CSIRO;
- 3. To enhance the State's accessibility to the current state of climate knowledge so that informed policy decisions can be reached;
- 4. To build a climate research capacity in Western Australia that is focused on priority issues for the State; and
- To facilitate partnerships that will enable State agencies (and sectoral stakeholders) to integrate IOCI's climate research findings with their assessments of climate impacts, vulnerability and potential adaptation strategies.

The core research is conducted by Australia's Bureau of Meteorology; and CSIRO divisions of Marine and Atmospheric Research; Land and Water; and Mathematics, Informatics and Statistics under the auspices of CSIRO's Climate Adaptation Flagship. Collectively, these research institutions match the funding provided by the Government of Western Australia.

This document presents a summary of the progress made during the second phase of IOCI 3. It includes descriptions of developing insights and interpretative material. A solid foundation for work to be undertaken during the third phase is demonstrated.

The south-west and north-west regions of Western Australia are important frontline areas in national climate adaptation. The products of IOCI, together with parallel initiatives stimulated by IOCI activity, are of regional, national and now international significance. They represent a substantial achievement for a modestly funded research program, and IOCI's researchers will take steps to make elements of this widely accessible.

Hon Hendy Cowan

Chair Indian Ocean Climate Initiative Stage 3 Board

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