

## **CURRICULUM VITAE: IAN MACADAM**

### **Present Role**

Since January 2005 Ian Macadam has provided scientific and computing support to the research activities of CSIRO Marine and Atmospheric Research's Climate Change Impacts and Risk Stream. His responsibilities include running computer simulations, analysing and producing graphical representations of climate data and contributing to consultancy reports and scientific papers. Much of his work is in support of the assessment of storm surge risk under present and future climate conditions. This involves the statistical analysis of extreme events. Ian's other main activity is the generation of projections of key climate variables under future climate conditions. A key challenge in this work is the estimation and presentation of uncertainty in the projections.

### **Previous Employment**

From January 2002 until January 2005 Ian was a member of the UK Met Office's Aviation Outcomes Team. His role was to contribute to the safety and economy of flight by improving the meteorological services provided by the UK Met Office to its aviation customers and by providing additional meteorological information to these customers when they required it. Much of his work was concerned with in-flight icing of aircraft and he project managed and took a leading technical role in a project developing software capable of producing forecasts of aircraft icing and turbulence from the output of the Met Office's Numerical Weather Prediction model.

From October 1998 until January 2002 Ian provided scientific and computing support to the research activities of the Climate Variability Group of the UK Met Office's Hadley Centre. His main tasks were the analysis and presentation of historical climate data. This work included the estimation of trends in temperature time series for the Third Assessment Report of the Intergovernmental Panel on Climate Change. Ian's other activities included the quality control of climate observations and the setting up and monitoring of climate model simulations.

### **Academic Qualifications**

MSc Weather, Climate and Modelling - University of Reading, UK

BSc Physics - Imperial College, London, UK

### **Conferences, Symposia and Workshops Attended**

- Third International Conference on Climate Impacts Assessment, Cairns, Queensland (24-27/07/2006)
- Extreme Sea Levels Stakeholder Consultation Workshop, Hobart, Tasmania (31/05/2006)
- Coastal CRC Symposium, Melbourne, Victoria (26/05/2006)
- Coast to Coast 2006 Conference, Melbourne, Victoria (22-25/05/2006)
- Greenhouse 2005 Conference, Melbourne, Victoria (14-17/11/2005)
- Antarctic Climate and Ecosystems CRC Symposium, Hobart, Tasmania (30-31/08/2005)
- CSIRO Climate Meeting 2005, Surfers Paradise, Queensland (25-25/05/2005)
- Gippsland Coastal Planning Information Sharing Workshop, Pakenham, Victoria (21/05/2005)
- 11th Conference on Aviation, Range, and Aerospace, Hyannis, Massachusetts (04-08/10/2004)
- International In-flight Icing / Ground De-icing Conference, Chicago, Illinois (16-20/06/2003)

### **Present Membership of Committees**

- Greenhouse 2007 Conference Organising Committee
- Australian Meteorological and Oceanographic Society Melbourne Centre Committee
- CSIRO Marine and Atmospheric Research Aspendale Social Club Committee

## Publications

Preston, B.L., Suppiah, R., **Macadam, I.**, and Bathols, J.M., (2006). Climate change in the Asia/Pacific region. CSIRO Marine and Atmospheric Research report for the Climate Change and Development Roundtable.

McInnes, K.L., **Macadam, I.**, and Hubbert, G.D., (2006). Climate change in Eastern Victoria. Stage 3 report: the effect of climate change on extreme sea levels in Corner Inlet and the Gippsland Lakes. CSIRO Marine and Atmospheric Research report for the Gippsland Coastal Board.

Suppiah, R., Preston, B.L., Whetton, P.H., McInnes, K.L., Jones, R.N., **Macadam, I.**, Bathols, J.M., and Kirono, D., (2006). Climate change under enhanced greenhouse conditions in South Australia. CSIRO Marine and Atmospheric Research report for the South Australian Government.

Hennessy, K.J., **Macadam, I.**, and Whetton, P.H., (2006). Climate change scenarios for initial assessment of risk in accordance with risk management guidance. CSIRO Marine and Atmospheric Research report for the Australian Greenhouse Office.

Hennessy, K.J., McInnes, K.L., Bathols, J.M., Ricketts, J., and **Macadam, I.**, (2005). Climate change scenarios for assessing potential impacts on buildings. CSIRO Marine and Atmospheric Research report for BRANZ Ltd.

**Macadam, I.**, McInnes, K.L., Durack, P.J., and Jones, R.N., (2005). Climate change projections for SEDSIM modeling over north-east Australia. CSIRO Marine and Atmospheric Research report for CSIRO Petroleum.

McInnes, K. L., **Macadam, I.**, Hubbert, G.D., Abbs, D. J., and Bathols, J. M., (2005). Climate change in Eastern Victoria. Stage 2 report: the effect of climate change on storm surges. CSIRO Marine and Atmospheric Research report for the Gippsland Coastal Board.

**Macadam, I.**, and Hoad, D.J., (2004). Development of GRIB Icing and Turbulence Products. Internal UK Met Office report.

Watkin, H.A., Scott, T.R., **Macadam, I.**, Radice, L.C., and Hoad, D.J., (2003). Reducing the false alarm rate of a Met Office automatic volcanic eruption detection system. UK Met Office technical report.

**Macadam, I.**, (2002). An assessment of aircraft icing forecasts from the Met Office UK mesoscale and global Numerical Weather Prediction models. UK Met Office technical report.

Contributing author of Observed Climate Variability and Change in Houghton, J.T, Ding, Y., Griggs, D.J., Noguer, M., van der Linden, P.J, Da, X., Maskell, K., and Johnson, C.A., (2001). Climate Change 2001: The Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change.

Folland, C.K., Rayner, N.A., Brown, S.J., Smith, T.M., Shen, S.S., Parker, D.E., **Macadam, I.**, Jones, P.D., Jones, R.N., Nicholls, N., and Sexton, D.M.H., (2001). Global temperature change and its uncertainties since 1861. Geophysical Research Letters, 28, 2621-2624.

Christy, J.R., Parker, D.E., Brown, S.J., **Macadam, I.**, Stendel, M., and Norris, W.B., (2001). Differential trends in tropical sea surface and atmospheric temperatures since 1979. Geophysical Research Letters, 28, 183-186.

Brown, S.J., Parker, D.E., Folland, C.K., and **Macadam, I.**, (2000). Decadal variability in the lower-tropospheric lapse rate. Geophysical Research Letters, 27, 997-1000.

Brown, S.J., **Macadam, I.**, and Parker, D.E., (1999). Surface-troposphere trends and their implications. UK Met Office report for the then UK Government Department for the Environment, Transport and the Regions.

**Macadam, I.**, (1999). The Recovery of the Ozone Layer. MSc Dissertation.