

A window on climate change



ADRIAN PATE

Sørsdal glacier near Davis.

After the introduction of two new CASA 212-400 aircraft to Antarctica last year, the Australian Antarctic Division (AAD) is this year gearing up to deliver an inter-continental air service between Hobart and Casey in 2007.

The Australian Government has given the AAD an extra \$46.3 million over four years to establish the Australia-Antarctica Airlink. Preparations are underway to secure a suitable aircraft and to build the ice runway and supporting infrastructure at Wilkins Aerodrome near Casey station. The inter- and intra-continental aircraft, in combination with our ships, will provide modern logistics to support Australia's Antarctic scientists in their work, and to open up new research opportunities in unexplored areas of the Australian Antarctic Territory and the Southern Ocean.

A major thrust of our research aims to understand the role of Antarctica and the Southern Ocean in regional and global climate processes; how these climate processes arise; the impacts of climate change; and how ecosystems, communities and species will respond. In this issue of the *Australian Antarctic Magazine* we look at some of this research.

To set the scene, glaciologist Tas van Ommen, steers a path through the greenhouse jungle, describing the difficulties faced by researchers trying to separate human-induced climate change from natural climate variation. He also discusses the work yet to be done; work that is continuing through Australia's Antarctic programme and some of which is described in subsequent articles. This work includes monitoring the effects of sea ice reduction, understanding the responses of plants and animals to a changing environment, and improving climate models.

This issue also brings you up to date with the latest results from projects in our Southern Ocean Ecosystems Programme. Since our Heard Island expedition in 2003-04 (*Australian*

Antarctic Magazine 7), Toby Jarvis has been analysing hydroacoustic data for clues to what makes up Heard Island's marine ecosystem. Colin Southwell has also finalised a survey of crabeater seals in east Antarctica - his results have implications for the sustainable harvest of krill in the Southern Ocean.

It has been a busy year for those in the AAD involved with the Antarctic environment, Antarctic tourism and whales. At this year's Antarctic Treaty Consultative Meeting, for example, Treaty Parties adopted rules governing liability for 'environmental emergencies' (such as oil spills), concluding 12 years of complex negotiations. The Treaty Parties also passed the first site-specific guidelines for tourism on the Antarctic Peninsula, to manage tourism and to protect sensitive plants and wildlife. These guidelines will also help protect the tourist experience in this rapidly growing industry. Last but not least, members of Australia's Antarctic programme, participating in this year's meeting of the International Whaling Commission, were pleased to see the moratorium on commercial whaling retained.

Finally, on page 26, I am pleased to present our new Environmental Policy, which was finalised in April. As part of the Australian Government's Department of the Environment and Heritage, and as an environmentally responsible member of the Australian and Tasmanian communities, the AAD extends its environmental ethics to all its activities - at 'home' and in Antarctica - through its Environmental Policy.

—AJ PRESS
Director, AAD