



The cycle of an Argo profiling float. The *Mirai* will drop 70 floats in the Southern Ocean.

Climate and ocean research boosted

OUR CONTRIBUTION to the urgent quest for understanding of regional climate and ecosystem influences was strengthened on 31 July 2003 with the launch of the Cooperative Research Centre (CRC) for Antarctic Climate and Ecosystems in Hobart.

Opening the CRC, Federal Science Minister Peter McGauran said 'through expert scientists and students working across a range of research fields, the new CRC will make a significant contribution to expanding the take-up of new approaches based on improved knowledge of the Antarctic and Southern Ocean, including how its living resources should be best managed and its role in the global climate system.'

Australian universities and research organisations which include CSIRO will coordinate with international interests including the National Institute of Water and Atmospheric Research in New Zealand, the Japanese Marine Science and Technology Centre, and the Alfred Wegener Institute for Polar and Marine Research in Germany.

In a program literally plumbing the ocean depths, scientists will measure water temperature, salinity, dissolved oxygen, nutrients, and carbon dioxide from the surface to the sea floor at more than 500 locations in the Southern Ocean.

The Centre's projects are strengthening Australia's position in the US-coordinated

global network of earth observations. The network extends from satellites to collaborative ocean measuring programs, including new generation tools such as the Argo system of thousands of robotic floats that report back on the world's ocean conditions.

A CRC project to research the unknowns of the Southern Ocean's influence left aboard the sophisticated Japanese oceanographic research vessel, *Mirai*, in early August.

The \$20 million, seven-month circumnavigation of the Southern Ocean surrounding Antarctica is collecting vital new ocean and climate data to compare with that taken from some previous southern sites 10 years ago.

Chief Scientist aboard *Mirai*, Dr Masao Fukasawa, says the expedition will have three key research elements:

- Understanding the oceanic structure over the whole water column, particularly the circulation system in the Southern Ocean and changes in the system as a result of global warming.
- The interchange of carbon dioxide between the atmosphere and the ocean, and the way the ocean responds to this cycling.
- Understanding environmental changes, including the process by which the ocean harnesses light, oxygen and carbon dioxide to generate the ocean food chain.

A FORWARD LOOK AT CITY SPRAWL

ACKNOWLEDGING the pressing challenge of sustainability in our urban areas, the Federal Minister for Environment and Heritage has commissioned the Sustainable Cities 2025 Inquiry from the House of Representatives Committee to be chaired by MP Bruce Billson.

'Integrating the built and natural environment in a sustainable manner requires planning and a clearly articulated strategy. Identifying the issues and developing a forward strategy for the nation is the target of this inquiry,' Mr Billson said.

The Committee will examine issues and policies relating to:

- The environmental and social impacts of sprawling urban development;
- The major determinants of urban settlement and desirable patterns of development for the growth of Australian cities;
- A 'blueprint' for ecologically sustainable patterns of settlement, with particular reference to eco-efficiency and equity in the provision of services and infrastructure;
- Measures to reduce environmental, social and economic costs of continuing urban expansion; and
- Mechanisms for the Commonwealth to bring about urban development reform and promote sustainable settlement.

Submissions to the Inquiry must be received by 31 October 2003.

www.aph.gov.au/house/committee/environ



Urban sprawl needs to be better managed. Can you guess the city?