# PREFACE

The Great Barrier Reef is a marine ecosystem that is recognised worldwide for its unique biological and physical features. It is by far the largest single collection of coral reefs in the world and biologically supports one of the most diverse ecosystems known.

The Great Barrier Reef Marine Park includes most of the Great Barrier Reef region and the Reef was added to the World Heritage List in 1981. The Great Barrier Reef Marine Park is a multiple-use protected area with zoning plans and permits for different activities being the main tools for Reef management. The Great Barrier Reef region supports direct economic activity estimated to be worth in excess of $1 billion annually to Australia. Demands are rapidly increasing for information about, and access to, the Reef and its resources by tourists, other recreational users, commercial fishing and mariculture industries.

The large and growing economic and social values of the Great Barrier Reef demand an improved scientific knowledge base to allow Reef users and managers to make more informed decisions, so that benefits can be maximised in a sustainable manner and costs minimised, while preserving the Reef's unique biological and physical features. The 25 year Strategic Plan for the Great Barrier Reef World Heritage Area, with both 5 year and 25 year objectives, has been developed recently by a process involving all users and interest groups.

Knowledge about the Great Barrier Reef from natural, social and economic research is an essential part of decision making for ecologically sustainable development. In the early 1970s, research effort in the Great Barrier Reef underwent a major shift – essentially from earlier expedition-type enterprises to institutionally based projects and programs. The Great Barrier Reef Conference held in Townsville in 1983 captures a summary of this work and provides a valuable baseline of information. But much of the early information comprised small bites or building blocks of vital knowledge with little integration possible across scientific disciplines. Physical and natural science predominated with minor mention of social, economic and engineering research.

Thirteen years later, ideas on reef management and use have changed considerably, as has the knowledge from research. The present Conference sought to examine two key questions:

Firstly, how reef science has adapted to reflect these changes.

Secondly, what we have learnt in recent years that will enable sustainable reef-based industries and economic activity, and provide an improved scientific basis for management and decision making of the Great Barrier Reef as a World Heritage Area.

The Conference provides a review of major scientific findings and concepts over the last decade, purposely integrating information across research on key issues. The mixture of keynote, invited and contributed papers provides a good basis of record and discussion. Putting 'people' into the equation through enhanced social science research is a notable step forward, along with higher effort in engineering research. However, research on economics and indigenous use/involvement remain under represented.

The work of the Organising Committee (Jan Crossland, Dave Yellowlees, Terry Done, Don Alcock, Jon Brodie, Peter Valentine, Kirsten Duke, Peter McGinnity) and graduate students; the sponsors – and the enthusiastic response of authors – ensured that the Conference delivered and recorded a new information base useful to existing and future Reef researchers, managers and users, and conservation and other interest groups.

Chris Crossland
Chair, Organising Committee