**EXECUTIVE SUMMARY**

This report outlines the proceedings and findings of a workshop on the offshore effects of tropical cyclone Winifred. The cyclone crossed the North Queensland coast south of Innisfail on February 1, 1986. The workshop was held at the Townsville International Hotel on Friday, June 20, 1986.

The workshop had two principal objectives;

- to review what was learned from studies of the offshore effects of cyclone Winifred; and
- to review the significance of those findings in the context of our understanding and management of the Great Barrier Reef Region.

Nineteen reports and papers were presented in respect of the first objective, covering a range of scientific and management-oriented topics. Each of these contributed to the second objective. This was considered in detail by the workshop under the following headings:

- **Biophysical and ecological significance.** While Winifred was not an exceptional cyclone (rated 3 on the five level Saffir-Simpson scale), follow-up studies yielded new insights into the functioning of the Great Barrier Reef system. Short-term phenomena, such as nutrient release from lagoonal sediments, were observed which may have significant longer term implications for the functioning of the Great Barrier Reef.
- **Socio-economic significance.** Little data was obtained on the offshore socio-economic impacts of Winifred. Although reports presented noted that damage to structures and facilities was minimal. Data obtained to date on post-disaster response indicates that local residents and visitors would have experienced severe, short term disruption.
- **Scientific understanding of the Great Barrier Reef.** Winifred provided an excellent opportunity to evaluate the effects of an extreme, short-term phenomena. Measurement and evaluation of those effects was greatly facilitated by the availability of "baseline" information on aspects of the impacted area in the form of data obtained from studies undertaken in the week preceding the cyclone. New information was obtained on short and mid-term processes; however, understanding of this will be limited until longer term and comparative data are available.
- **Human use.** Human use of the offshore areas was severely disrupted in the short-term by Winifred. The extensive damage to some reefs and inter-reef areas may cause some disruption to tourism and fisheries operations between Fitzroy and Hinchinbrook Islands.

- **Management of the Great Barrier Reef.** Winifred reinforced the notion that cyclones are one of the most significant forces shaping the Great Barrier Reef. Concern was expressed that, in planning for human use of offshore areas, care should be taken that the proposed activity does not interfere with the inherent ability of natural systems to recover from extreme damage, such as is caused by cyclones.

- **Research response.** It was noted that the research response to Winifred was the best yet achieved. However, major deficiencies exist in many areas, particularly socio-economic studies. Longer term, follow-up studies are also needed on processes such as the potential occurrence of ciguatera outbreaks. In order to improve response to future cyclones, three recommendations were put forward by the workshop:

  (1) A meeting of nominated heads of involved institutions be held to determine individual and collective responsibilities and requirements with a view to developing a co-ordinated response system.

  (2) The Great Barrier Reef Marine Park Authority should co-ordinate a multidisciplinary committee to oversee research activities after natural disasters, especially to organise long-term studies.

  (3) A source of funding be identified to enable rapid response to future incidents. This should be considered in the context of both points above.

**Footnotes:**

On June 3, 1986, the Commonwealth Government provided $30 000 to the Johnstone Shire Council and the James Cook University for a project designed to develop practical approaches to disaster management. This will, at least in part, redress some of the deficiencies noted above.

On August 25, 1986, the meeting recommended in (1) above was held. This meeting was attended by the heads of the three principal institutions; the Great Barrier Reef Marine Park Authority, The Australian Institute of Marine Science, and the James Cook University. The meeting agreed that the Authority should proceed with establishing a committee to plan for disaster response as recommended. Where possible, any plan(s) should make provision for involvement of appropriate research groups, particularly the Centre for Disaster Studies at James Cook University.