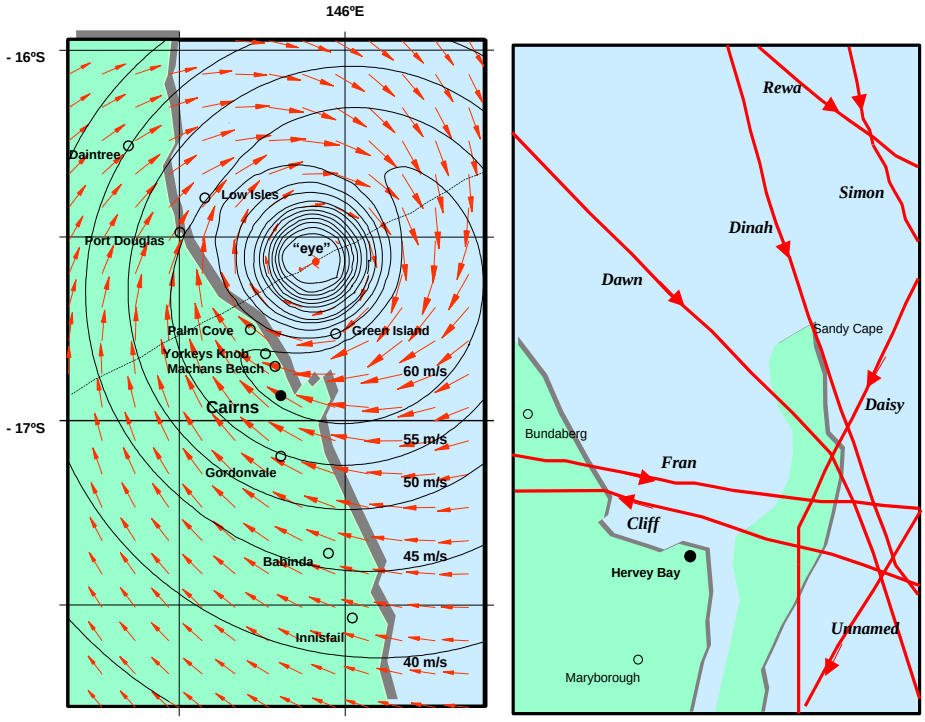
MULTI-HAZARD RISK ASSESSMENT
QUEENSLAND: CAIRNS, MACKAY, HERVEY BAY



PROJECT DESCRIPTION

The project involved the development of a risk assessment methodology for adoption by Local Government Authorities throughout Queensland, dealing with all major natural hazards such as earthquake, flood, tropical cyclones and severe thunderstorms.

The overall study was coordinated by Queensland Risk Management Consultants Pty Ltd in Brisbane with technical assessments provided by Hatch Associates Pty Ltd (formerly BHP Engineering). SEA acted as a specialist sub-consultant to Hatch by providing risk assessment for tropical cyclones (wind, surge and infrastructure damage) and severe thunderstorms (Hervey Bay only).

The risk studies considered the historical record of tropical cyclones at each of the three coastal sites. The long-term statistical characteristics of tropical cyclone intensity, size and track were assessed and a number of storms-of-record examined.

The community impacts of tropical cyclones and severe thunderstorms were then estimated based on the distribution and age of domestic infrastructure. GIS data available for Mackay and Cairns was accessed via the AGSO Cities Project. Recommendations were made as to the means by which the various communities might act to reduce the impact of these severe weather-related events.

DEPARTMENT OF Emergency SERVICES

CLIENT:
Dept of Emergency Services, Queensland, 1999.

LOCATION
Queensland Coast:
Cairns, Mackay, Hervey Bay.

SEA PERSONNEL PROVIDED

- Historical analysis of tropical cyclones in each region
- Regional risk assessment models for extreme winds and storm surge.
- Severe thunderstorm analysis for Hervey Bay.
- Commentary on El Niño Southern Oscillation
- Prediction of long-term community damage levels.

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