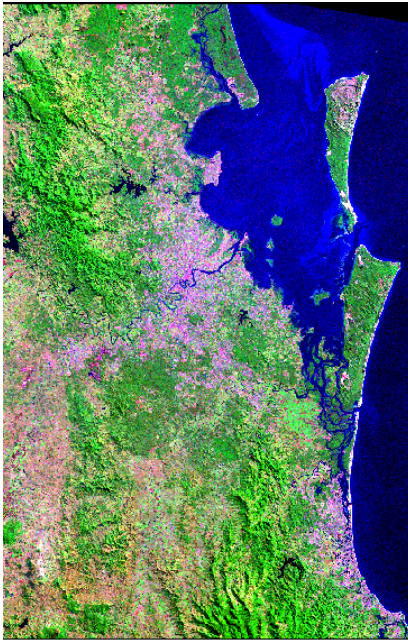


MULTI-HAZARD RISK ASSESSMENT STUDIES: SE Queensland and Mackay



CLIENT:

Bureau of Meteorology;
Australian Geological Survey
Organisation; 2000.

LOCATION

SE Queensland,
Mackay.

SEA PERSONNEL PROVIDED

- Bureau of Meteorology contributions in regard to regional descriptions of all meteorological hazards
- Extreme tropical cyclone wind swaths for SE Queensland
- Commentary on climate change and El Niño Southern Oscillation influences

PROJECT DESCRIPTION

The project involved assisting the Australian Geological Survey Organisation (AGSO) in respect of the *Cities Project* multi-hazard risk assessment program for South East Queensland and Mackay. The *Cities Project* is designed to assist Local Government in planning for the full range of natural hazards such as earthquake, flood, tropical cyclones and severe thunderstorms.

SEA was engaged by the Bureau of Meteorology to provide specialist input to AGSO for the Mackay and South-East Queensland regions. SEA's role was to consult and liaise with Bureau staff in the Queensland Regional Office to collate available data and provide technical input to the AGSO study reports covering all meteorological hazards, namely tropical cyclones, storm surge, severe thunderstorms and flooding. The flood assessment forms the greater portion of the study and involved consultation with all regional local government authorities in SE

Queensland.

A series of reports has been completed by AGSO which also consider community wide levels of damage caused by tropical cyclones. To assist in this, SEA was subsequently commissioned directly by AGSO to provide a series of hypothetical tropical cyclone wind swaths covering the region from Caboolture south to the Gold Coast. The wind swaths were representative of a range of peak wind gusts corresponding to return periods estimated from the SEA insurance risk assessment model MIRAM. AGSO applied the wind fields to its own form of damage assessment model using GIS-based terrain and topography. The AGSO damage assessment for Mackay was based on previously published SEA methodologies for Cairns, Mackay and Hervey Bay.



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