

Cairns Region Storm Tide Study

On behalf of Cairns Regional Council, BMT WBM completed a modelling study to assess the risks posed by coastal inundation in the Cairns Region.

The scope of the study included the modelling of tropical cyclones and mapping of inundation hazards, examination and mapping of community vulnerability and risk, and development of strategies to manage these risks.

The coastal inundation modelling assessment involved development of a parametric cyclone wind and pressure model, hydrodynamic modelling (TUFLOW-FV) of tides and tropical cyclone storm surges in the Coral Sea and Great Barrier Reef and modelling of cyclone-induced waves (SWAN).

Extensive validation of modelling systems was undertaken by comparing wind, wave and water level predictions with historical records of a range of tropical cyclones.

Client

Cairns Regional Council

Date

April 2009

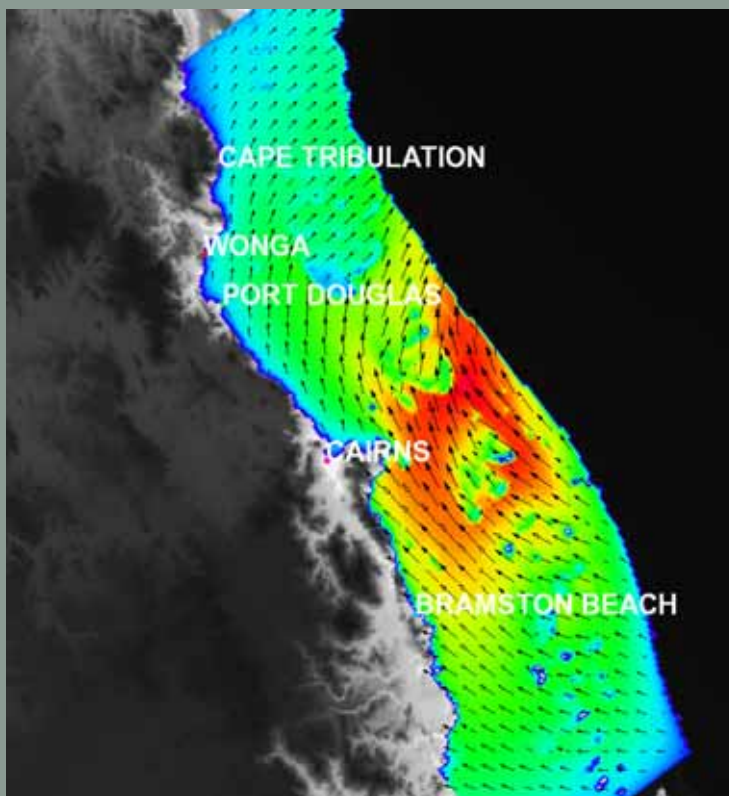
Services & Expertise Provided

Tropical Cyclone Numerical Modelling;

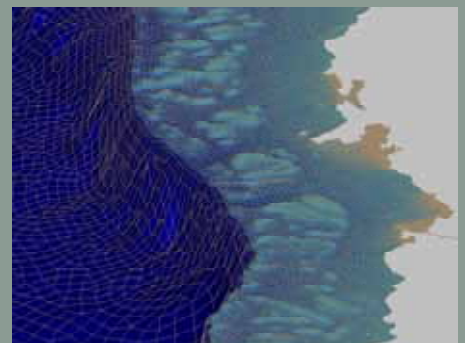
Hydrodynamic (TUFLOW-FV) and Wave Modelling (SWAN);

Coastal Inundation Hazard mapping (MapInfo); and

Community vulnerability and risk assessment.



Modelled Wave Field Tropical Cyclone Steve



Model Mesh and Bathymetry of Great Barrier Reef TUFLOW-FV model (Cairns Region)