

**Hypothetical: Climate change and climate variability
– responding to an extreme event. Hypothetical from Hervey Bay**

**Tuesday, 18th September
3.55pm – 4.25pm
Auditorium, Civic Centre**

Facilitators: Prof. Rodger Tomlinson and Dr Peter Helman, Griffith Centre for Coastal Management, GU, Gold Coast, Qld

Background

Recent research concluded that many extreme storm periods on the east coast occur during negative phases of Interdecadal Pacific Oscillation (IPO), for example from the 1860's to the 1890's when severe erosion of shorelines and record floods in the coastal rivers occurred.

Discussion

Records show that few extreme storms enter Hervey Bay but when these events do occur shoreline erosion, storm surges and river floods cause significant damage. A few examples:

- 12-15 Feb 1863 a Tropical cyclone caused severe erosion of 32km of coast, including some areas of mature forest, on the western shore of Hervey Bay.
- 19 March 1864 Panama cyclone. US barque *Panama* wrecked at Rooney Pt, Fraser Island, when at 4am the wind shifted from ESE to NW as the eye crossed over Hervey Bay. 11 people were lost.
- 25 Feb 1875 Tropical cyclone north of Rockhampton with NE gale and heavy rain moved over Hervey Bay with heavy SE gales. Shoreline erosion on the western shore of Hervey Bay at Pialba and the Mary River flooded to 8.5m.
- 9-11 Jan 1973 Tropical cyclone seas swept away the new pilot station buildings and 'all their belongings' at Inskip Point.
- 1-4 Feb 1893 Tropical cyclone (Dicky Storm). Crossed the coast at Yeppoon (969hPa) and moved south causing extensive wind damage and very heavy rain. The steamer *Dicky* left Fitzroy River in heavy weather and strong north wind. On 4 Feb the wind shifted to the north east with very heavy seas and the steamer was driven ashore at Caloundra. Passengers and crew rescued. Heavy rain caused Mary River to rise to 40ft [12m] 'the worst flood ... ever seen' that damaged bridges, the sawmill and washed away more than 100 houses. It was many years before the Wide Bay oyster industry recovered from silting.

Question

How would present and proposed future development of the Hervey Bay coastline cope with possible extreme storms and floods associated with the next negative IPO phase?