

VANISHING COASTAL NATIONAL PARKS – PLANNING FOR THE PROBLEMS OF SEA LEVEL RISE AND CLIMATE VARIABILITY

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Abstract

Slowly rising sea levels since the 1820's had a major impact on the east coast during the storm phase associated with negative Inter-decadal Pacific Oscillation (IPO) from the 1860's to the 1890's. Reports indicated that beaches previously used as roads and access for over 70 years were no longer usable due to severe beach erosion.

Permanent changes to the coastline are recorded such as the breach at Jumpinpin to form North and South Stradbroke Islands. Subsequently during generally low storm years the coast again accreted, and historic photos shows the recovery of wide beaches. During the 1930's a severe storm period eroded beaches again only to be reformed during the Second World War drought. A severe storm period, again associated with negative IPO, from the 1950's to the 1970's resulted in periods of severe beach erosion. Since the late 1970's expected accretion has not occurred and beaches have been badly eroded from minor storm events. The next phase of negative IPO will be accompanied by increasing sea level rise. The resulting erosion will be more severe than any previously experienced in our history. The sand island parks of SE Queensland are particularly vulnerable to the impacts of sea level rise. The implications for coastal park management are the loss of park area, changes to shoreline ecosystems, damage to shoreline facilities and the increasing loss of beach access for recreation as well as management.