RESILIENCE TO CLUSTERED DISASTER EVENTS ON THE COAST

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BACKGROUND

- Coastal communities and infrastructure are at risk from the impacts of storm surge
- Clustered surge events means little time for recovery of the coastline
- Not accounting for the impact of clustered events underestimates the risk to coastal assets
1) Demonstrate a methodology to quantify the coastal impacts of clustered storm surge events.

→ As basis for risk management: to inform decisions around resource investment in e.g. disaster mitigation, planning and recovery

→ At a range of scales suited to use by National, State and Local Government agencies
METHODOLOGY

Risk Assessment Methodology

• Impact focus
• Consider clustered events

Coastal Compartments framework

→ functional units for shoreline response

• Process based
• Allow scaling results, consistent approach
• Modelling & management applications
METHODOLOGY

• Identify coastal landform systems that are vulnerable to erosion during storm surge events;
  • Case study sites
• Model clustering as part of frequency and severity storm events;
• Assess numerical models quantifying coastal response to storm surge based on coastal system characteristics;
• Collect field data to validate findings;
• Quantify the impact of clustered storm surge events on coastal assets (buildings and infrastructure).
OUTCOMES

• A demonstrated methodology
  • for quantifying the impact of clustered events on coastal infrastructure;
  • for including clustering as part of integrated quantitative risk and impact modelling approach for storm surge
• Recommendations for integrating coastal studies across a range of scales (local/regional/national);
• Recommendations for a national approach to the acquisition of coastal data for studies to minimise the impacts of coastal risks.
• The development of a nationally consistent methodology to assess the potential impact of coastal hazards.
PROJECT TEAM

1) Research: **GA:** Dr. Scott Nichol, Martyn Hazelwood, Dr. Martine Woolf, **UQ:** Prof. Tom Baldock, Dr. David Callaghan. &c.

2) End-users of the Coastal Management Cluster: David Hanslow (OEH NSW), Shona Prior (DPAC, Tas), Doug Fotheringham (DEWNR SA), Robert Schwartz (DSITIA QLD)
THANK YOU!

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