Shoreline Erosion Management Plans in Queensland: Lessons Learnt

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Outline

- Similarities between a Shoreline Erosion Management Plan (SEMP) and a Coastal Hazards Adaptation Strategy (CHAS).
  - Hence the opportunity to learn from SEMP experiences.

- Lessons Learnt
  - Technical aspects
  - Stakeholder engagement

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What is a SEMP……?

"Shoreline erosion management plans (SEMPs) are EHP's preferred method for councils to address shoreline erosion issues at the local level. SEMPs enable local governments and their communities to develop effective and sustainable erosion management strategies.

SEMPs serve to:

- *identify significant coastal erosion issues*
- *develop an understanding of the underlying coastal processes contributing to erosion problems*
- *develop and evaluate options for erosion protection and management*
- *facilitate community input on coastal erosion issues*
- *assist planning for the delivery of selected erosion protection and management options."*

https://www.ehp.qld.gov.au/coastal/management/shoreline_erosion_management_planning.html

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Similarities SEMP / CHAS

- **Both consider coastal hazards:**
  - **CHAS = erosion threat, inundation (sea level rise & storm tides)**
  - **SEMP = erosion threat, *but*……..**

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Similarities SEMP / CHAS

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  - **SEMP = erosion threat, but……**
- **Planning Period:**
  - **CHAS = medium to long-term, a "living" document**
  - **SEMP = short to medium-term, but……**

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- Planning Period:
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  - SEMP = short to medium-term, but……
- Physical Extent
  - CHAS = the entire coastal zone within a Council's jurisdiction, but…….
  - SEMP = specific coastal reach / precinct, but…….

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- Both consider the influences of future climate change.

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- Both consider the influences of future climate change.
- Both identify & evaluate viable mitigation / adaptation measures.
  - Consideration of environmental values, social values, financial/ cost implications, legislation.

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- Both consider the influences of future climate change.
- Both identify & evaluate viable mitigation / adaptation measures.
  - Consideration of environmental values, social values, financial/ cost implications, legislation.
- Both recommend mitigation / adaptation strategies.

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Similarities SEMP / CHAS

The lessons learnt in the preparation and delivery of Shoreline Erosion Management Plans can be applied when developing Coastal Hazards Adaptation Strategies.

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Lessons Learnt

- Technical aspects
- Stakeholder engagement

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Lessons Learnt

- Technical aspects
  - Need to consider a wide range of hazard levels.
    - Not just one possibility (eg. the 100 year ARI event)
      - A 100 year ARI event has approx 40% chance of being equalled or exceeded in any 50 years.
      - A 500 year ARI event has approx 10% chance of being equalled or exceeded in any 50 years.
      - A 1,000 year ARI event has approx 5% chance of being equalled or exceeded in any 50 years.
      - The incremental cost of accommodating a more severe but rarer event can be relatively modest. ie. informs cost/benefit analysis
  - Consider the implications of climate change on these events.

Lessons Learnt

- Technical aspects
  - Need to consider fluvial (river) floods and sediment processes.
    - Not just hazards that emanate from the ocean / coastline
      - ✗ eg. seawall defences may impede natural entrance migration causing increased flooding problems upstream.
      - ✓ eg. sand for a beach nourishment strategy may be sourced from river / creek entrance shoals, alleviating flooding problems upstream.
    - Consider the implications of climate change on these events.

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Lessons Learnt

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Lessons Learnt

- **Stakeholder Engagement**
  - **Local community**
    - Strong opinions by residents.
    - Important to have coastal engineering expertise as well as strategic planners involved.
    - Observations by residents can significantly inform technical assessments of options.

Lessons Learnt

- **Stakeholder Engagement**
  - **Local community**
    - Strong opinions by residents.
    - Important to have coastal engineering expertise as well as strategic planners involved.
    - Observations by residents can significantly inform technical assessments of options.
  - **External (& other) stakeholders**
    - Important to have all other stakeholders involved early.
    - Port Authorities, state & commonwealth agencies (Defence, GBRMPA);
    - Council ……!

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Lessons Learnt

- **Need to consider a wide range of hazard levels.**
- **Vital to have a well designed stakeholder engagement process.**

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Thank you….