

Understanding current and future erosion hazards

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Photo credit: Courier Mail – TC Yasi - Cardwell

Today's discussion

- Components of erosion
- Data essentials
- Selection of inputs
- Making the most of existing information

Components of erosion

- Short-term erosion
- Long-term erosion
- Erosion due to sea level rise
- Dune slumping

Components of erosion

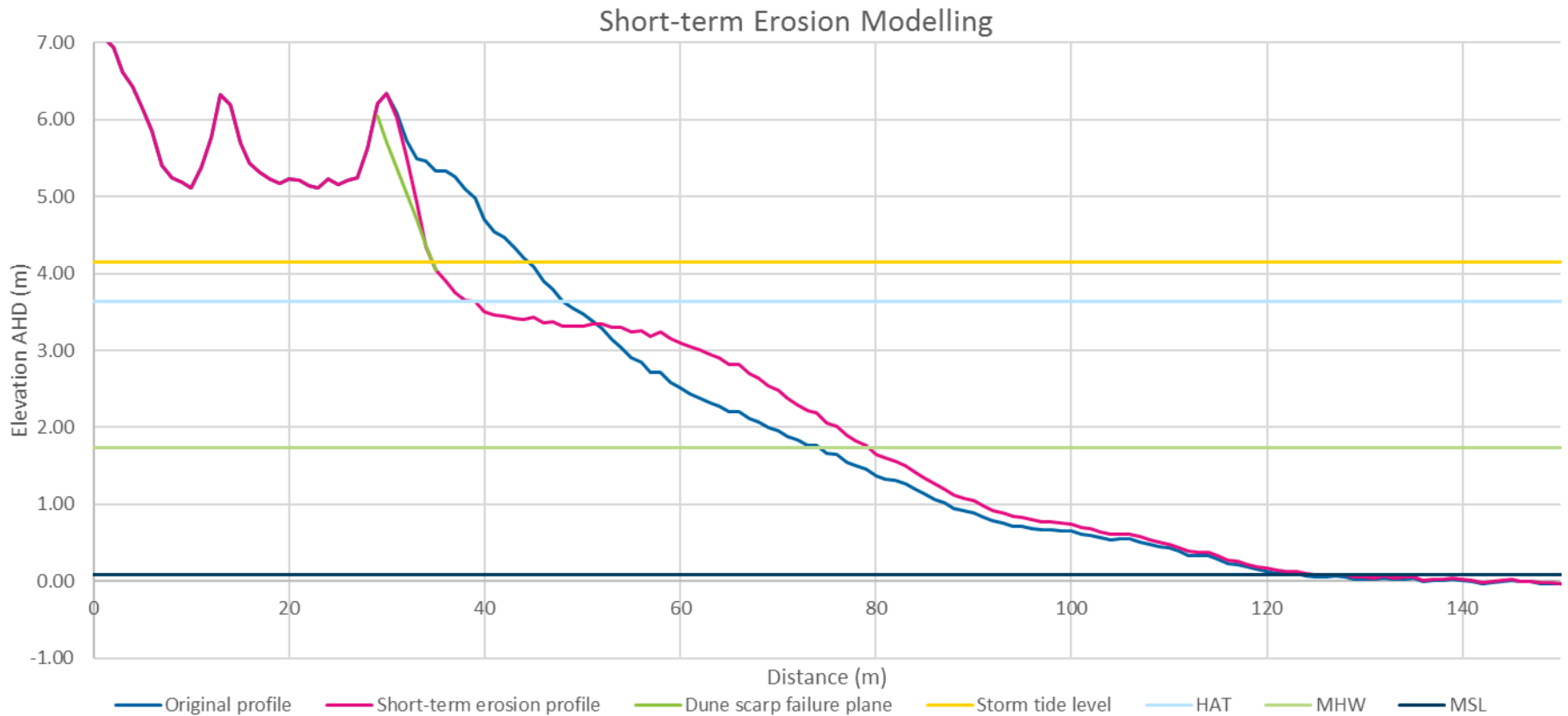
Short-term erosion



Photo credit: SBS

Components of erosion

Short-term erosion



Components of erosion

Long-term erosion



Components of erosion

Long-term erosion

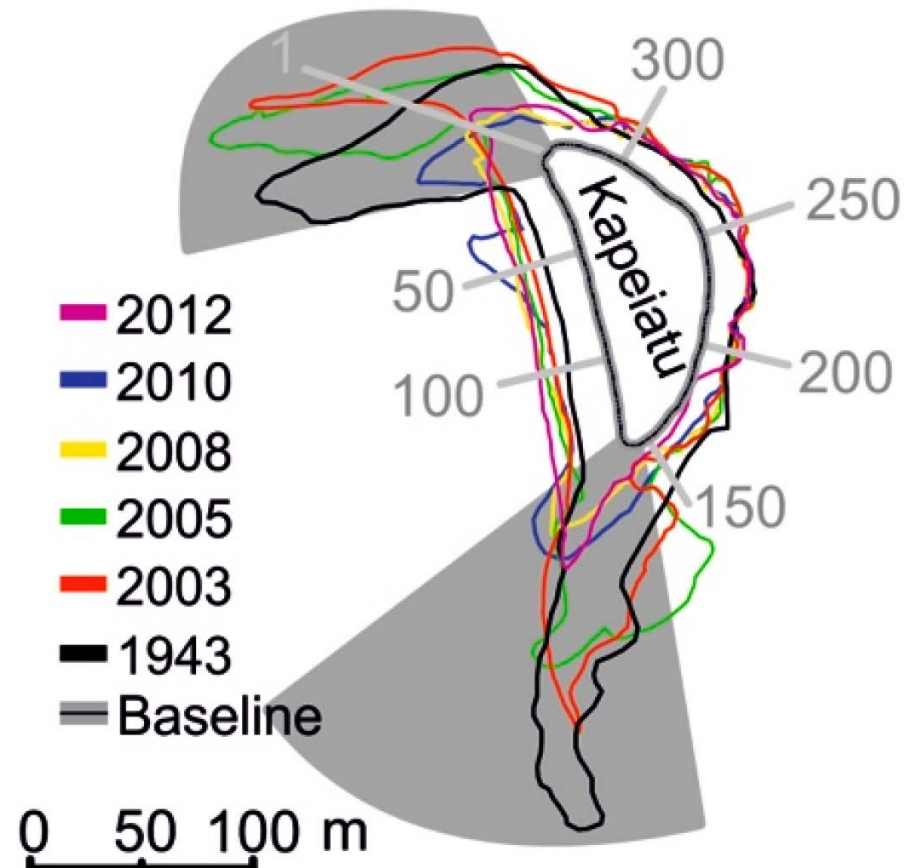
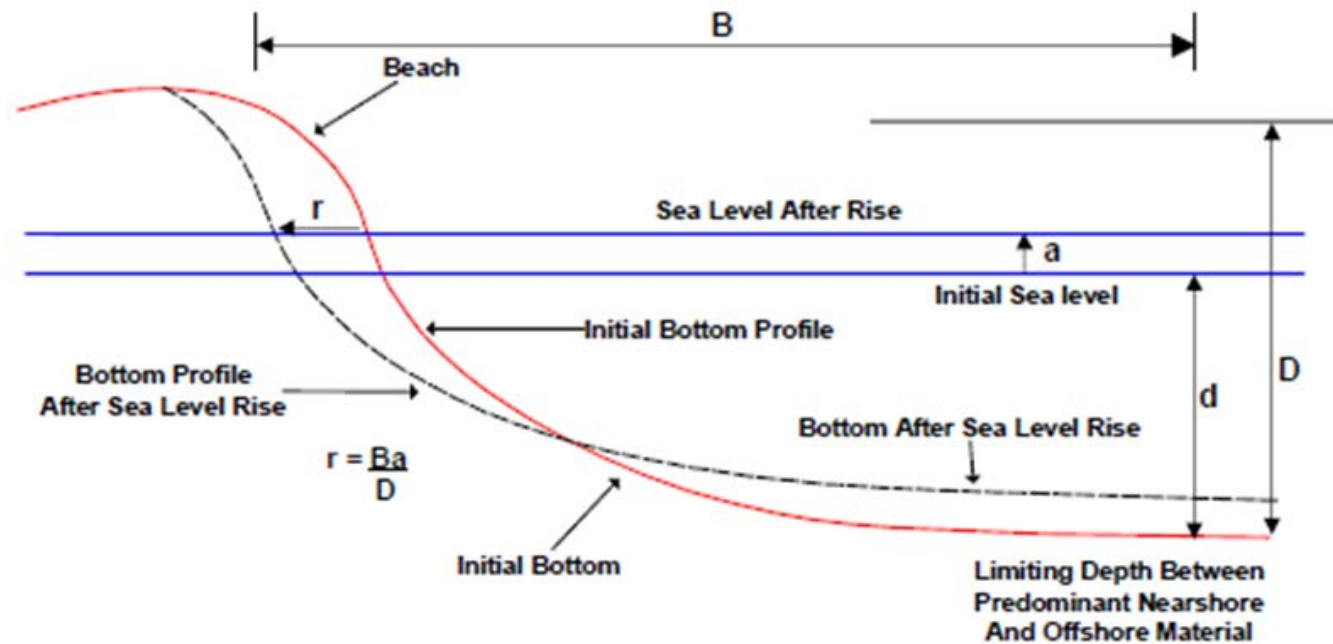


Image credit: Mann and Westphal, 2014

Components of erosion

Erosion due to sea level rise



Source: Rollason et al, 2010

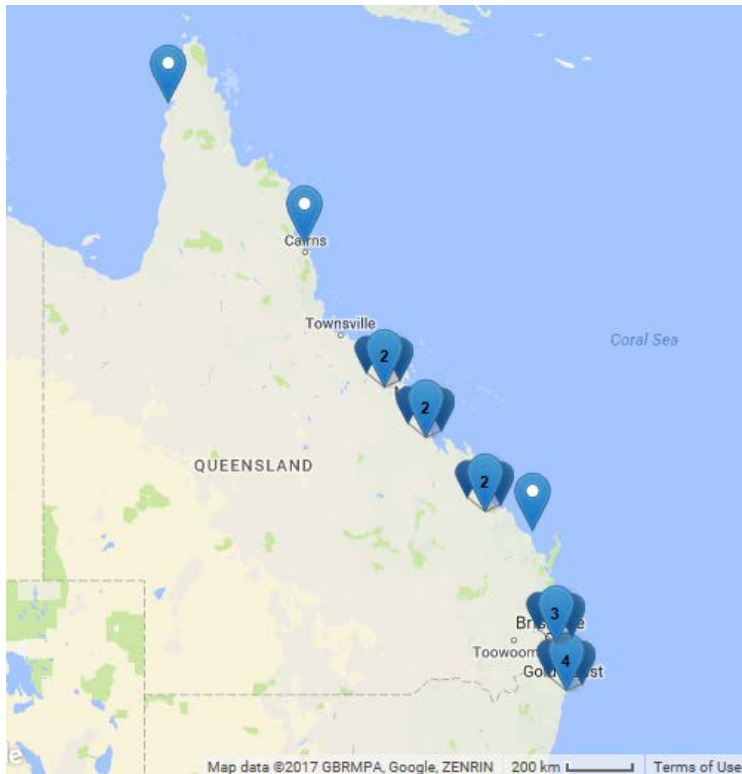
Components of erosion

Dune slumping

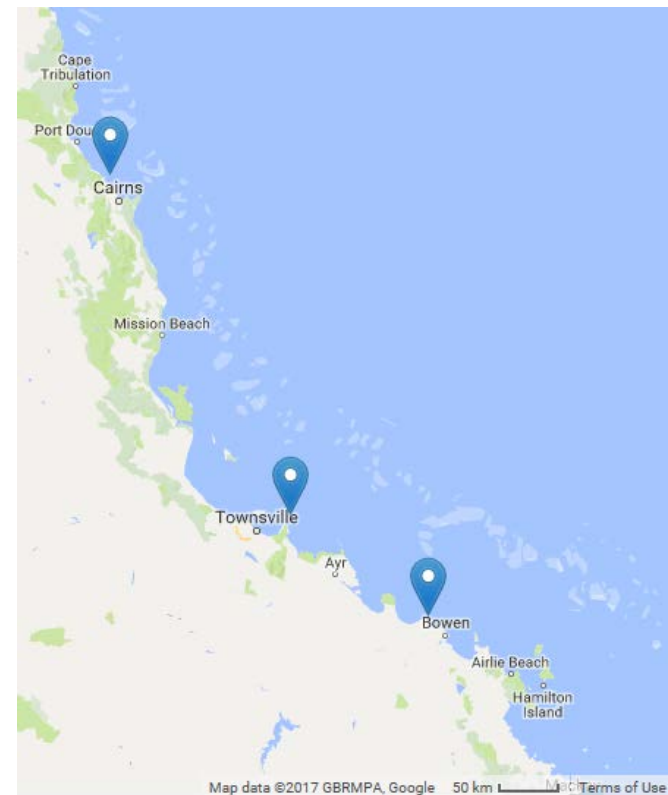


Image <https://elmuseumscience.wordpress.com/2017/08/24/nahoon-beach-storm-surge-event/>

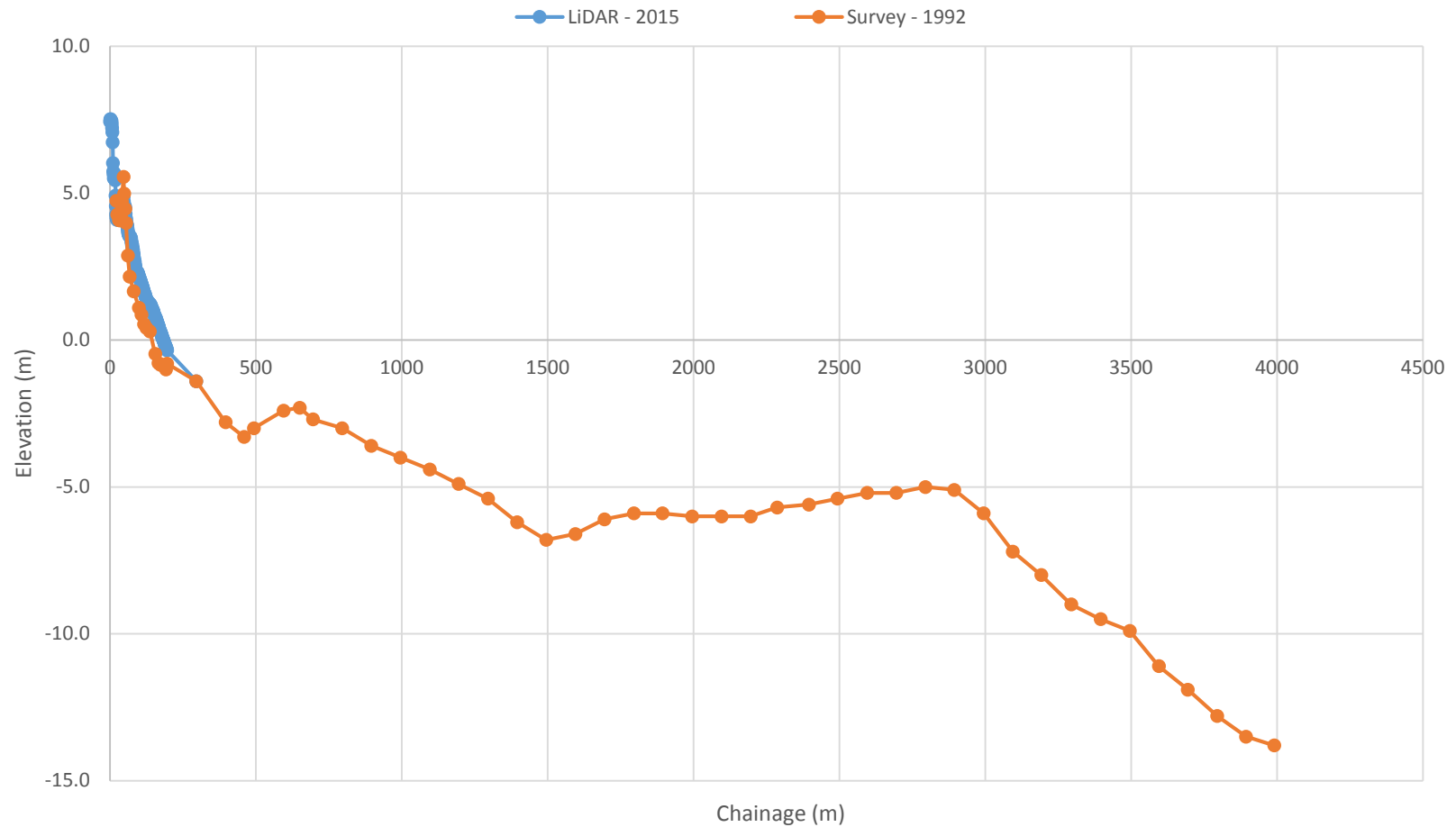
Data essentials – data coverage



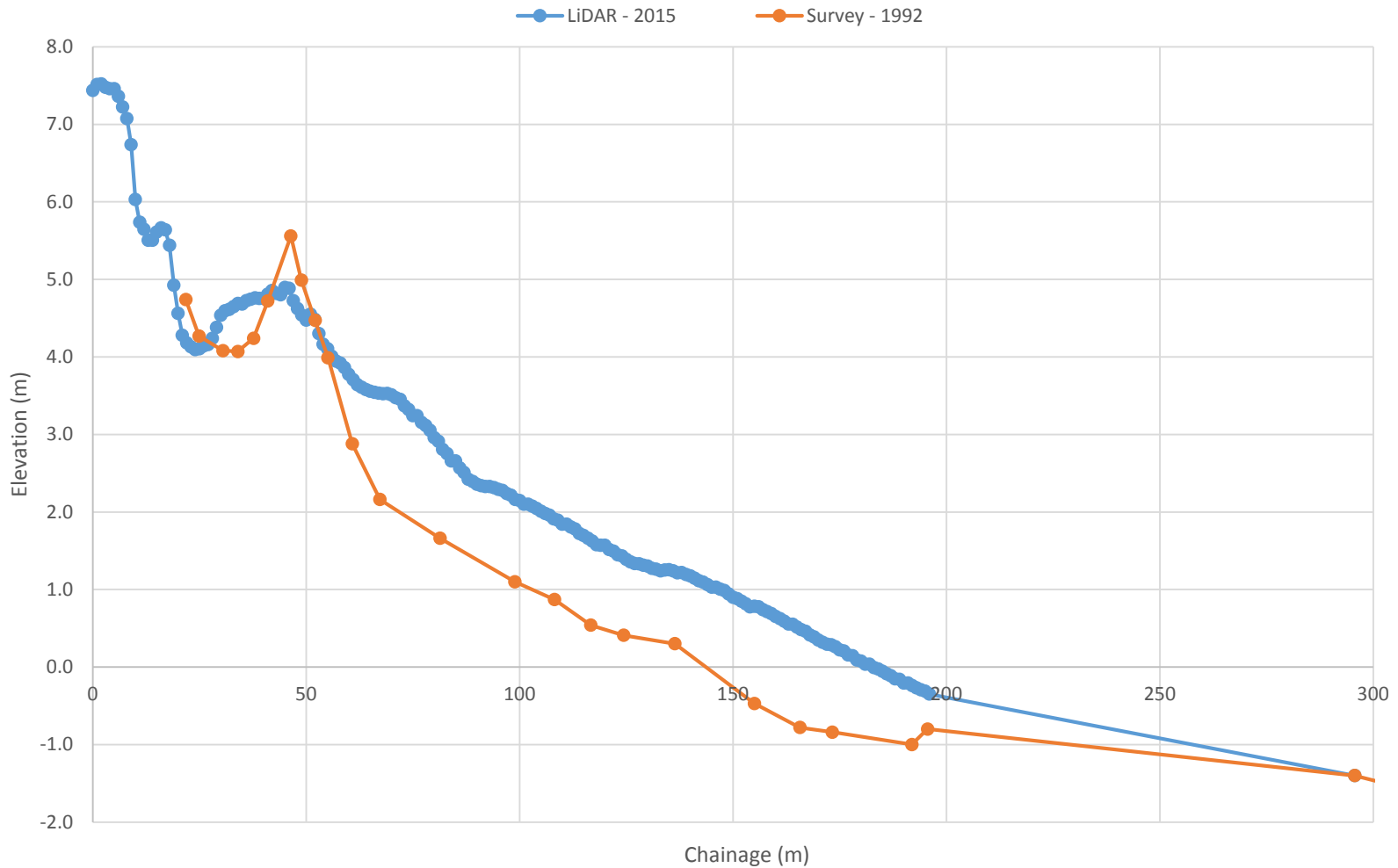
Images from DEHP website



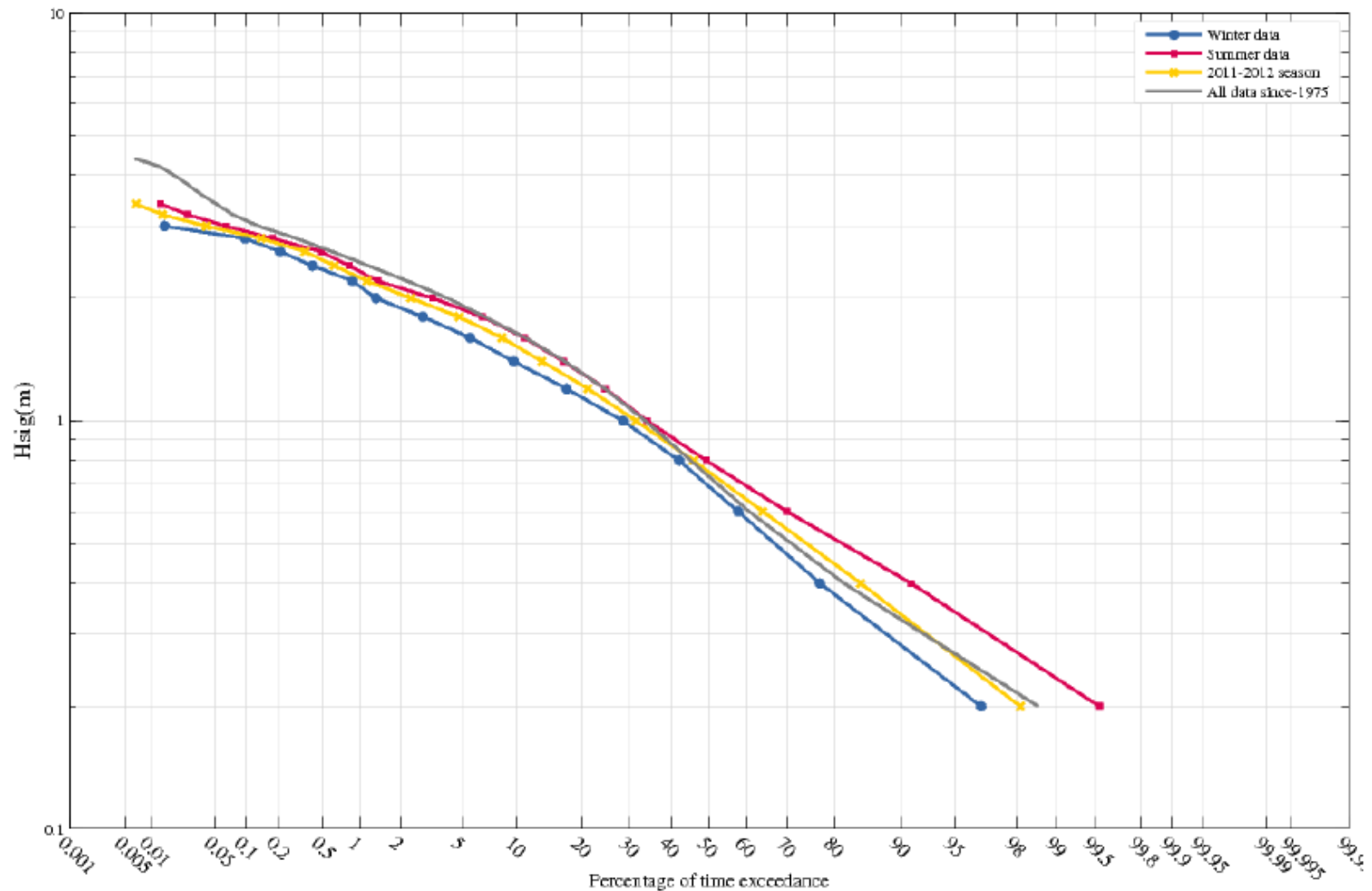
Data essentials – data coverage



Data essentials – data currency

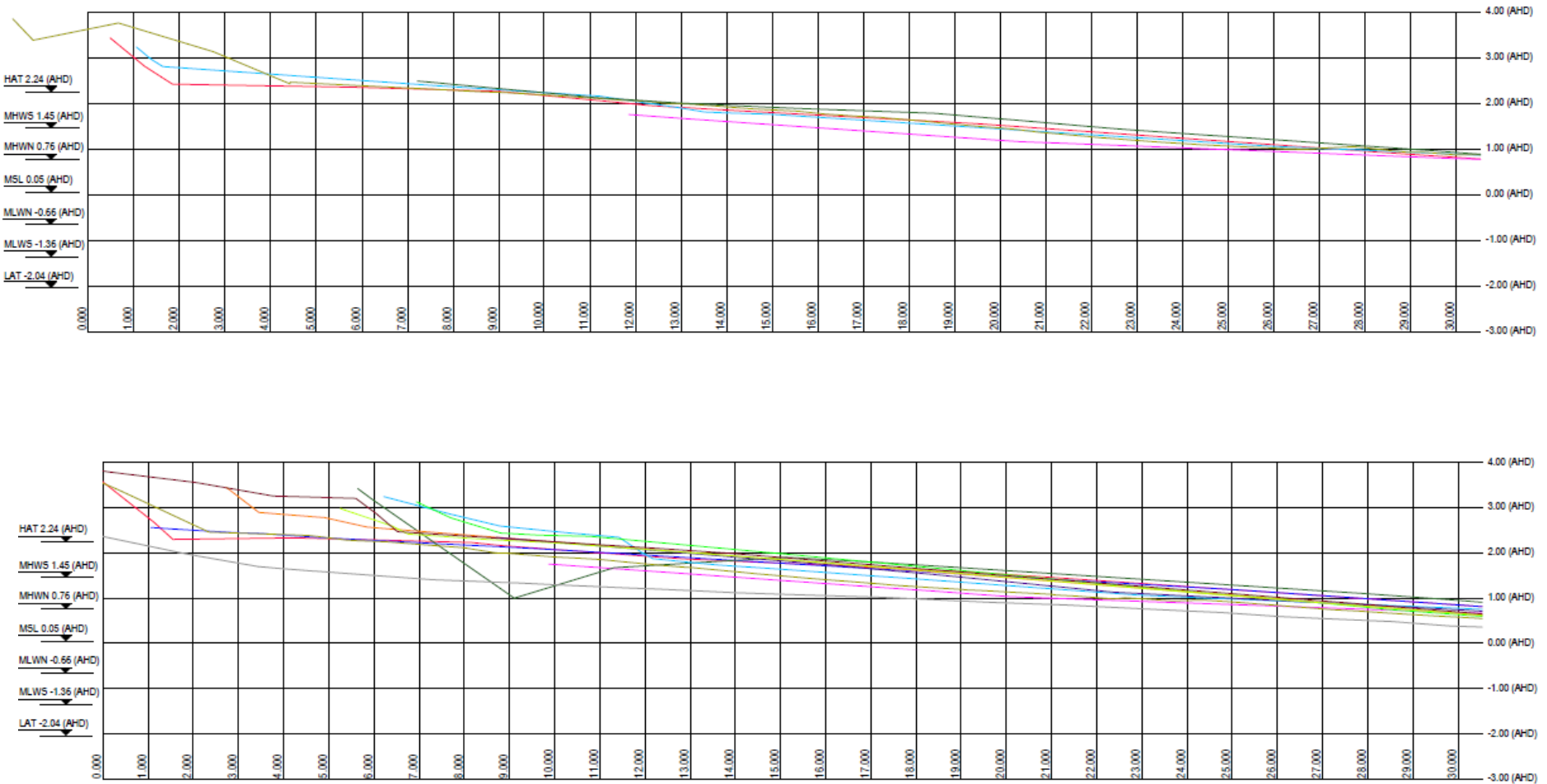


Data essentials – data currency



Source: Annual wave summary 2011-12

Data essentials – data accuracy



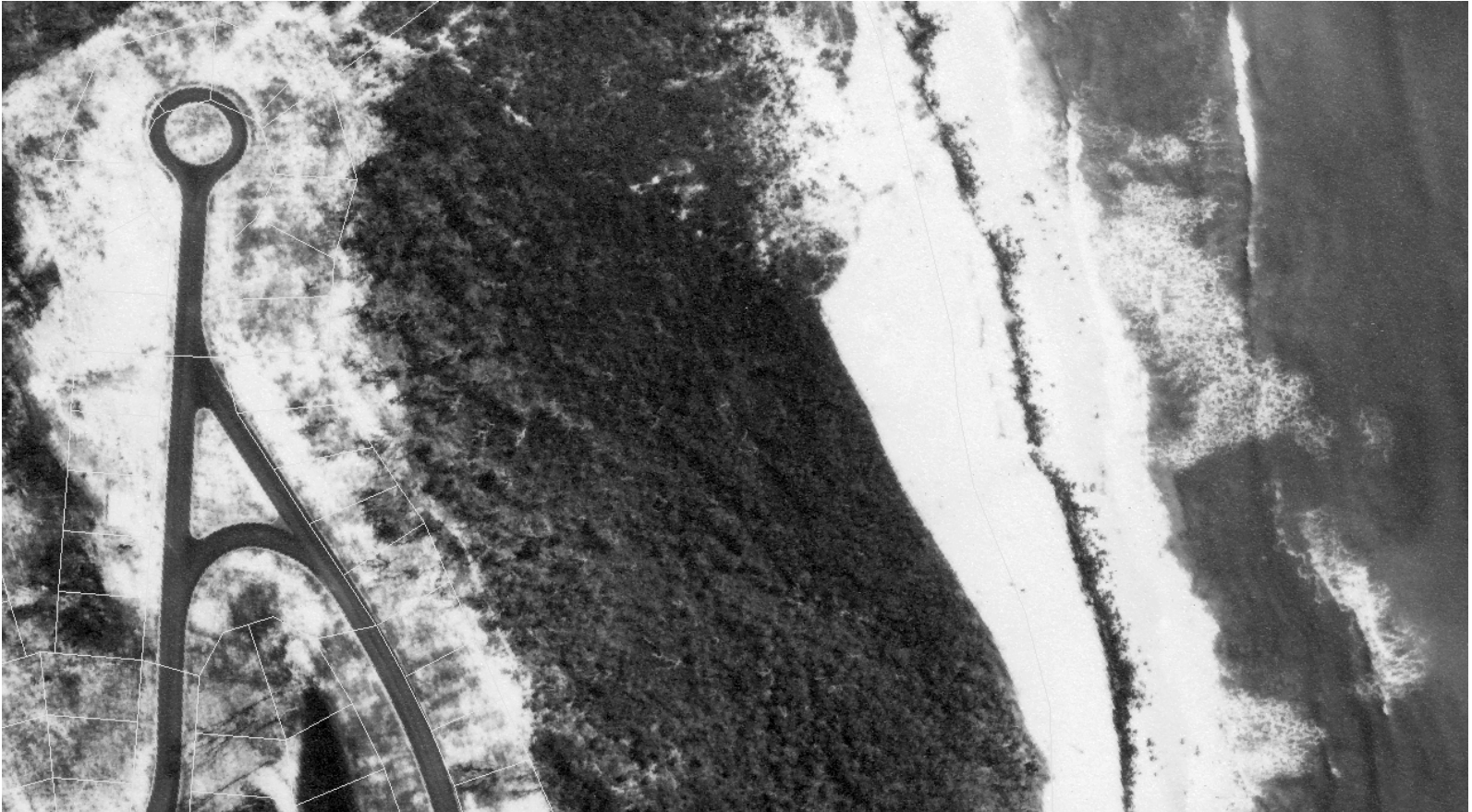
Data essentials – data accuracy



Data essentials – data accuracy



Data essentials – data accuracy



Data essentials – data accuracy

- From a reputable source
- Quality controlled
- Understanding of tidal datum
- Appropriate processing of data

Selection of inputs – Annual recurrence interval

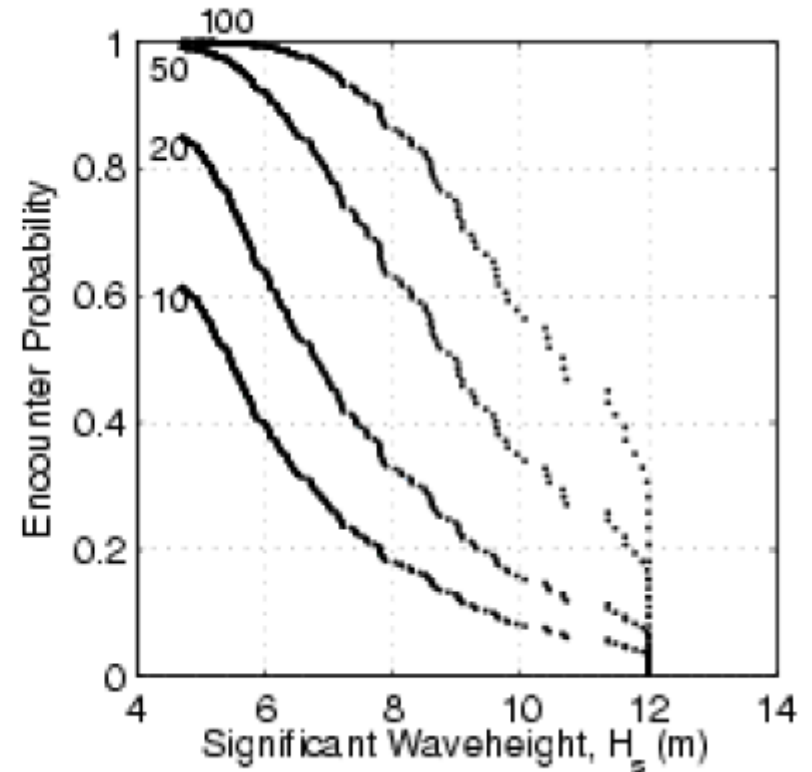
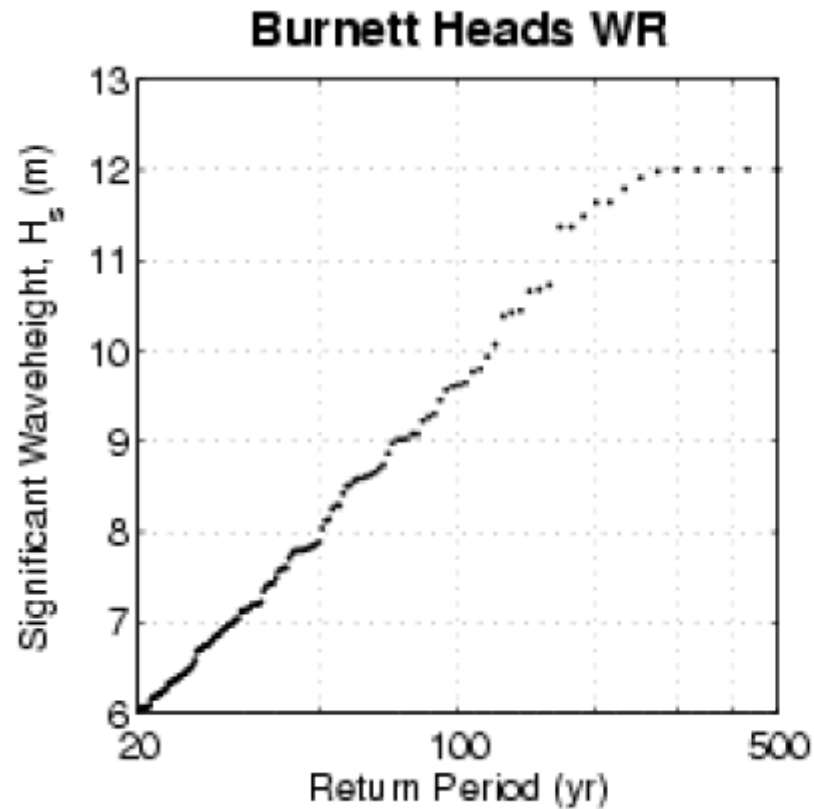


Image from Ocean Hazards Assessment Report

Selection of inputs – Wave or tide dominated?



Selection of inputs – Planning for extreme events



Image from Cairns Post



Image from Google Earth
Erosion Hazards

Selection of inputs

- Know what your key influences are
- Understand what your community considers to be an acceptable risk
- Understand what you are planning for

Making the most of existing information

- Existing erosion prone areas
- Previous site specific assessments

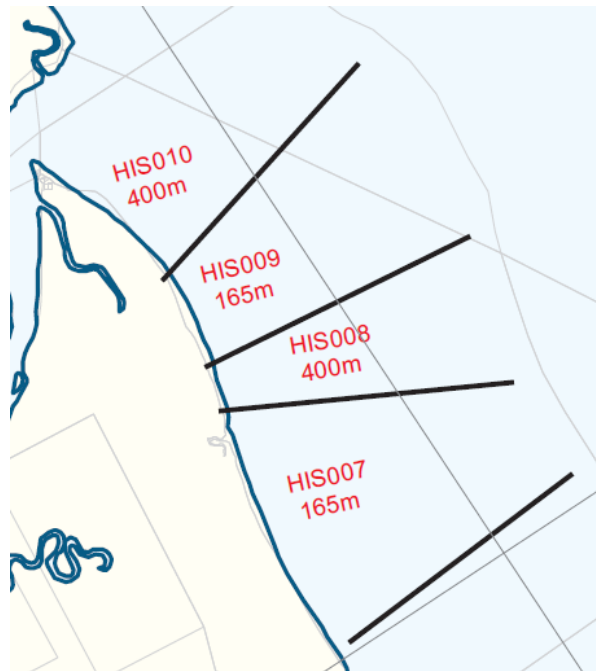
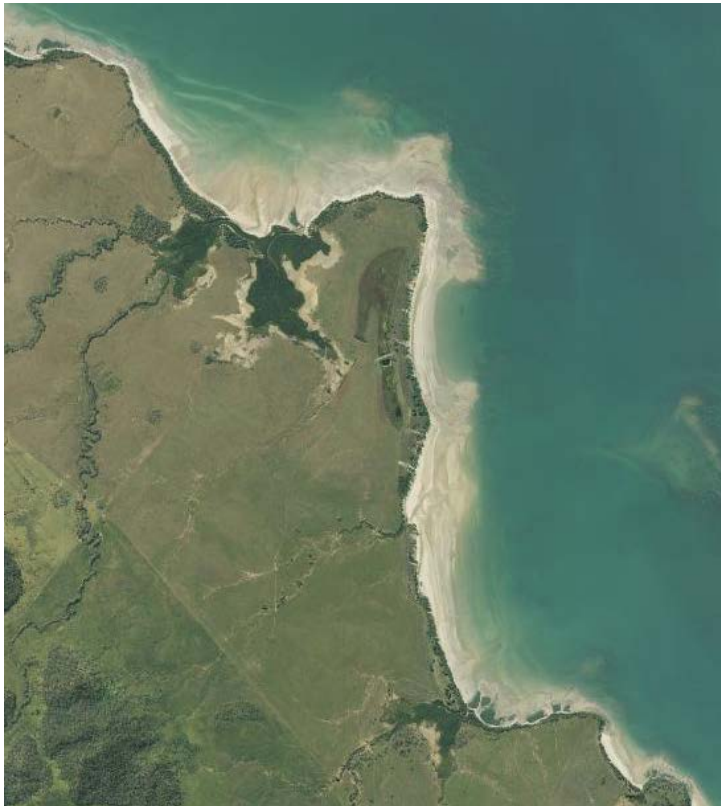


Image from EHP erosion prone area plan

Do I NEED a site specific assessment?

- Focus on areas where action is likely to be required if erosion occurs



Questions?





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