

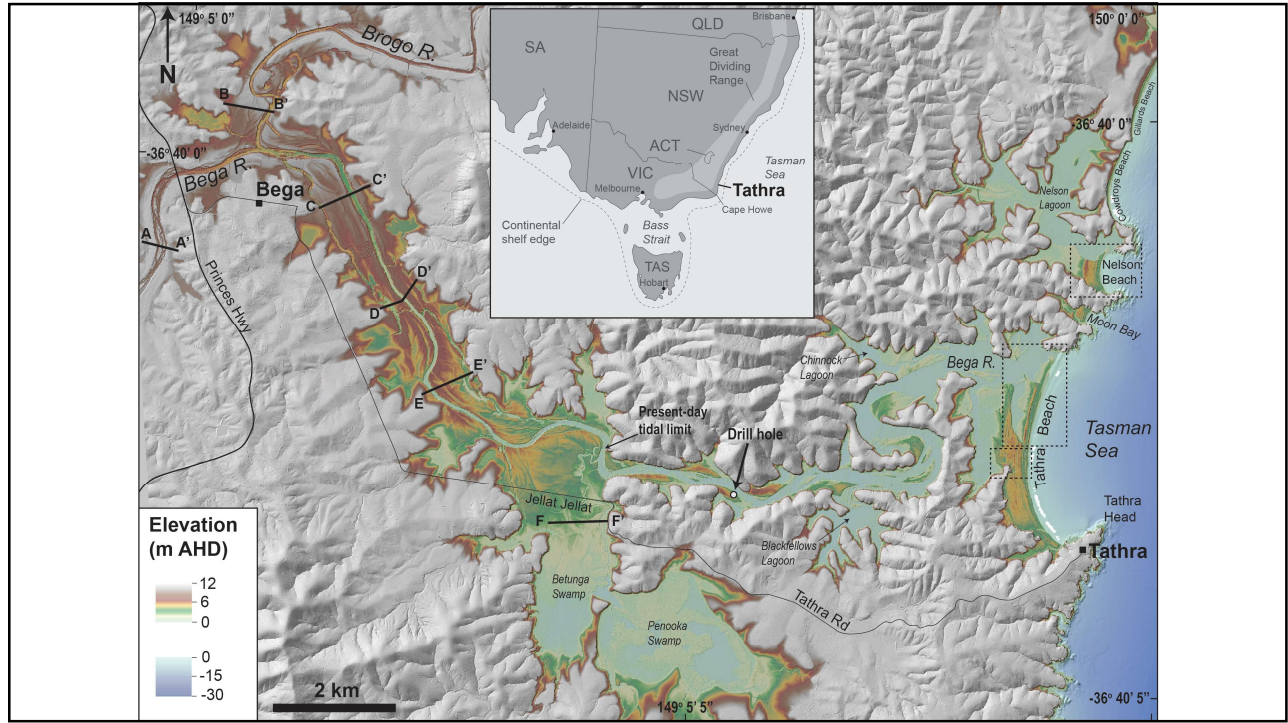
1

Sediment dynamics of the estuary, beach and shoreface

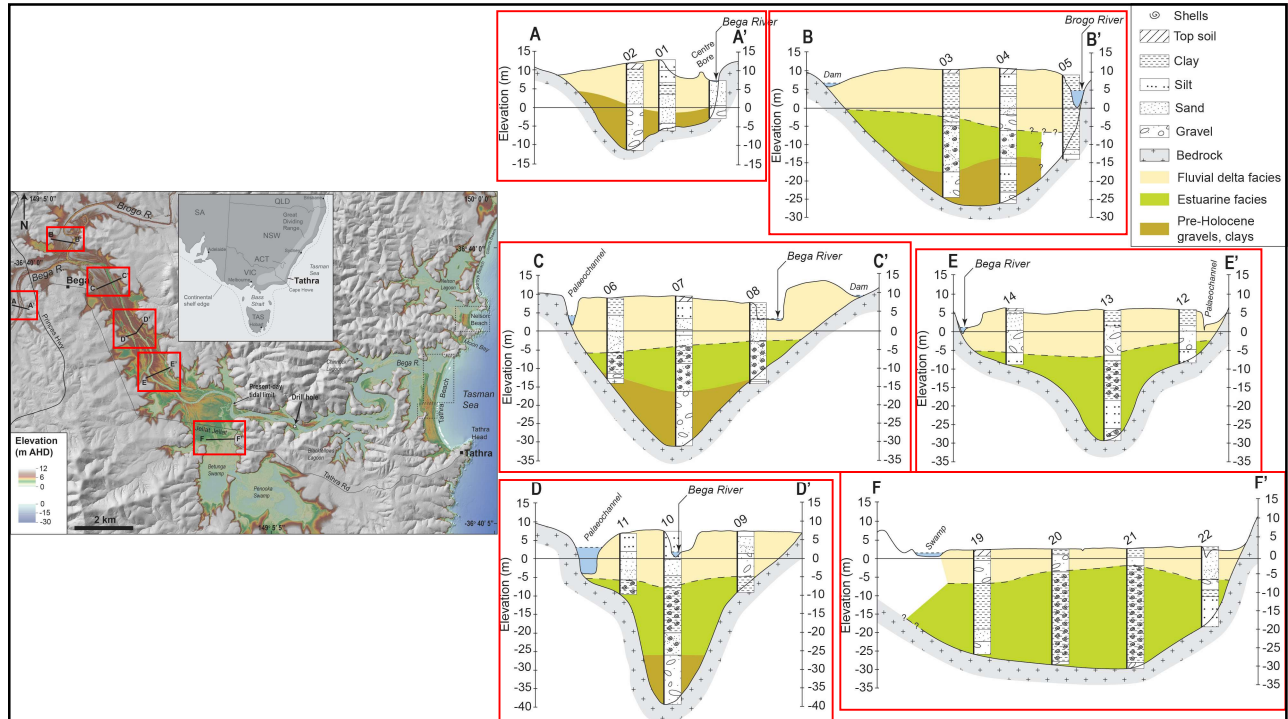
PWD report postulated:  
Relationship between river floods, and shoreline erosion with storage of sand and loss? in the shoreface near the river mouth

Gordon et al. 1980, Tathra Erosion Study, Coastal Engineering Branch, Public Works Department Report No. PWD 79015.

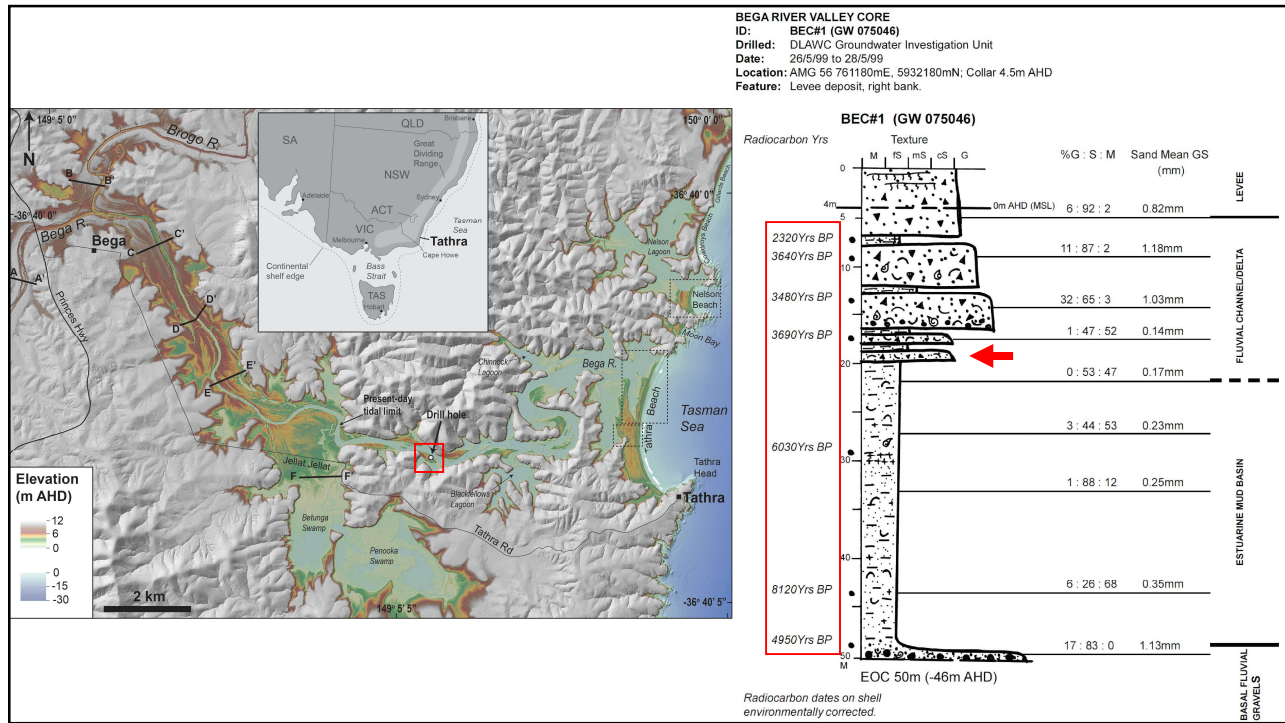
2



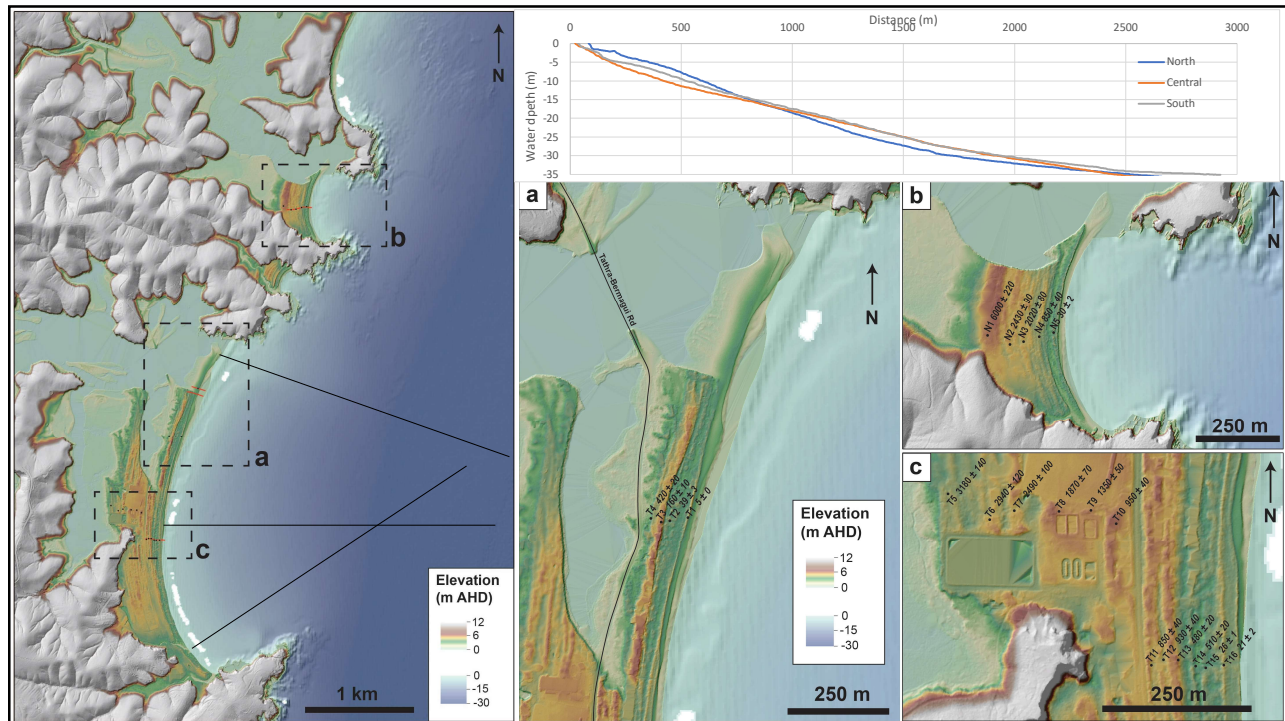
3



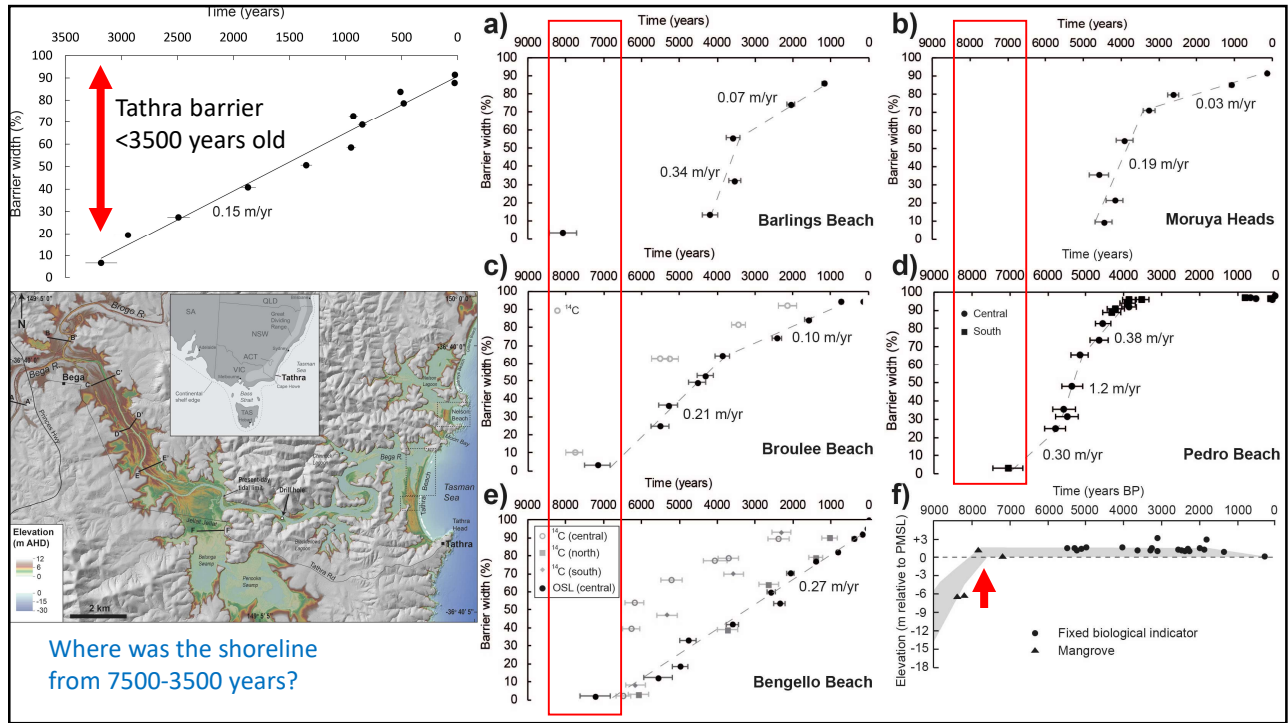
4



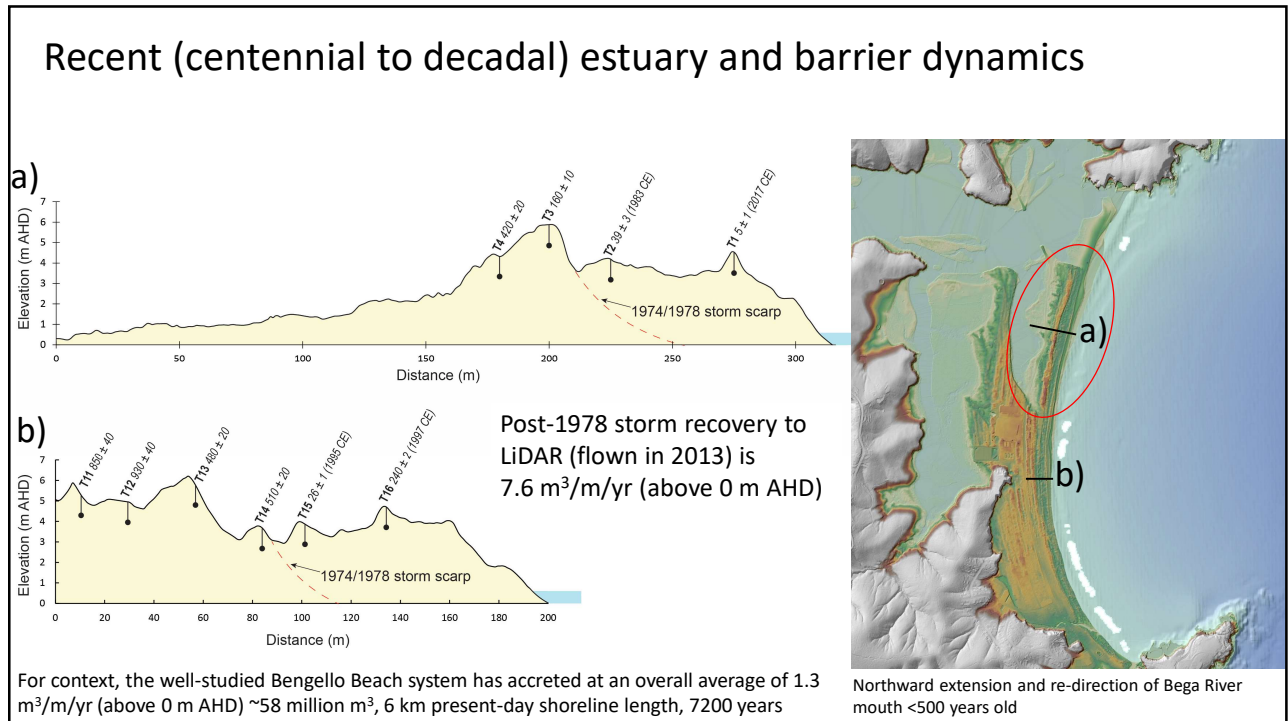
5



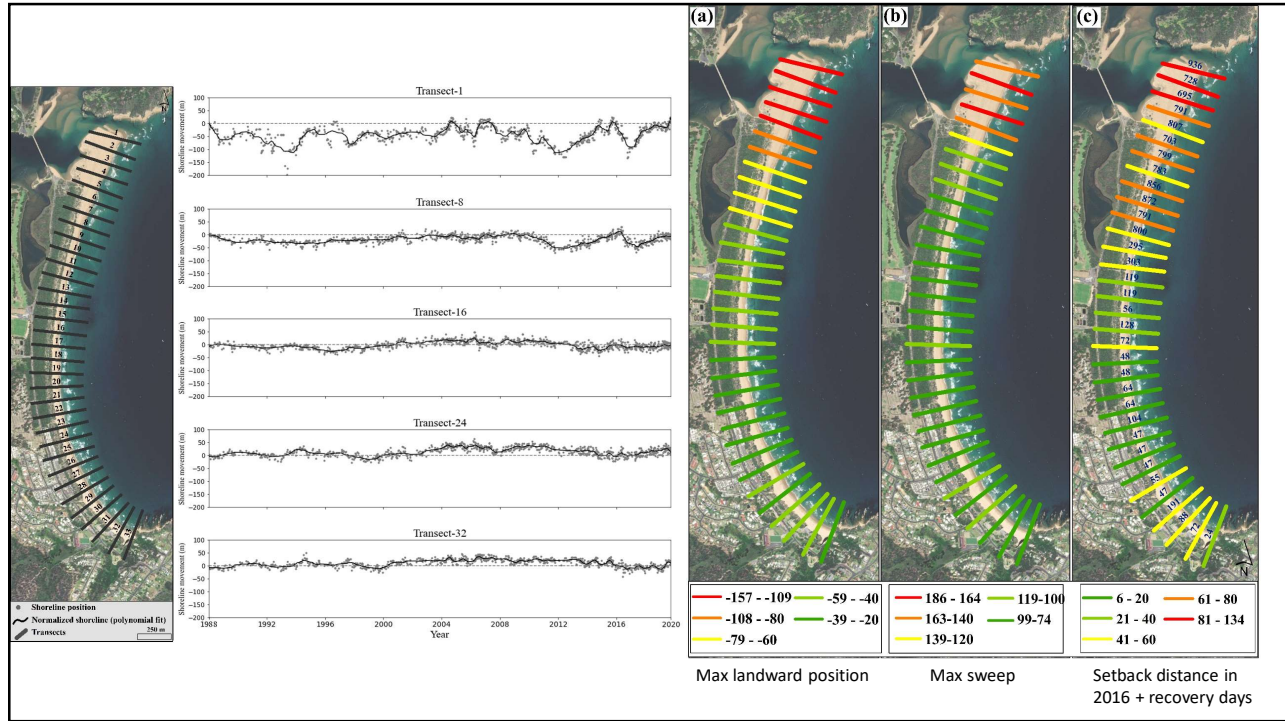
6



7



8



9

### 2011 flood in Landsat archive



10

## Conclusions and future work

- Infill of a drowned river valley type estuary from 8000-3000 years
- River-fed barrier system – did not form until fluvial sand was supplied to the coast
- Recent dynamics of the river entrance, shifts in position in past 500 yrs
- Shoreline response to major storms
- Response to major floods e.g. 2011
- Future work:
  - Estuarine basin area 8000-3000, fluvial infill volume, barrier volume informs historical sediment budget
  - Shorter-term dynamics – volume recovered since storms, destruction and re-formation of the modern spit
  - Sediment storage in the shoreface and interaction with the beach