1-line model

COVE

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Exploring the sensitivities of crenulate bay shorelines to wave climates using a new vector-based one-line model

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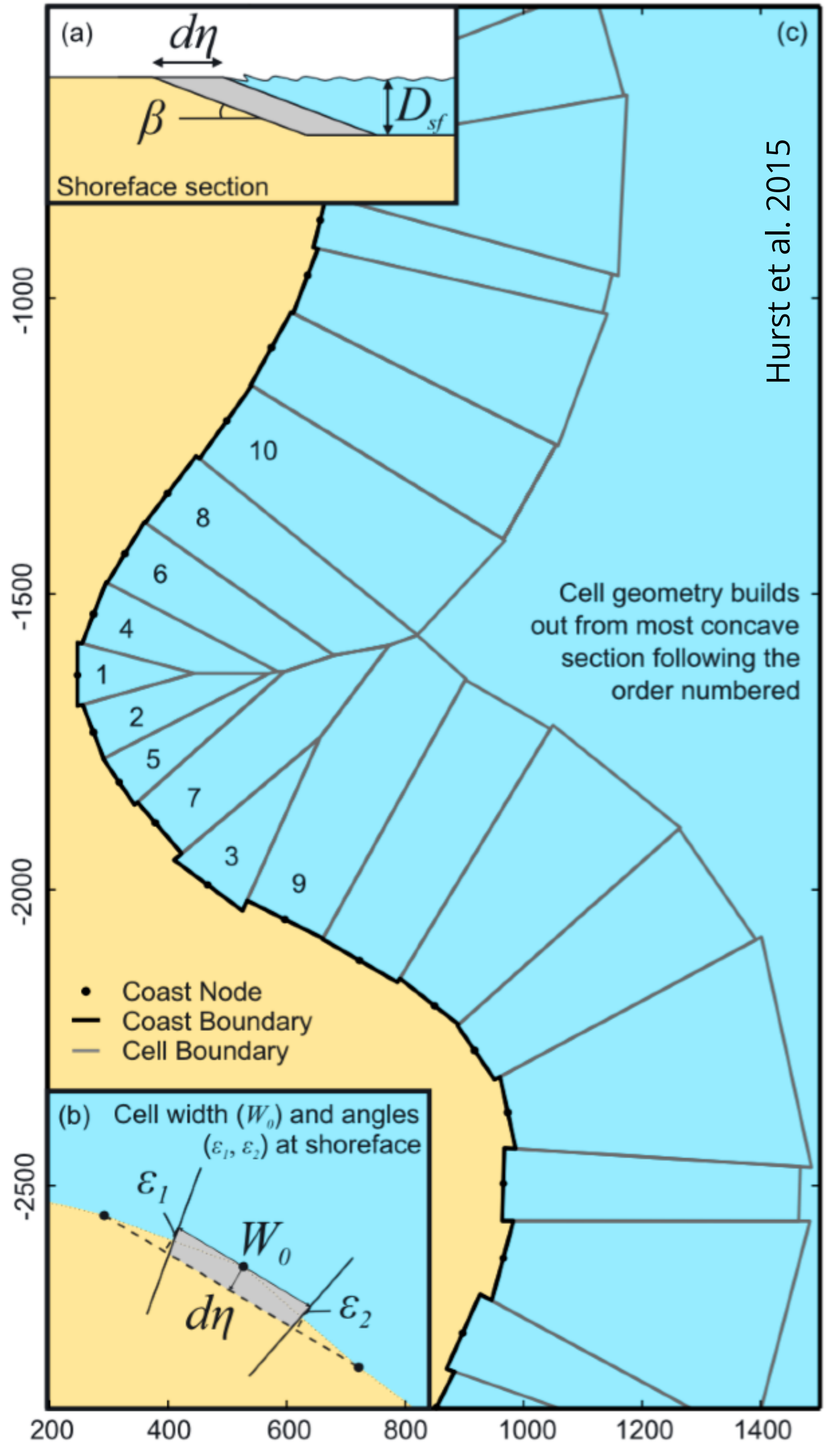
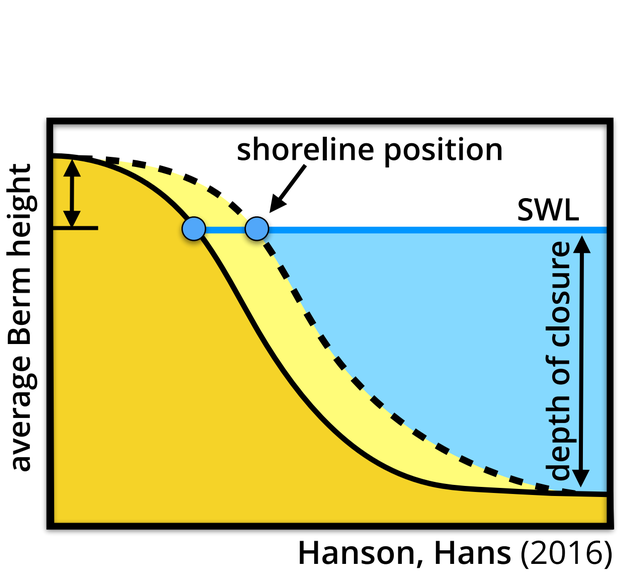
Key Points:
- New vector-based one-line model for evolution of sandy coasts developed
- Wave climate variability is important in controlling equilibrium form



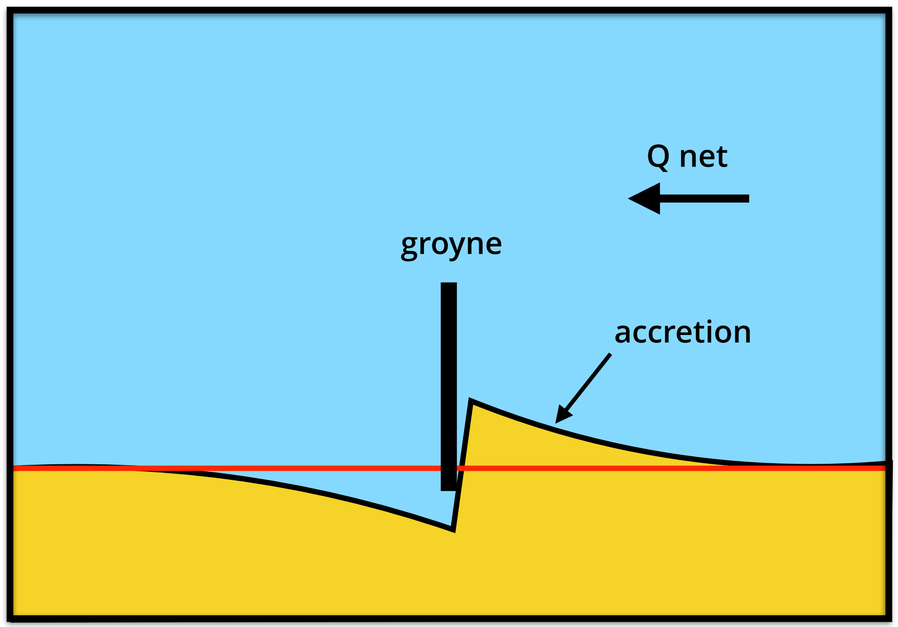
1-line model

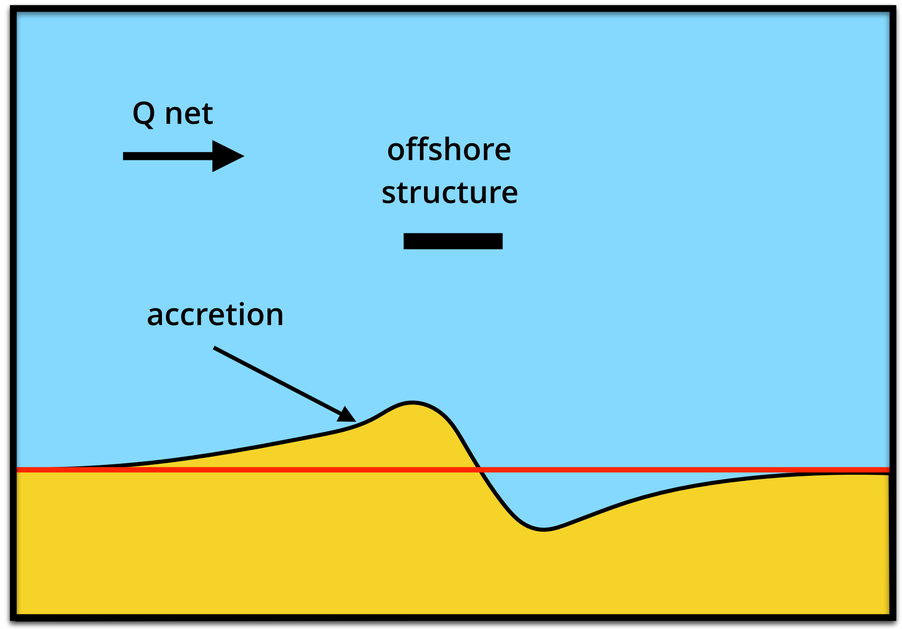
- The 1-line concept rests on a common observation that the beach profile maintains an average shape that is characteristic of the particular coast, apart from times of extreme change (i.e. storms).

- Assumption: **long term shoreline changes** is induced by **longshore sediment transport** caused by **waves breaking at an angle** to the shore and **wave induced nearshore current** circulation.



Hanson, Hans (2016)





- First 1-line model was presented by Pelnard-Considère (1956) who examined the behaviour of groynes on a beach.