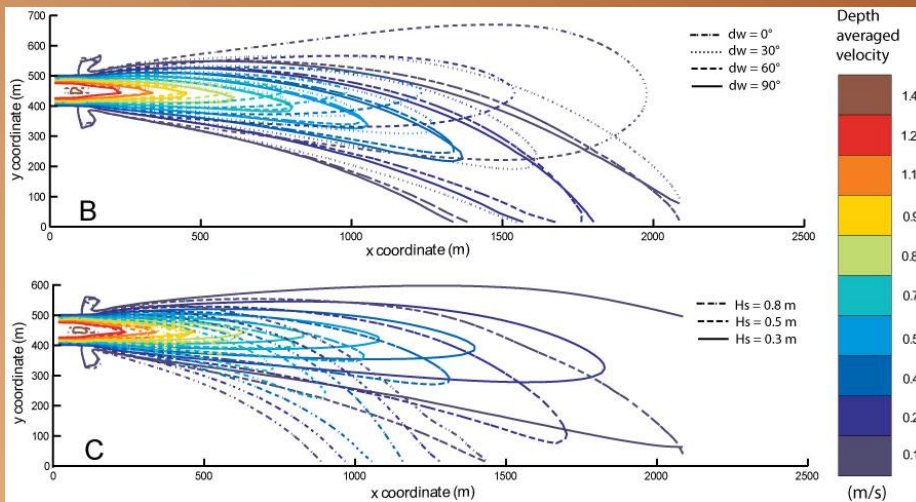


Evolution of Mouth Bars and Salt Marshes in Deltas: Implications for Sedimentary Deposits and Stratigraphy

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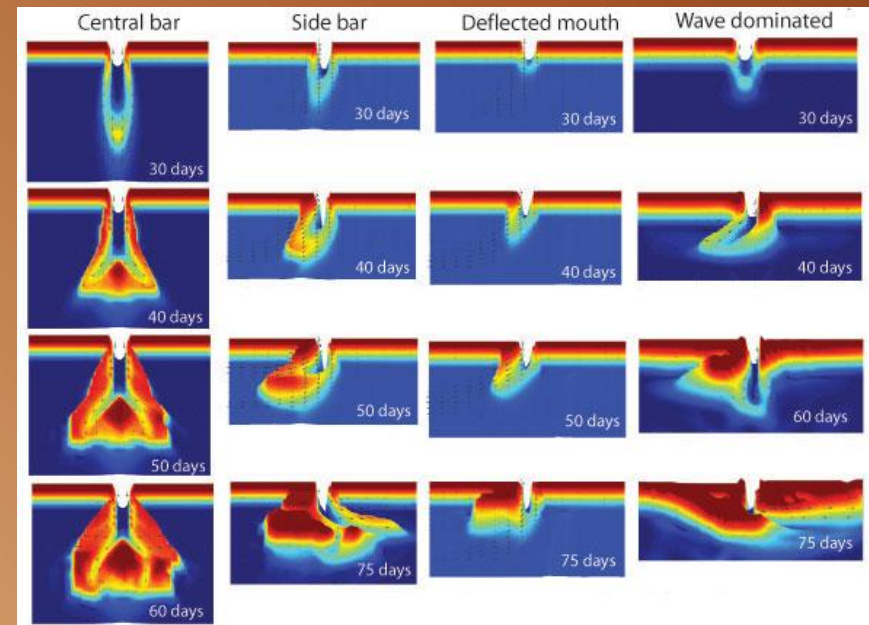
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Deflection of the flow at the river mouth triggered by wind waves

Predicting mouth bar formation on marine coastlines is complex because of the interactions between waves, tides, water and sediment discharge. Numerical results show that high waves with long period prevent the formation of mouth bars; in particular, wave angles between 45° and 60° are the least favorable to bar formation, likely producing a deflected river mouth.

River deltas are among the most important reservoirs on earth, housing a large fraction of oil and gas resources. The key process for delta development is the deposition of mouth bars in front of delta distributaries.



Different mouth bar deposits as a function of wave intensity and direction