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Basin filling without waves			
Initial bathymetry	SAND	MUD	bed

Marsh retreat vs marsh drowning



Basin filling with waves



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Waves oppose basin infilling by eroding the marsh edge...

- ... but a large input of mud can
- overcome erosion

and promote

progradation

= → Marsh retreats faster for high RSLR

Conclusions

- Mud vs Sand: different ability to fill a backbarrier basin
- External sediment input reduces and in some cases prevents marsh edge retreat by wave erosion
- Sea level rise increases the net rate of marsh retreat even if marshes do not drown
- Predicting marsh loss requires to account for both internal sediment recycling and external sediment inputs