

FORECASTING LANDSCAPE EVOLUTION IN COASTAL MARSHES? AN OVERVIEW OF ECO-GEOMORPHOLOGICAL MODELLING APPROACHES AT CONTRASTING SCALES

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How will coastal marsh landscapes change during this century in response to forcing, ranging from global sea level rise to local human landscape engineering? This presentation discusses some recently developed models that aim to project marsh landscape evolution resulting from feedbacks between hydrodynamics, sediment transport, vegetation and geomorphological dynamics. Examples range from (1) a local-scale landscape evolution model aiming to help design a marsh restoration project, and (2) a global-scale model aiming to evaluate impacts of scenarios of sea level rise and human land occupation on global coastal wetland areas.