

Future Behaviour Category	Landform	Initiating Event	Landform Response to Climate Change & Sea Level Rise	Shoreline Management Outcome	Consequence	Economic Implications
1 Static Resistant	Cliffs	Increased likelihood of extreme water levels and wave heights Hard cliffs	No significant change in likelihood of cliff failure	No Significant Change in Standard of Protection	No Significant Change in risk of recession	No significant increase in threat to cliff top assets.
2 Static Dynamic	Barrier Beaches & Lowlands	Increased likelihood of extreme water levels and wave heights Maintained sediment availability	Increased likelihood of defence overtopping or overflow Increased likelihood of storm damage to defences	Increased likelihood of Defence Failure Decrease in Residual Life of Defences Decrease in Standard of Protection	Increased Risk of Flooding behind the Defences Increased Risk of Saltwater Contamination behind the Defences	Gradually increasing beach recharge costs. Increase in area at risk from flooding Slight increase in likelihood of flooding damages
3 Static Declining	Cliffs	Increased likelihood of extreme winter effective rainfall Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Increased likelihood of slope failure or landslide reactivation Increased likelihood of defence overtopping Accelerated foreshore/beach lowering Increased likelihood of undermining of defences Increased likelihood of storm damage to defences	Increased likelihood of Defence Failure Decrease in Residual Life of Defences and Slope Stabilisation Measures	Increased Risk of Renewed Cliff Top Recession Increased Risk of Ground Movement	Increased cost of maintaining defences. Increased slope stabilisation costs. Possible loss of cliff top assets.
	Barrier Beaches & Lowlands	Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Increased likelihood of beach face or crest erosion Increased likelihood of defence overtopping Increased likelihood of undermining of defences Increased likelihood of storm damage to defences Increased likelihood of barrier breakdown	Increased likelihood of Defence Failure Decrease in Residual Life of Defences Decrease in Standard of Protection Increased likelihood of Sub cell-wide Changes Following Barrier Breakdown	Increased Risk of Flooding behind the Defences Increased Risk of Saltwater Contamination behind the Defences Increased Risk of Shoreline Erosion Increased Risk of Flooding elsewhere within the Sub cell Increased Risk of Erosion elsewhere within the Sub cell	Increased cost of maintaining defences. Increased Flooding damages. Increased Agricultural losses due to land contamination.
	Estuaries & Inlets	Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Increased likelihood of defence overtopping or overflow Accelerated foreshore/beach lowering Increased likelihood of undermining of defences Increased likelihood of storm damage to defences	Increased likelihood of Defence Failure Decrease in Residual Life of Defences Decrease in Standard of Protection	Increased Risk of Flooding behind the Defences Increased Risk of Saltwater Contamination behind the Defences	Increased cost of maintaining defences. Increased Flooding damages. Increased Agricultural losses due to land contamination.
4 Advance	Barrier Beaches & Lowlands	Increased likelihood of extreme water levels and wave heights Increased sediment availability	Beach accretion Increased dissipation/reflection of wave energy Decreased likelihood of barrier breach Decreased likelihood of barrier breakdown No significant change in likelihood of defence overtopping or overflow	Shoreline Advance No Significant Change in Standard of Protection	No Significant Change in Risk of Flooding behind the Shoreline	No increase in defence provision costs. Damages unchanged
	Estuaries & Inlets	Increased likelihood of extreme water levels and wave heights Increased sediment availability	Shoreline advance/beach accretion Increased dissipation/reflection of wave energy No significant change in likelihood of defence overtopping or overflow	Shoreline Advance No Significant Change in Standard of Protection	No Significant Change in Risk of Flooding behind the Shoreline	No increase in defence provision costs. Damages unchanged
5 Retreat	Cliffs	Increased likelihood of extreme winter effective rainfall Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Increased likelihood of cliff failure or landslide reactivation Increased likelihood of cliff foot erosion Accelerated cliff top recession Accelerated foreshore/beach lowering	Accelerated Shoreline Retreat Increased likelihood of Coastal Landsliding Increased likelihood of Ground Movement	Increased Risk of Cliff Top Recession Increased Risk of Ground Movement	Loss of Cliff Top Assets. Damage to assets/structures on slopes.
	Barrier Beaches & Lowlands	Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Increased likelihood of beach face or crest erosion Increased likelihood of barrier overtopping Increased likelihood of barrier breach Increased likelihood of barrier breakdown	Accelerated Shoreline Retreat Increased likelihood of Barrier Failure Decrease in natural Standard of Protection Increased likelihood of Sub cell-wide Changes Following Barrier Breakdown	Increased Risk of Flooding behind the Barrier Increased Risk of Saltwater Contamination behind the Barrier Increased Risk of Shoreline Erosion Increased Risk of Flooding elsewhere within the Sub cell Increased Risk of Erosion elsewhere within the Sub cell	Significantly increased flooding damages. Possible write-off of low lying assets (frequent flooding)
	Estuaries & Inlets	Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Increased likelihood of shoreline overtopping or overflow Accelerated foreshore/beach lowering Increased likelihood of shoreline erosion	Accelerated Shoreline Retreat Decrease in natural Standard of Protection	Increased Risk of Flooding behind the Shoreline Increased Risk of Saltwater Contamination behind the Shoreline Increased Risk of Shoreline Erosion	Significantly increased flooding damages. Possible write-off of low lying assets (frequent flooding)
6 New Form	Barrier Beaches & Lowlands	Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Barrier breakdown Defence overtopping Undermining of defences Storm damage to defences	Defence Failure/Barrier Breakdown Dramatic reduction in Standard of Protection Increased likelihood of Sub cell-wide Changes Following Barrier Breakdown	Flooding behind the Barrier Saltwater Contamination behind the Barrier Shoreline Erosion/retreat of Barrier Increased Risk of Flooding elsewhere within the Sub cell Increased Risk of Erosion elsewhere within the Sub cell	Loss of all low lying assets Loss of defence structures Cost of construction of new defences
	Estuaries & Inlets	Increased likelihood of extreme water levels and wave heights Reduced sediment availability	Reversion of Saltmarsh to Mudflat, and Mudflat to Sandflat. Defence overtopping Undermining of defences Storm damage to defences	Defence failure following loss of protective marsh. Dramatic reduction in Standard of Protection Probable Changes to Estuary Dynamics	Flooding behind the Defences Saltwater Contamination behind Defences Increased Risk of Flooding elsewhere within the Estuary	Loss of all low lying assets Loss of defence structures Cost of construction of new defences

Table 9.8 Potential Implications of Future Behaviour