Supplementary Material

# Supplementary Table

**Supplementary Table 1. Model settings for each simulation**

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| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Figure | Profile | Width of model domain (km) | SSC at the seaward boundary: cE (kg/m3) | Wave height: H (m) | Diffusion coefficient: D (m2/s) | Enclosed width (km) | Height of enrockment (m) | Distance from the seaward boundary to the enrockment (m) | Time for simulation (year) |
| 2A | Initial | 4 | 0.1 | 0.3 | 200 | / | / | / | 10 |
| 2A | Reclaimed | 4 | 0.1 | 0.3 | 200 | 1.5 | / | / | 1, 5, 20 |
| 2C | Initial | 2 | 0.15 | 0.3 | 20 | / | / | / | 2 |
| 2C | Reclaimed | 2 | 0.15 | 0.3 | 20 | / | 1.5 | 50 | 5 |
| 3 | Initial | 4 | 0.06 | 0.3 | 200 | / | / | / | 50 |
| 3 | Reclaimed | 4 | 0.06 | 0.3 | 200 | 1 | 2 | 400 | 2, 20 |
| 4 | Initial | 4 | 0.06 | 0.3 | 200 | / | / | / | 50 |
| 4 | Prograding | 4 | 0.07 | 0.26 | 200 | 1 | 2 | 400 | 20 |
| 4 | Retreating | 4 | 0.05 | 0.34 | 200 | 1 | 2 | 400 | 20 |
| 5 | Initial | 4 | 0.06 | 0.3 | 200 | / | / | / | 50 |
| 5 | Natural and reclaimed | 4 | 0.02-0.10 | 0.2-0.4 | 200 | 1 | 2 | 400 | 20 |

(1) All the initial profiles are derived from linear profiles with elevations at the two ends being 1.5m and -1.5m, respectively. All the other profiles are derived from their corresponding initial profiles. The initial profiles in Figure 2 are not in equilibrium.

(2) The tidal input for all cases except Figure 2C is composed of two tidal constituents (M2 and S2). Their amplitudes are 0.25m and 1.25m, respectively. The tidal input in Figure 2C is composed of four tidal constituents (M2, K1, O1, S2). The amplitudes and phase angles for each tidal constituent are given in Mao et al. (2004).

**Reference**

Mao, Q., Shi, P., Yin, K., Gan, J., and Qi, Y. (2004). Tides and tidal currents in the Pearl River Estuary. *Cont. Shelf Res.* 24, 1797–1808. doi:10.1016/j.csr.2004.06.008.