Modified parameters	Unit	This study	Reference range
Biological dynamics			
Maximum specific photosynthetic rate	s^{-1}	5.58 x 10^{-5}	0.107 – 18.2 × 10^{-5} (a)
Photosynthetic efficiency	m^2 s (µmol photons s)$^{-1}$	4.11 x 10^{-7}	1.67 – 6.94 x 10^{-7} (a)
Phytoplankton mortality rate constant	s^{-1}	37 x 10^{-8}	23 – 350 x 10^{-8} (a)
Phytoplankton growth constant	-	0.3	0.1 - 0.5(a)
Aerobic degradation rate constant	µmolC $L^{-1}s^{-1}$	1.44 x 10^{-4}	0.8 – 9.26 x 10^{-4} (a)
Denitrification rate constant	µmolC $L^{-1}s^{-1}$	5.00 x 10^{-4}	0.26 – 522 x 10^{-4} (a)
Nitrification rate constant	µmolN $L^{-1}s^{-1}$	4.62 x 10^{-4}	0.106 – 21.7 x 10^{-4} (a)
Particle dynamics			
Critical shear stress for erosion and deposition: km 0 – km 140; km 140 – estuary mouth	Newtons m^{-2}	0.25; 0.6	0.17 – 0.6(b)
Erosion coefficient: from km 0 – km 140; km 140 – estuary mouth	kgTSS m^{-2} s^{-1}	6.0 x 10^{-6} 1.0 x 10^{-6}	1.0 – 5.0 x 10^{-6} (b)
Settling velocity	m s^{-1}	1.0 x 10^{-4}	0.1 - 10 x 10^{-4} (b, c)

(a): Volta et al., (2016); (b): Letrung et al., (2016); (c): Le et al., (2020)