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| **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 | m2 s (µ mol 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-1s−1 | 1.44 x 10-4 | 0.8 – 9.26 x 10-4 (a) |
| Denitriﬁcation rate constant | µmolC L-1s−1 | 5.00 x 10-4 | 0.26 – 522 x 10-4 (a) |
| Nitriﬁcation rate constant | µmolN L-1s−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) | | | |