

**Table S1.**

Table S1: The cumulative difference between net air-sea CO<sub>2</sub> flux with and without trawling from 1996 to 2020 and the difference in oceanic dissolved inorganic carbon (DIC) inventory with and without trawling in 2020 for the three models (OCIM, GISScon, GISSemis).

Model	Cumulative trawling-induced atmospheric CO <sub>2</sub> emissions from 1996 to 2020 (Pg CO <sub>2</sub> )	Increase in oceanic DIC in 2020 (Pg C)
OCIM	9.01	1.82
GISScon	8.49	1.86
GISSemis	9.23 ± 1.89	1.90 ± 0.76

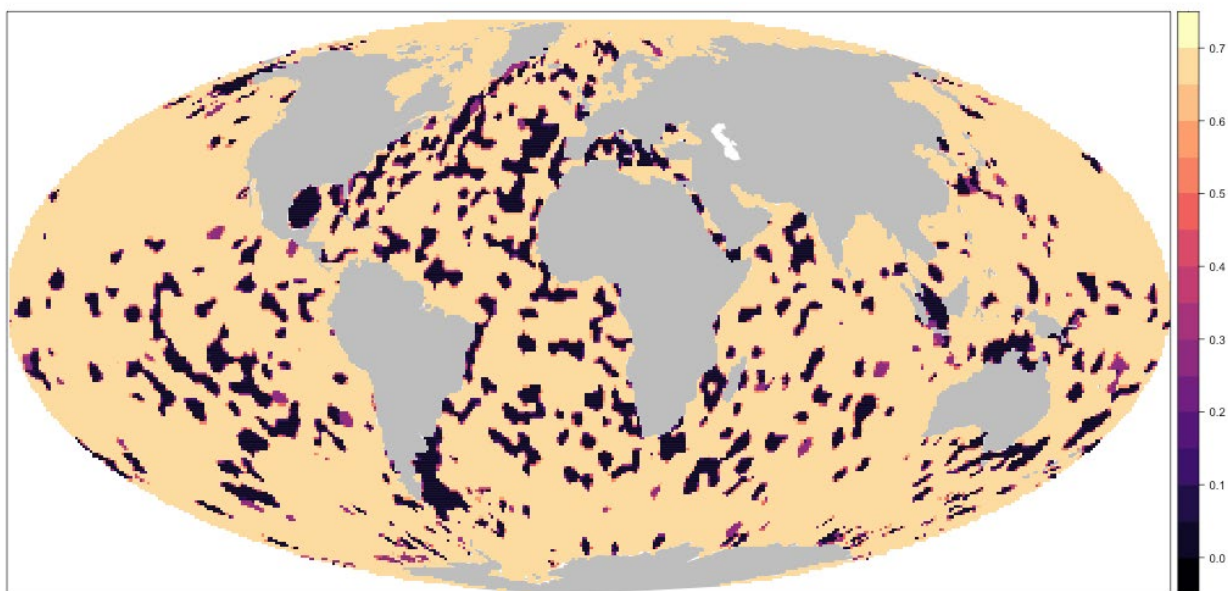


Figure S1: Proportion of labile sedimentary carbon

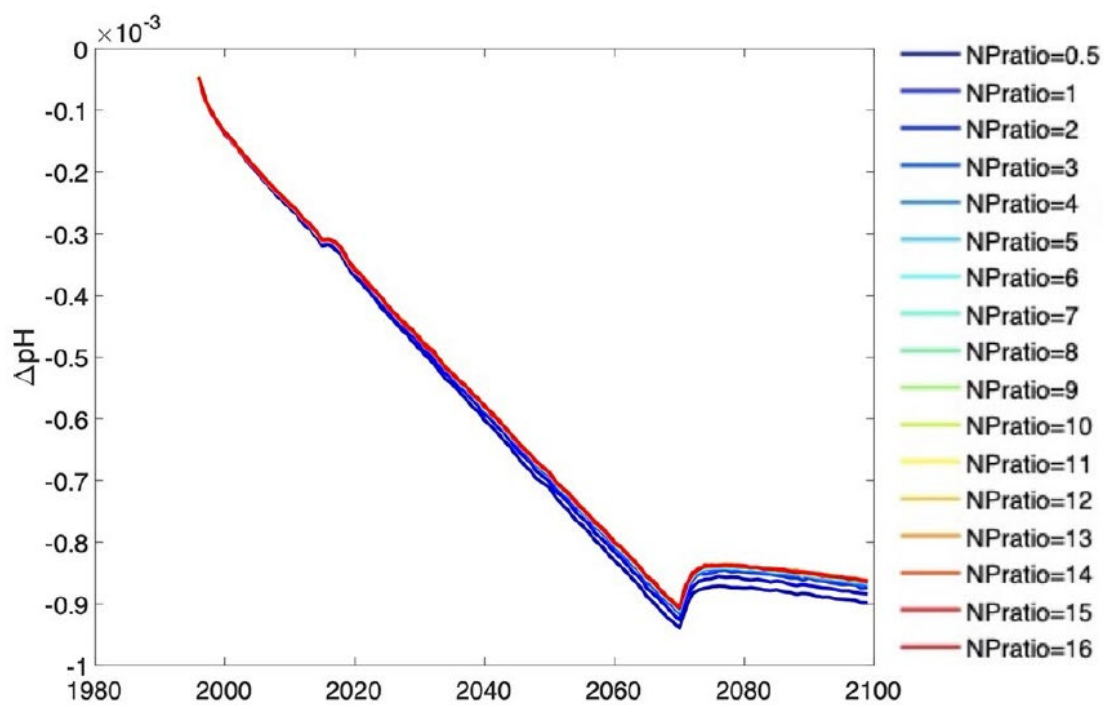


Figure S2: Impact of  $\text{NO}_3^-/\text{PO}_4^{3-}$  ratios on change in global pH due to trawling using the GISS-con model for the scenario where trawling ends in 2070.