Supplement of

Response of export production and dissolved oxygen concentrations in oxygen minimum zones to $p$CO$_2$ and temperature stabilization scenarios in the biogeochemical model HAMOCC 2.0

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Figure SD:1. Comparison of dissolved oxygen concentration in ml L$^{-1}$ between the World Ocean Atlas at 3000 meters depth to (b) the reference simulation at 3000 meters depth.
Figure SD:2. (a) Dissolved oxygen concentration for the extinction simulations and (b) reference simulation oxygen concentration.
Figure SD:3. Loss of dissolved oxygen due to changes in solubility in response to increase pCO$_2$ and radiative forcing for (a) the reference simulation, (b) the difference in solubility between the reference simulation and 2 X CO$_2$, (c) the difference in solubility between the reference simulation and 4 X CO$_2$, (d) the difference in solubility between the reference simulation and 6 X CO$_2$, and (e) the difference in solubility between the reference simulation and 8 X CO$_2$. 
Figure SD:4. Response of particulate organic matter ($P_{POC}$; gC m$^{-2}$ yr$^{-1}$) to reduction in ventilation for (a) the reference simulation, (b) 25% reduction, (c) 50% reduction, (d) 75% reduction and (e) the 100% reduction.
Figure SD:5. Dissolved organic carbon (DOC; \( \mu \text{mol kg}^{-1} \)) response to increase pCO\(_2\) and radiative forcing for (a) the reference simulation, (b) the difference in DOC concentration between the reference simulation and 2 X CO\(_2\), (c) the difference in DOC concentration between the reference simulation and 4 X CO\(_2\), (d) the difference in DOC concentration between the reference simulation and 6 X CO\(_2\) and (e) the difference in DOC concentration between the reference simulation and 8 X CO\(_2\),
Figure SD:6. Dissolved inorganic carbon (DIC; µmol kg⁻¹) response to increase pCO₂ and radiative forcing for (a) the reference simulation, (b) the difference in DIC concentration between the reference simulation and 2 X CO₂, (c) the difference in DIC concentration between the reference simulation and 4 X CO₂, (d) the difference in DIC concentration between the reference simulation and 6 X CO₂ and (e) the difference in DIC concentration between the reference simulation and 8 X CO₂,
Figure SD:7. Dissolved phosphate (PO$_4$; µmol kg$^{-1}$) response to increase pCO$_2$ and radiative forcing for (a) the reference simulation, (b) the difference in PO$_4$ concentration between the reference simulation and 2 X CO$_2$, (c) the difference in PO$_4$ concentration between the reference simulation and 4 X CO$_2$, (d) the difference in PO$_4$ concentration between the reference simulation and 6 X CO$_2$ and (e) the difference in PO$_4$ concentration between the reference simulation and 8 X CO$_2$. 
Figure SD:8. Mechanisms for oxygen loss in the OMZs at 2X CO₂. (a) Reference simulation. (b) The difference in DO concentrations between 2X CO₂ and the reference simulation. (c) The difference in DO lost due to changes in solubility between 2X CO₂ and the reference simulation. (d) The increase in oxygen consumption due to remineralization of organic carbon between the 2X CO₂ and reference simulation.
Figure SD:9. Mechanisms for oxygen loss in the OMZs at 6 X CO$_2$. (a) Reference simulation. (b) The difference in DO concentrations between 6 X CO$_2$ and the reference simulation. (c) The difference in DO lost due to changes in solubility between 6 X CO$_2$ and the reference simulation. (d) The increase in oxygen consumption due to remineralization of organic carbon between the 6 X CO$_2$ and reference simulation.