

### Supplement 3: Model results

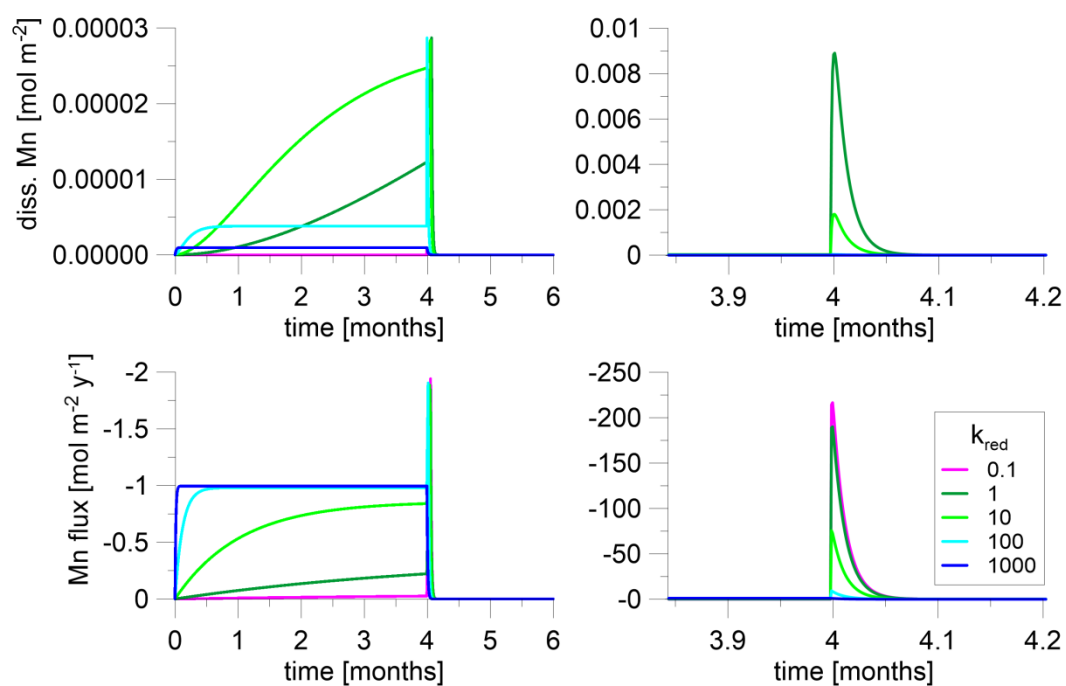


Figure S1. Changes in integrated amounts of dissolved Mn in the sediment (in units of mol m<sup>-2</sup>) and the benthic flux of Mn (in units of mol m<sup>-2</sup> y<sup>-1</sup>) for the simulations with 5 values of  $k_{red}$  (0.1, 1, 10, 100, 1000 y<sup>-1</sup>). Negative Mn fluxes refer to an efflux from the sediment. The left panels zoom into the processes during the oxic phase. Note that the values exceed the maximum of the y-axis. The right panels zoom into the shift from the oxic to anoxic phase at 4 months.