

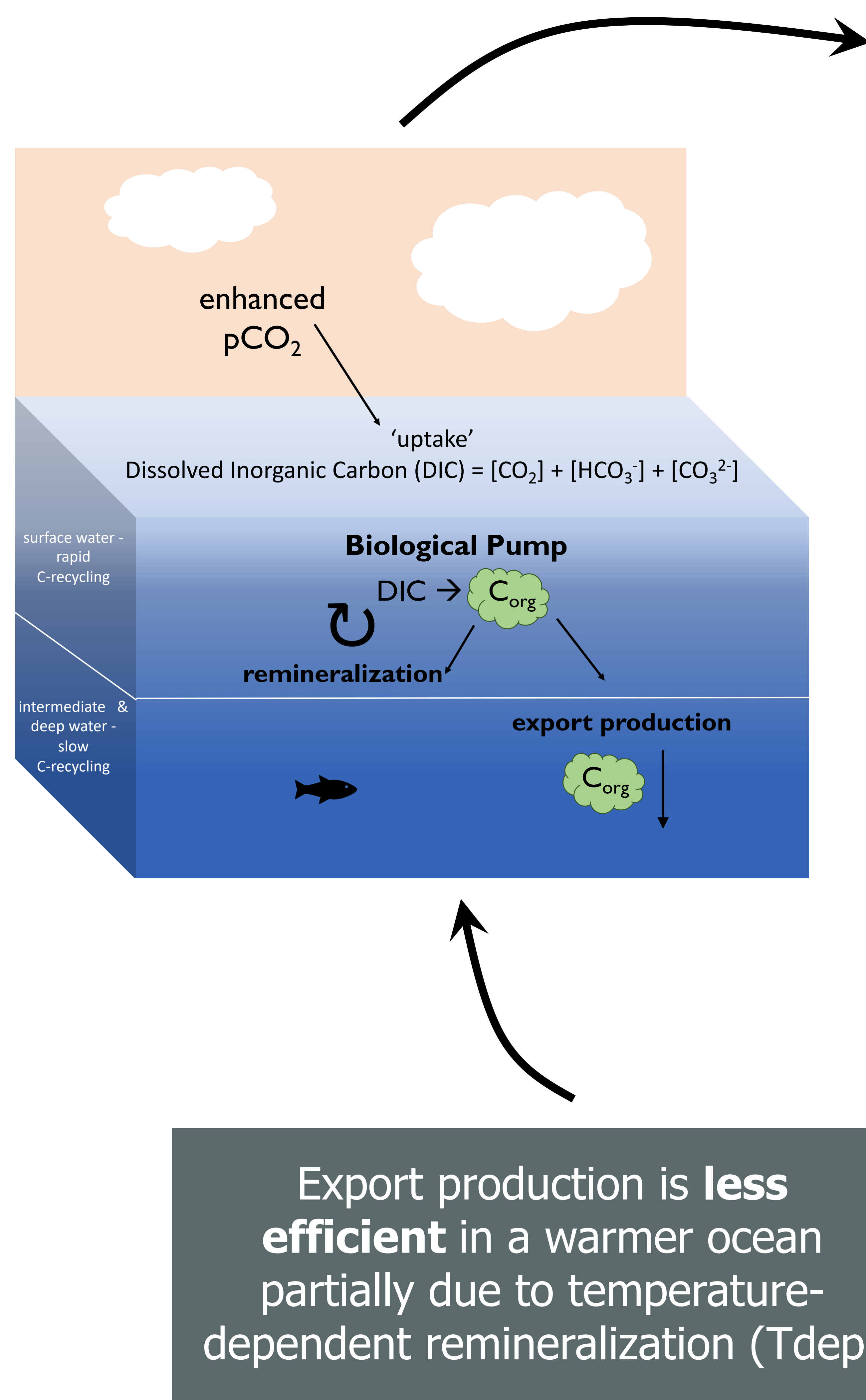
A Revised Temperature-Dependent Remineralization Scheme for the Community Earth System Model (CESM)



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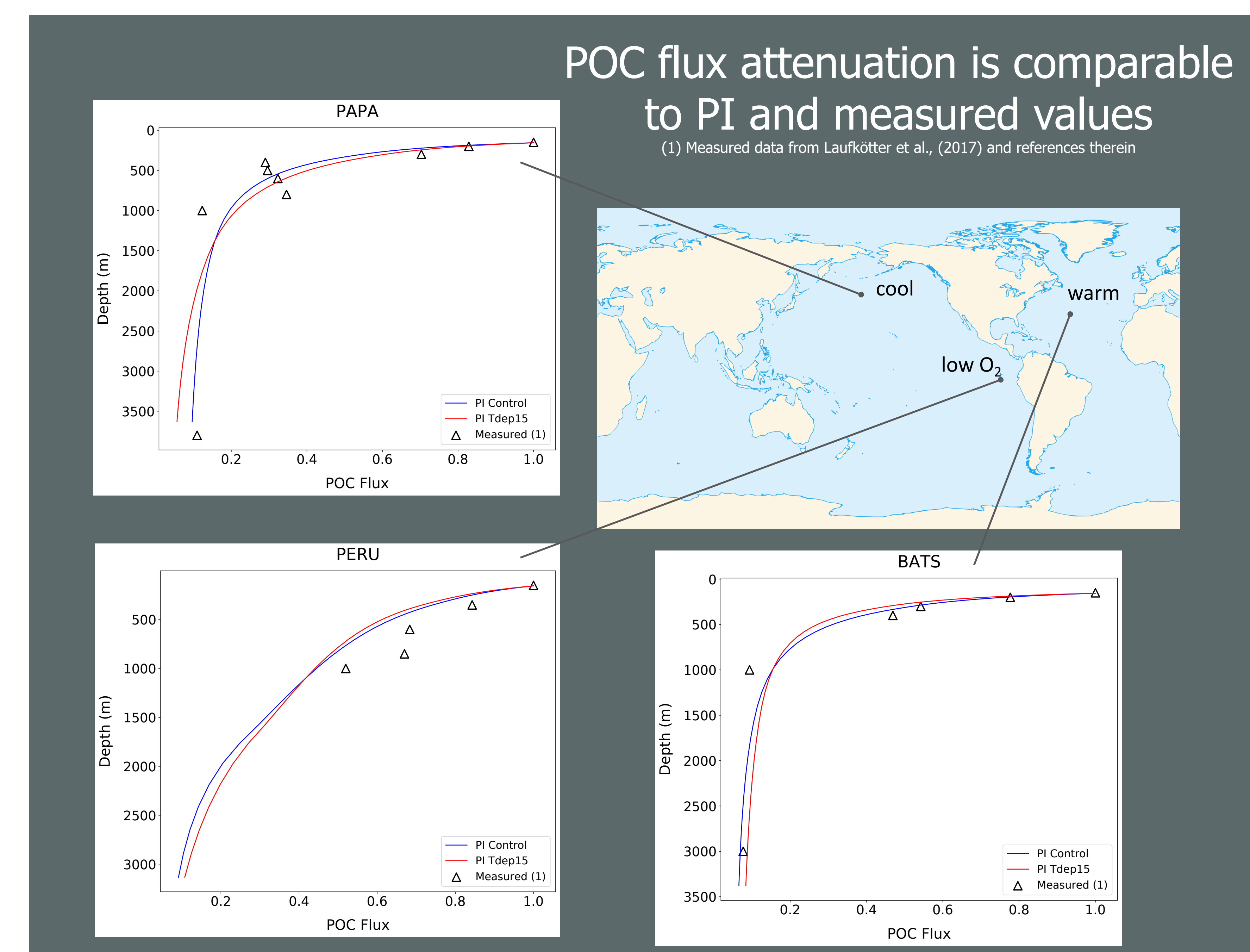
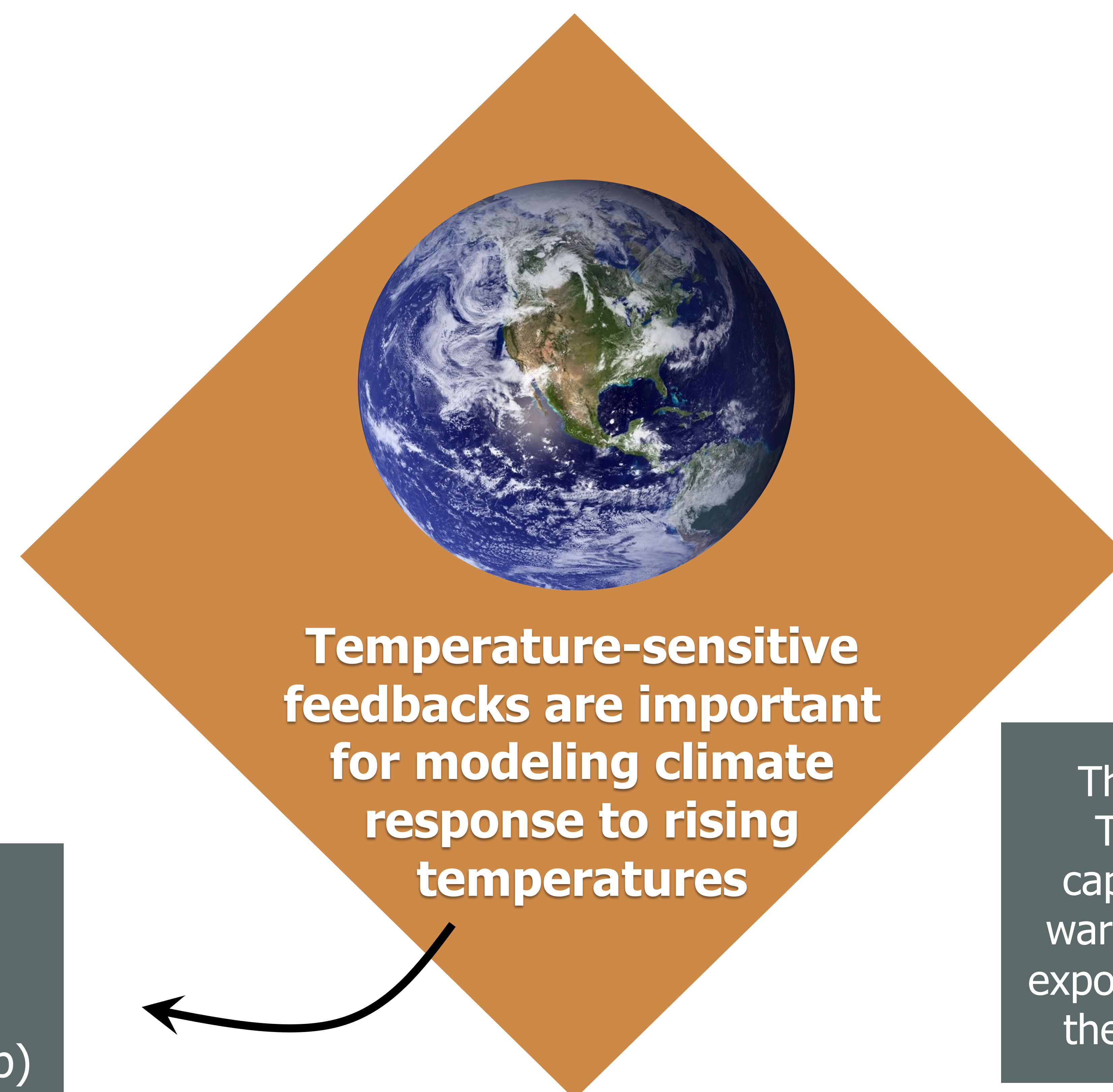
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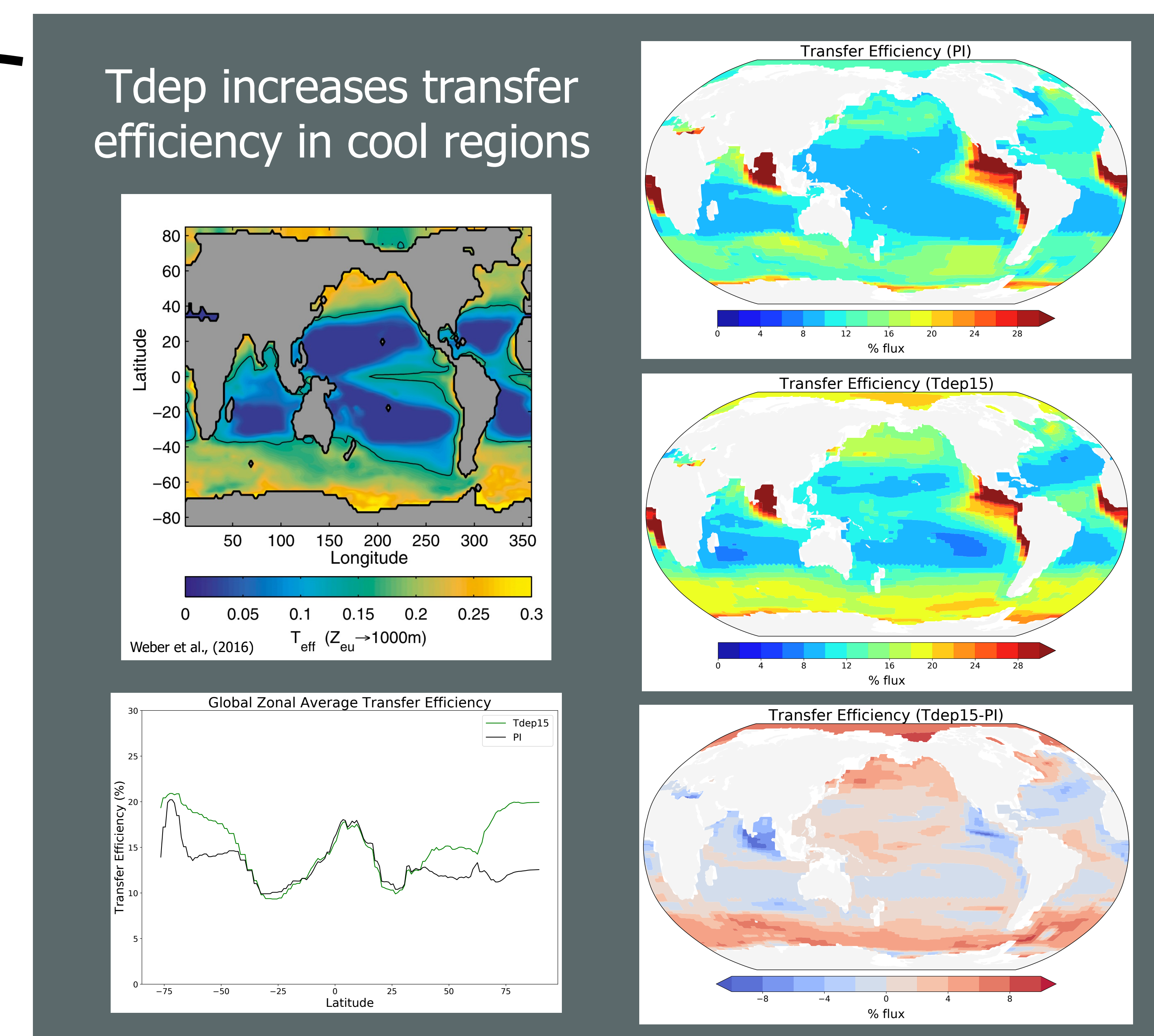


METHODS

Temperature-dependent remineralization (Tdep) was added to CESM 1.2 and applied to gravitationally sinking particulate organic carbon (POC)



The inclusion of Tdep will help capture effects of warming on carbon export, particularly in the high latitudes



APPLICATIONS & NEXT STEPS

Inclusion of Tdep in warm Pliocene simulations with and without a PMOC; RCP Scenarios with CESM2



(1) Laufkötter, C., et al. *Global Biogeochemical Cycles* **31**, 1038–1050 (2017).
(2) Weber, T., et al. *Proc of the National Academy of Sciences* **113**, 8606–8611(2016).