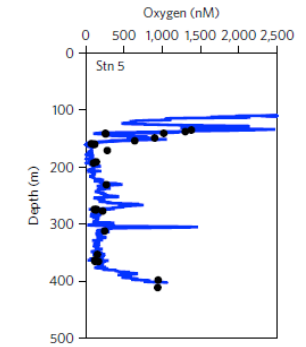
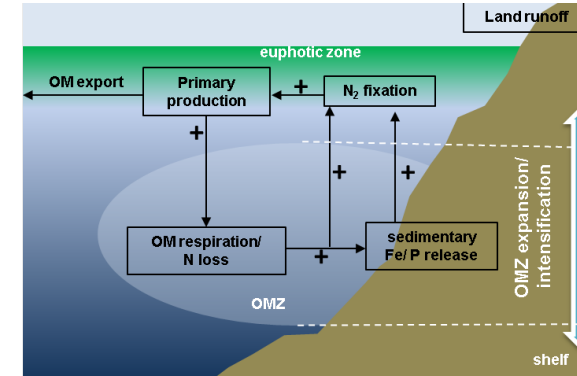


Is the Bay of Bengal at a tipping point?

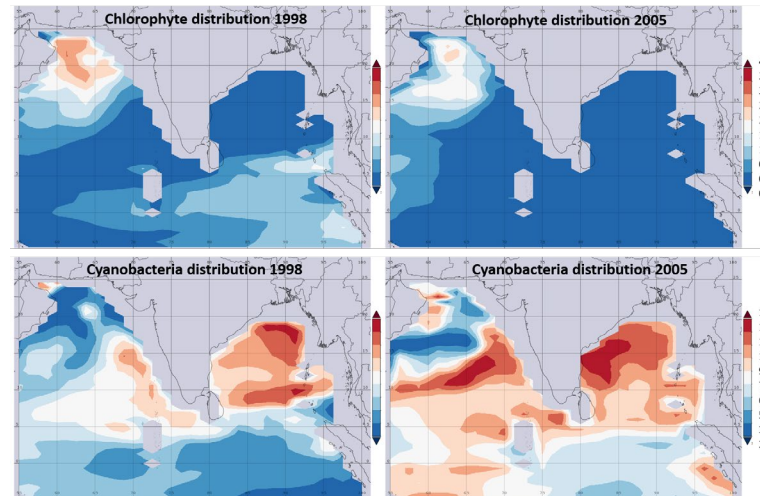
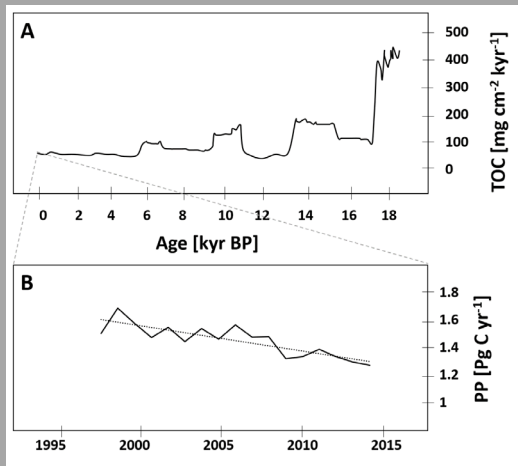
Carolin R. Löscher, cloescher@biology.sdu.dk, Nordcee, Department of Biology, D-IAS, University of Southern Denmark, Odense, Denmark

- Primary production in the BoB has historically been low, driven by diatoms and chlorophytes
- A shift in primary producer community composition is visible over the last two decades with a decrease in chlorophytes and an increase in cyanobacteria
- This community shift correlates to decreasing nitrate concentrations, which may provide an explanation for both, the decrease of eukaryotic nitrate-dependent primary producers and the increase of small unicellular cyanobacteria related to *Prochlorococcus*, which have a higher affinity to nitrate.

Impact on oxygen (O_2) concentrations of the BoB's low oxygen intermediate waters



Bristow et al., 2017



- If nitrate concentrations further decrease, decreasing biomass production, export and respiration, would stabilize O_2 concentrations within the oxygen minimum $\rightarrow$ no further O_2 loss
- Therefore, given a decrease in primary production, the BoB may not be at a tipping point for becoming anoxic, unless external nutrient inputs increase.

What is stronger, stratification decreasing ventilation or decreased respiration?