

Chapter 3b (B. Schneider)

ii. Marine Biogeochemistry

1. Changes in external forcing

- 1.1 Nutrient inputs
- 1.2 Organic and inorganic carbon input
- 1.3 Atmospheric CO₂

2. Methodology: Observations versus modelling approaches

- 2.1 Data availability
- 2.1 Model approaches and process parameterizations

3. Changes in biogeochemistry

- 3.1 Organic matter production: rates, controlling factors, stoichiometry
- 3.2 Acid/base (CO₂ system) balance: acidification, CaCO₃ saturation;
- 3.3 Organic matter decomposition: rates, stoichiometry, recycling of nutrients
 - 3.3.1 Denitrification
 - 3.3.2 Anoxia
 - 3.3.3 Phosphate transformations
- 3.4 Organic matter (C/N/P) burial

4. Response to potential future changes

- 4.1 Eutrophication
- 4.2 Acidification

5. Conclusions

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