

Supplementary Materials: North Sea ecosystem-scale model-based quantification of net primary productivity changes by the benthic filter feeder *Mytilus edulis*

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Abbreviations

The following abbreviations are used in this manuscript:

DJF	December/January/February
ESA-CCI	European Space Agency Climate Change Initiative
JJA	June/July/August
MAM	March/April/May
NPP	net primary productivity
SNS	southern North Sea
SON	September/October/November

Surface chlorophyll concentration

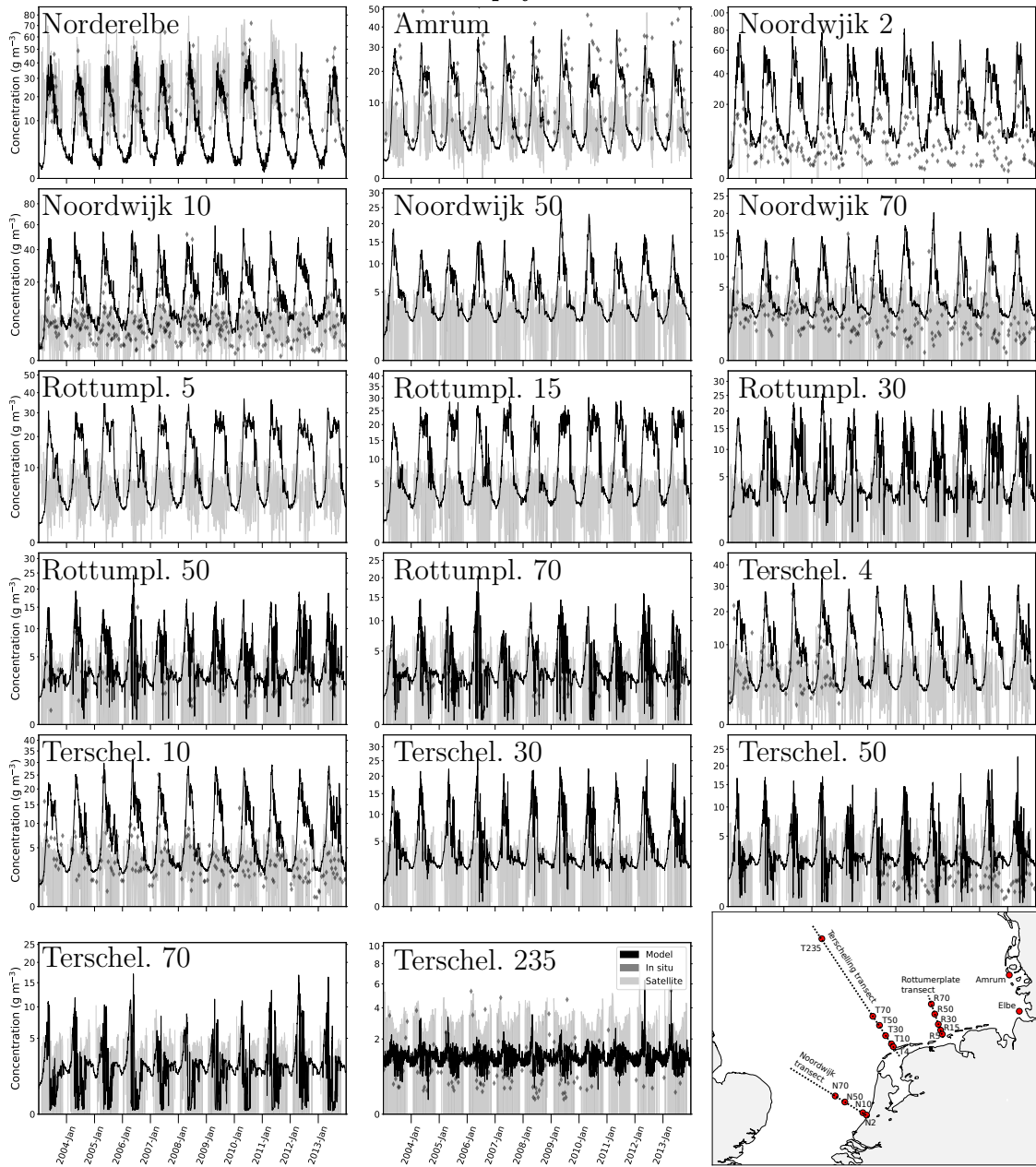


Figure S1. Simulated surface chlorophyll 2003-2013 compared to station data (diamonds) and satellite observation (shading).

Climatological observed surface chlorophyll

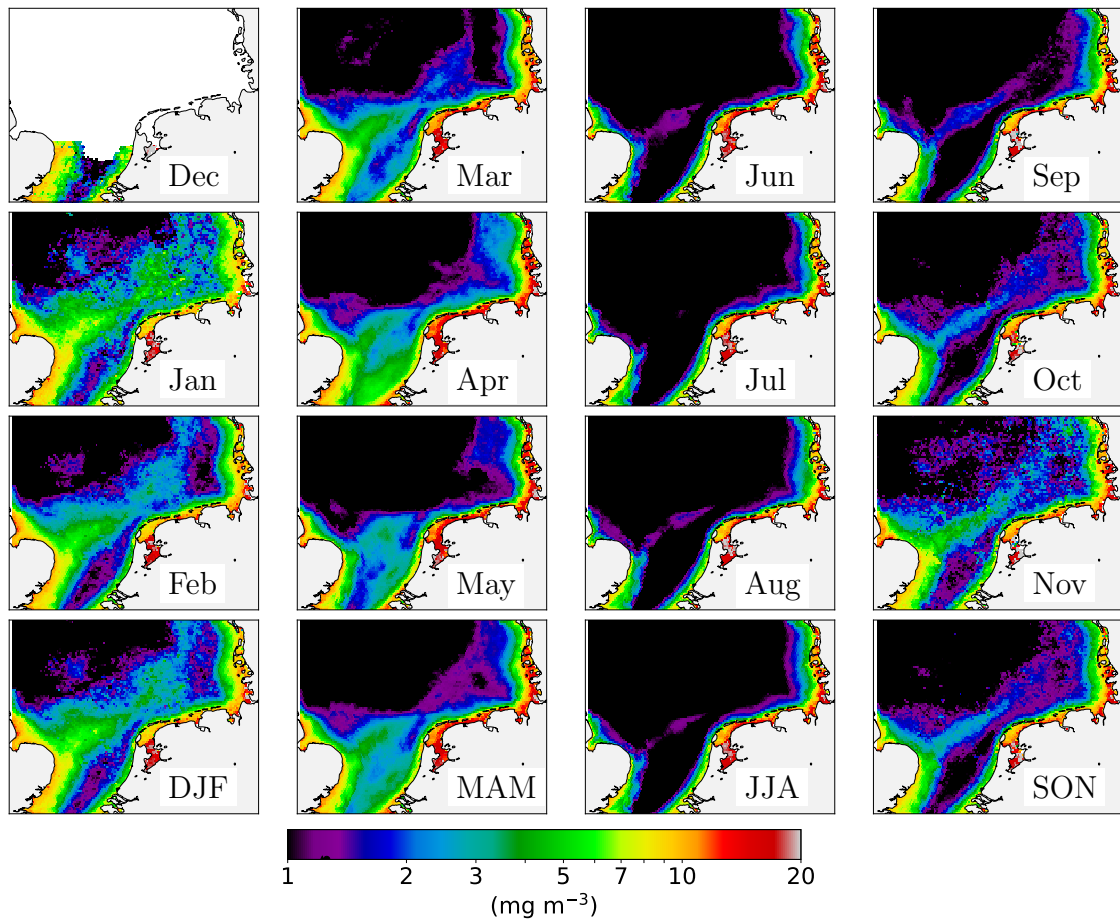


Figure S2. Climatological observed surface chlorophyll from ESA-CCI 2003-2013 by month and season.

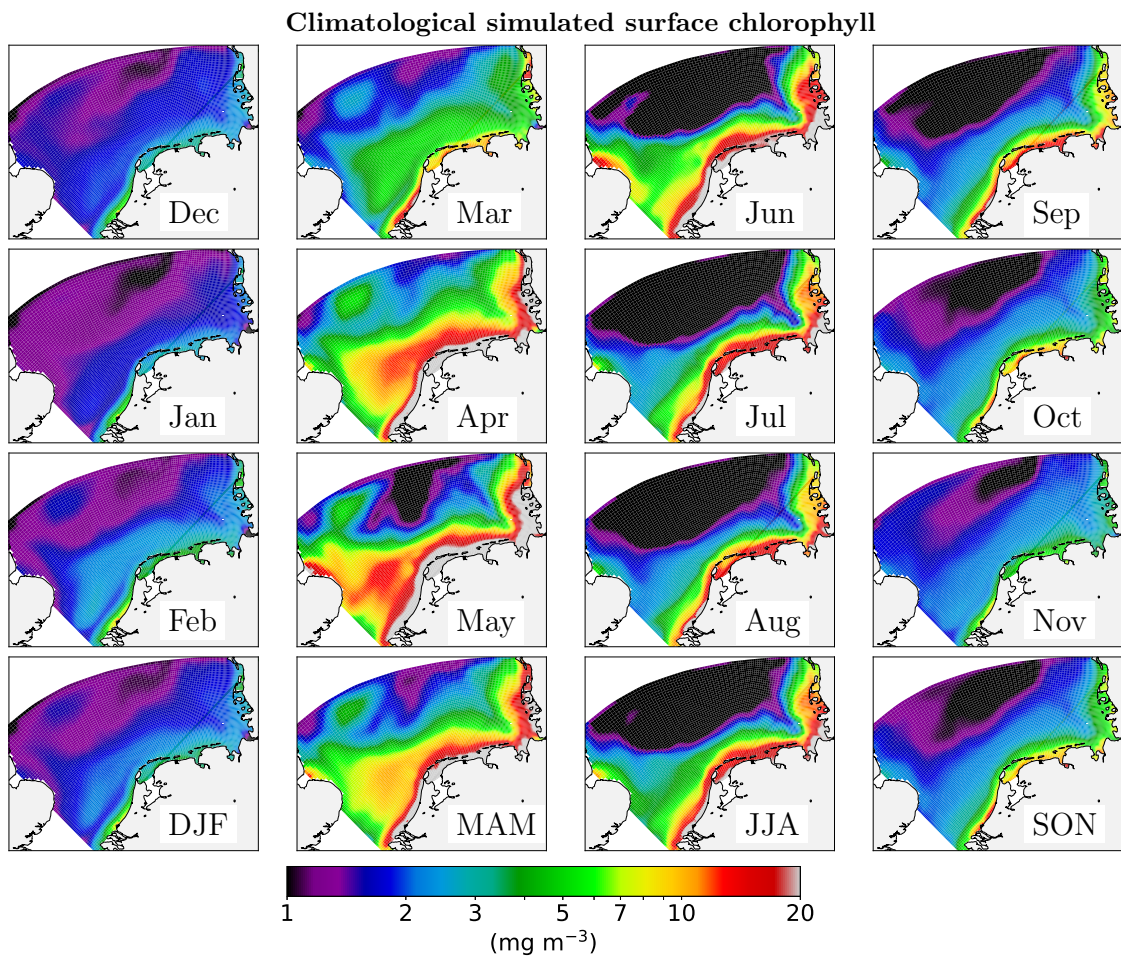


Figure S3. Simulated climatological surface chlorophyll 2003-2013 by month and season, without filtration

Climatological simulated surface chlorophyll (with filtration)

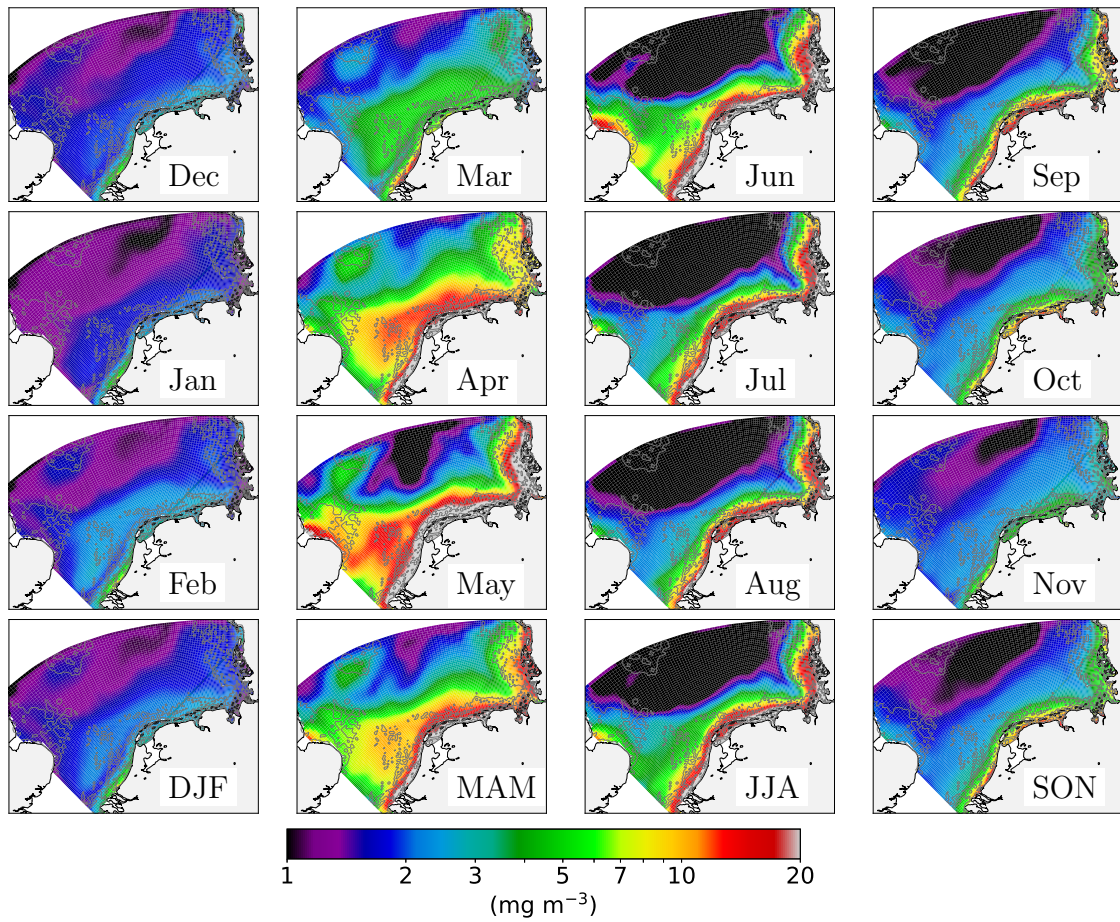


Figure S4. Simulated climatological surface chlorophyll 2003-2013 by month and season, with filtration

Annual net primary production (no filtration, scenario NONE)

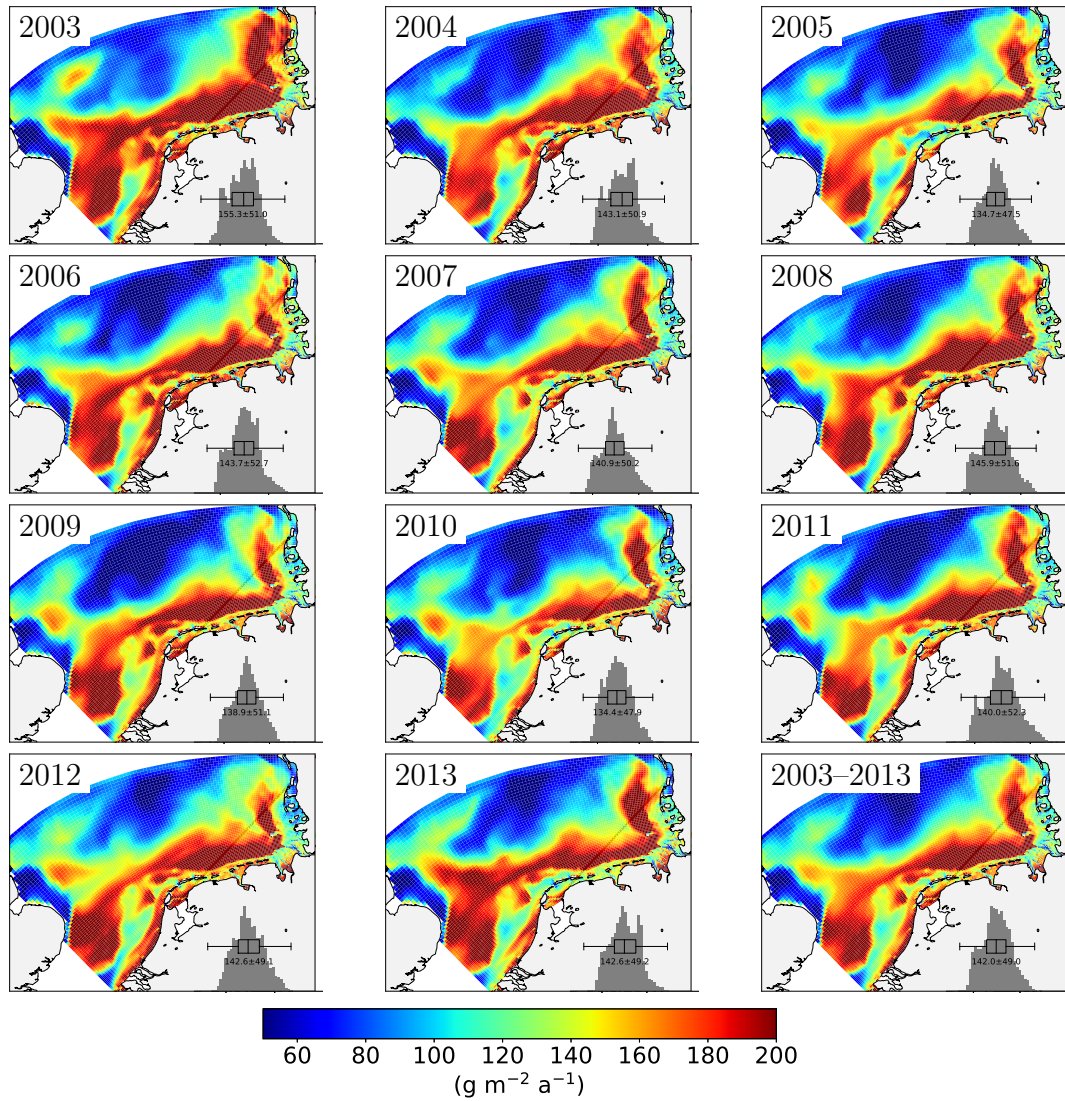


Figure S5. Simulated annual net primary production 2003-2013 and climatological for a simulation without benthic filtration.

Annual net primary production (with filtration, scenario REF)

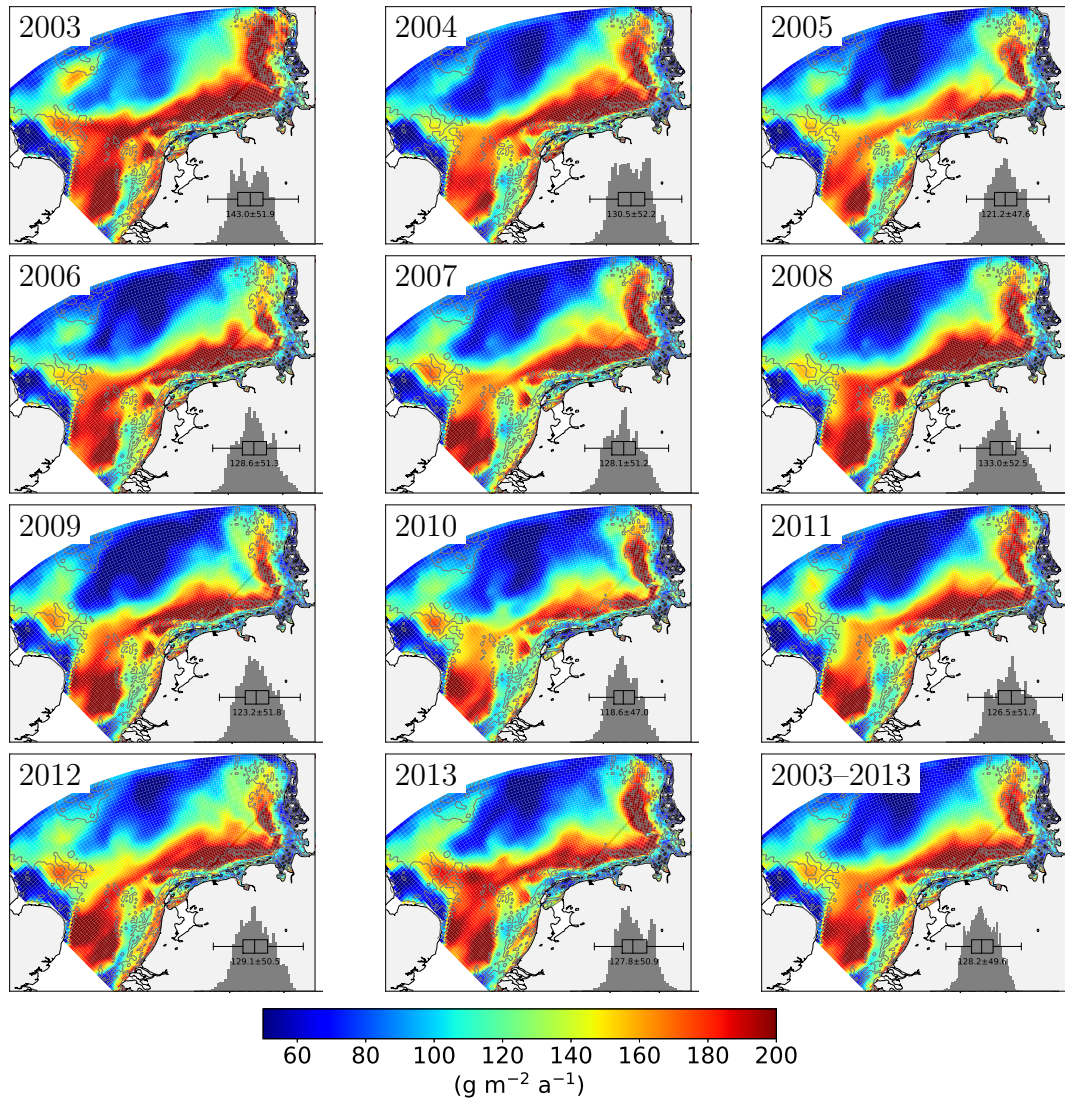


Figure S6. Simulated annual net primary production 2003-2013 and climatological for a simulation with benthic filtration.

Annual net primary production (relative difference)

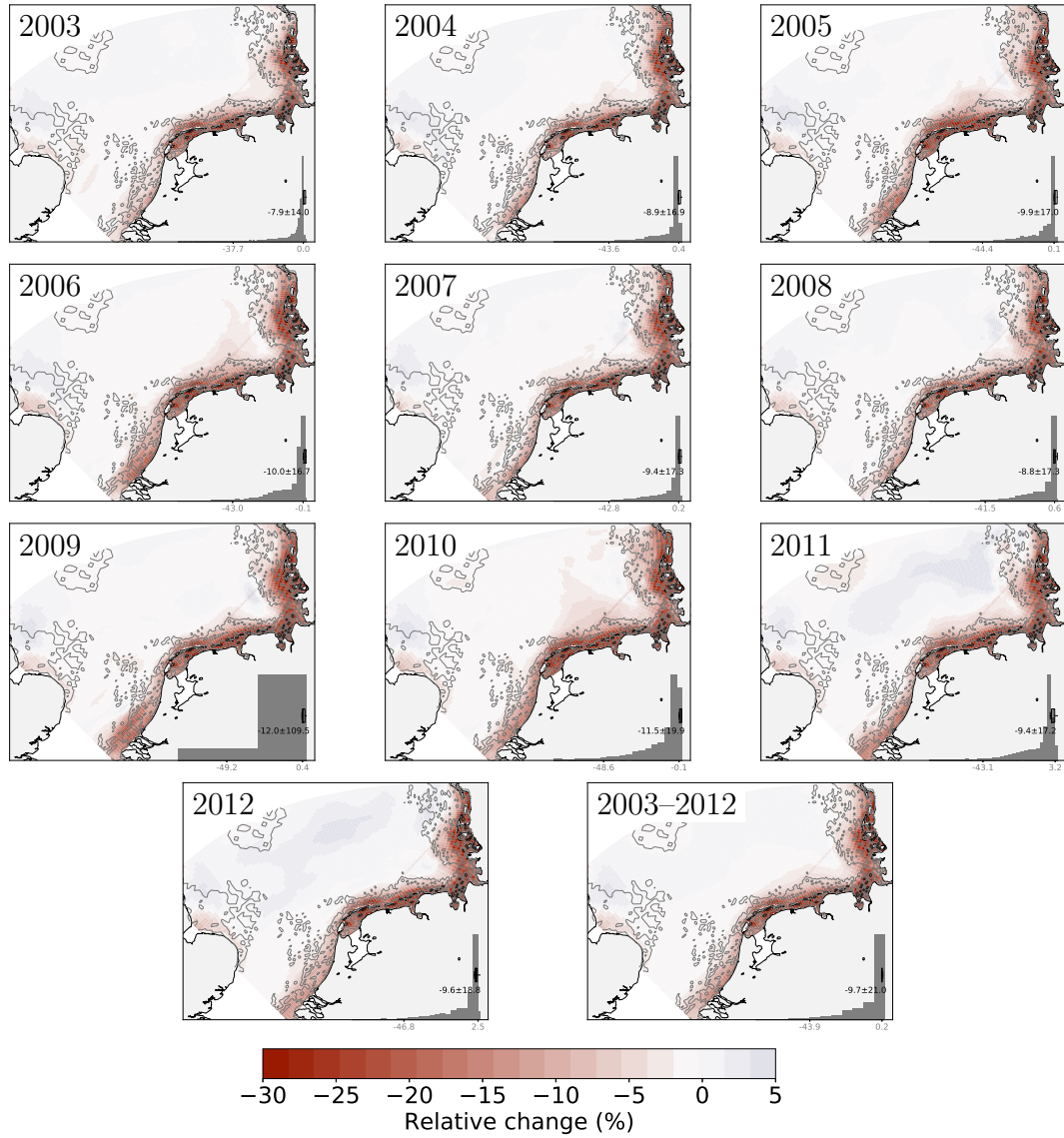


Figure S7. Simulated relative difference annual net primary production 2003-2013 and climatological between simulations including and excluding benthic filtration.