

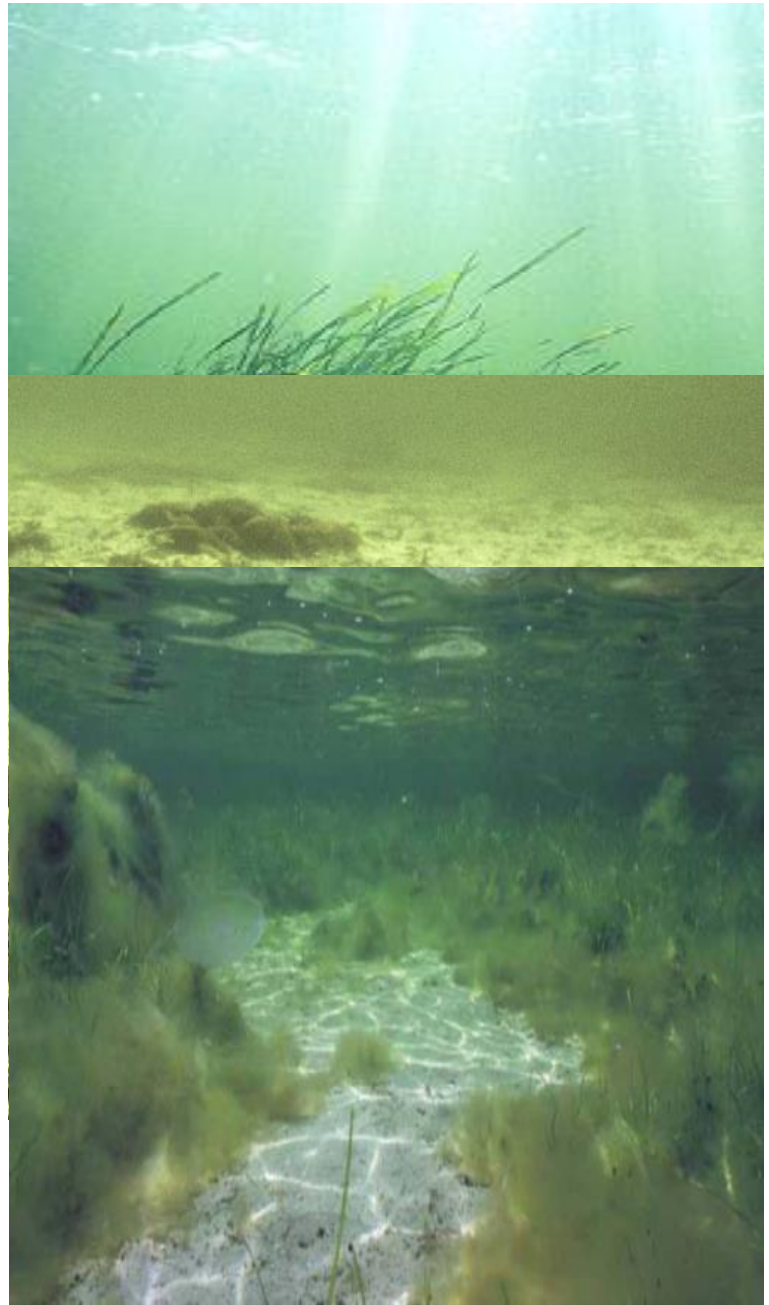
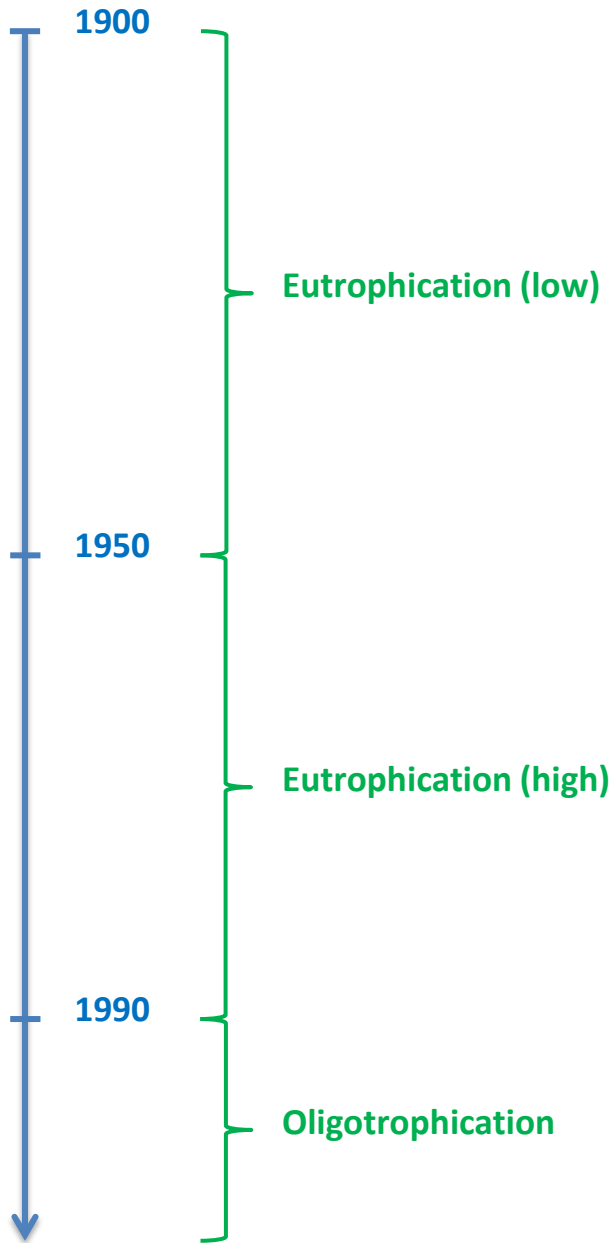
# Responses to **oligotrophication** in Danish coastal ecosystems

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Bo Riemann, Jacob Carstensen, Karsten Dahl, Henrik Fossing, **Jens Würgler Hansen**,  
Hans H. Jakobsen, Alf B. Josefson, Dorte Krause-Jensen, Stiig Markager, Peter A. Stæhr,  
Karen Timmermann, Jørgen Windolf & Jesper H. Andersen



# Historical overview



Nutrients  
(input)

Water

Nutrients  
(concentration)

Phytoplankton

Stratification

Light

Eelgrass

Macroalgae

Deposit feeders

Filter feeders

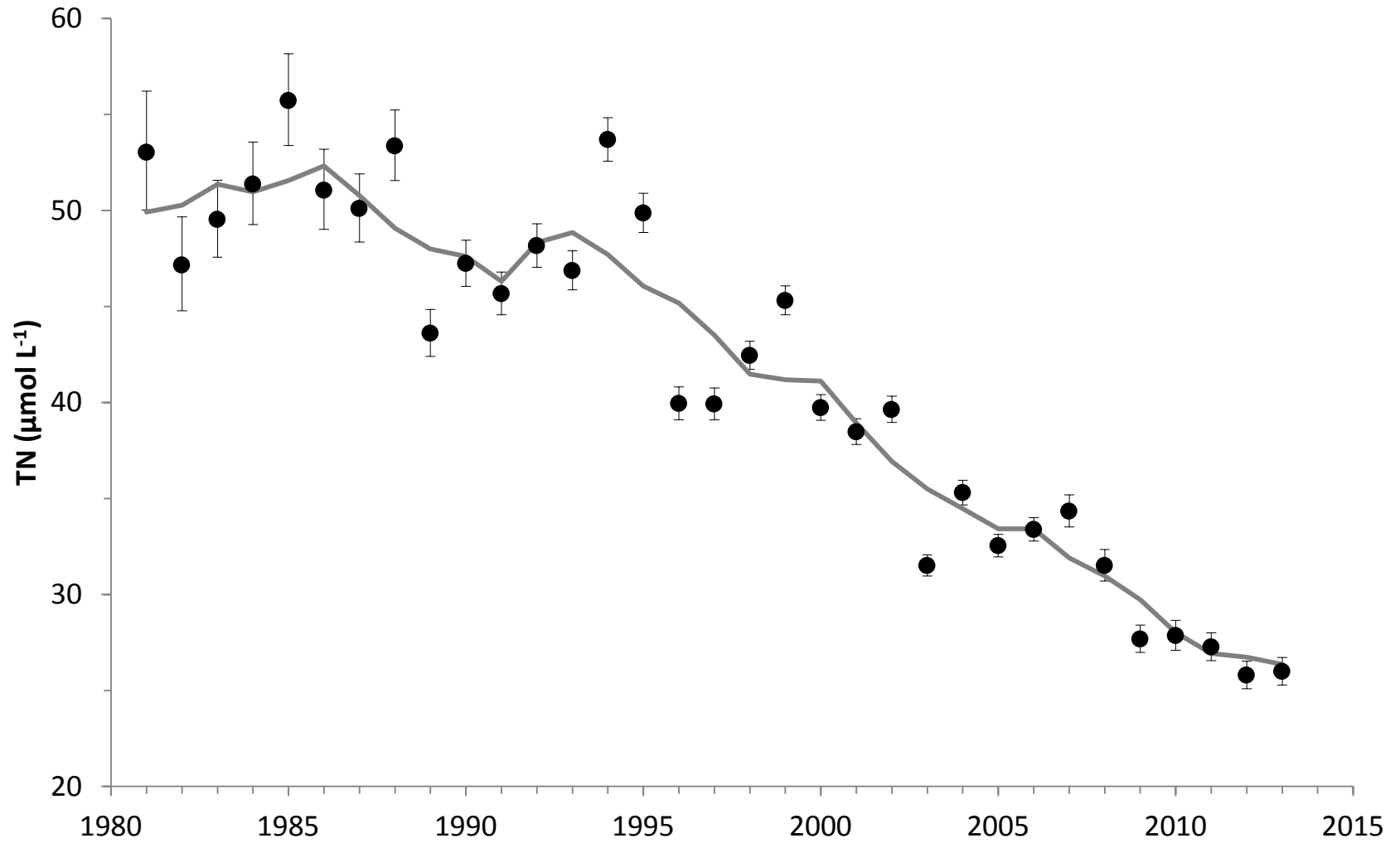


Sediment

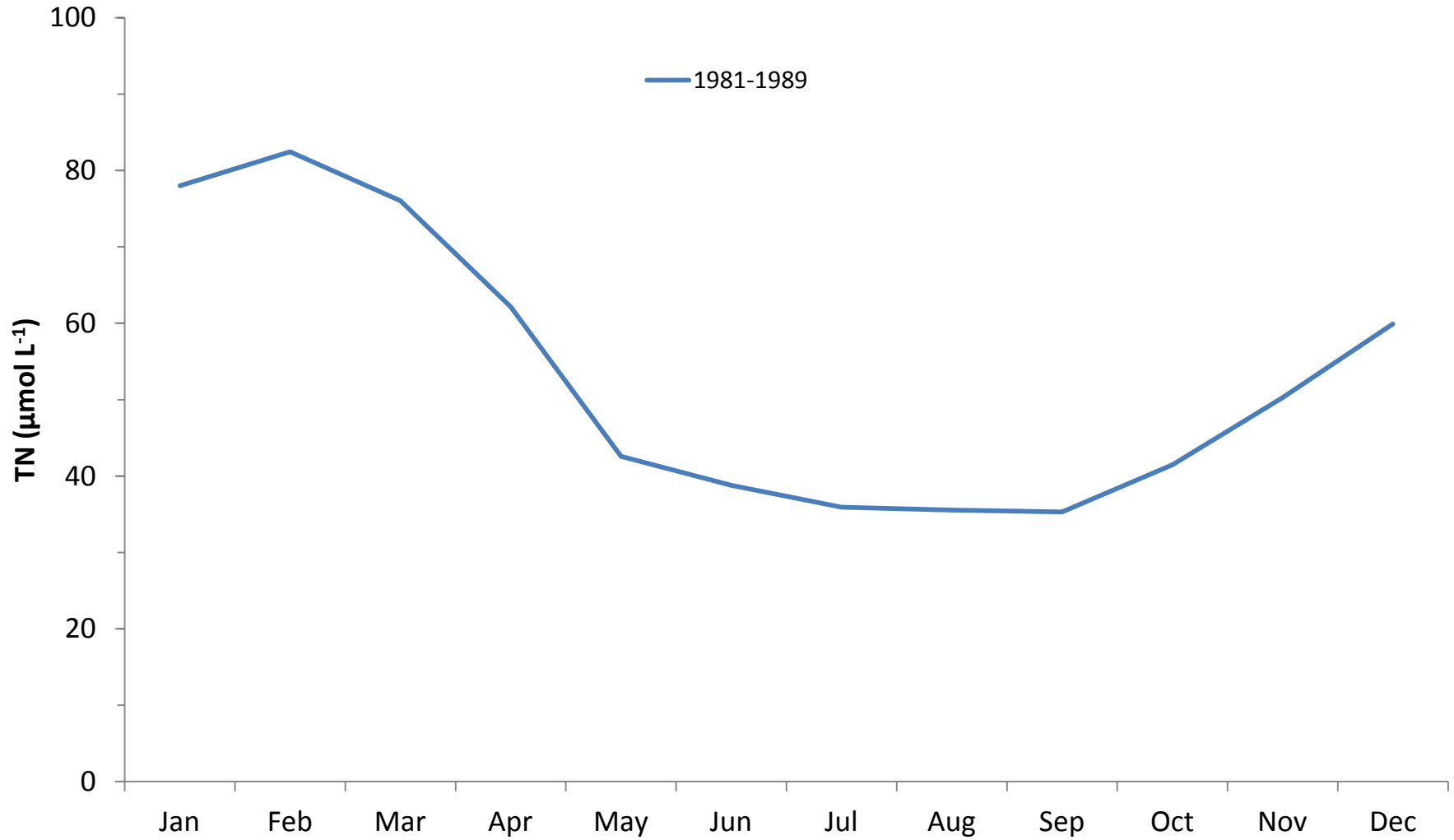
# Monitoring stations in coastal waters



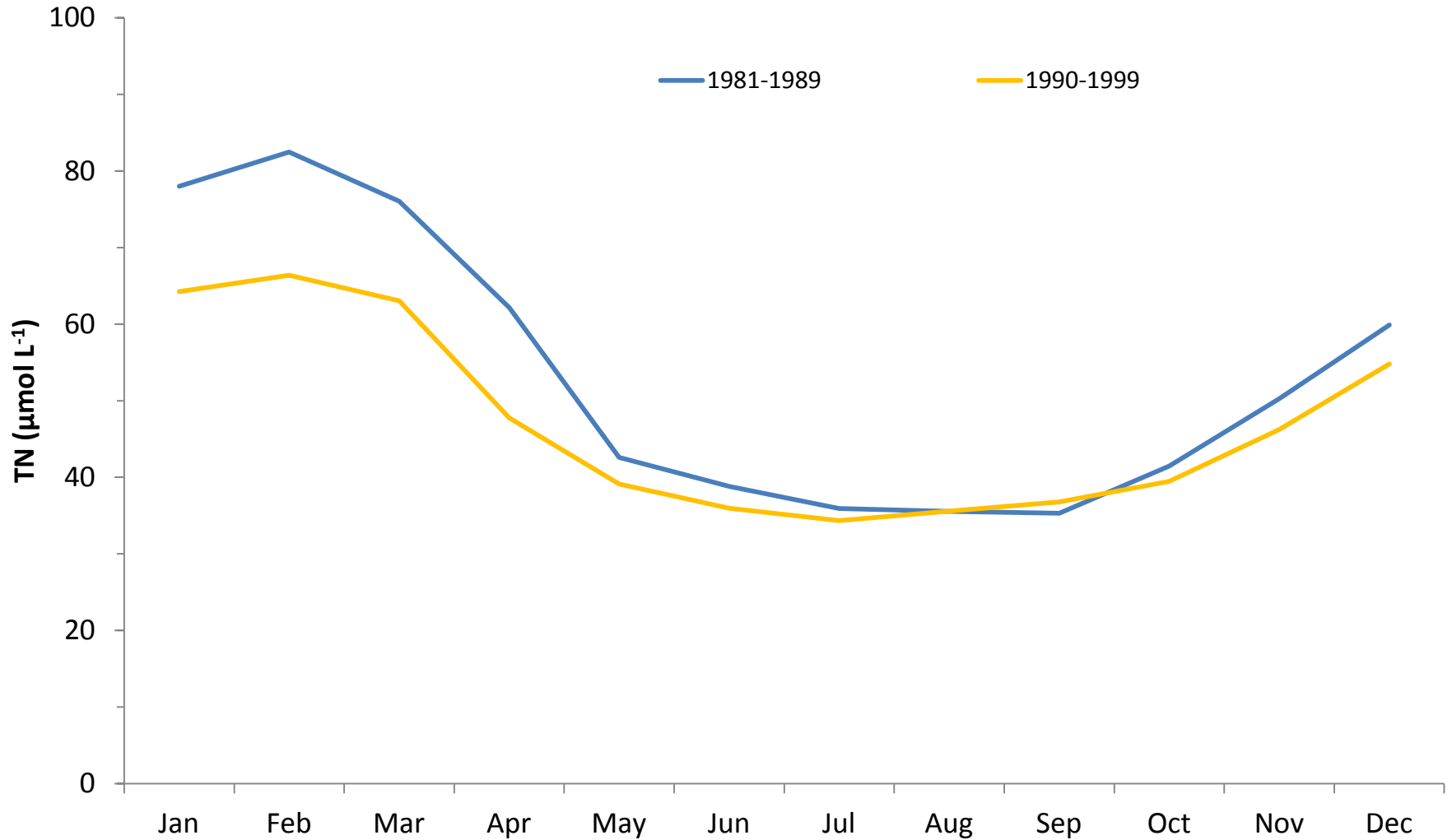
# Nitrogen (total)



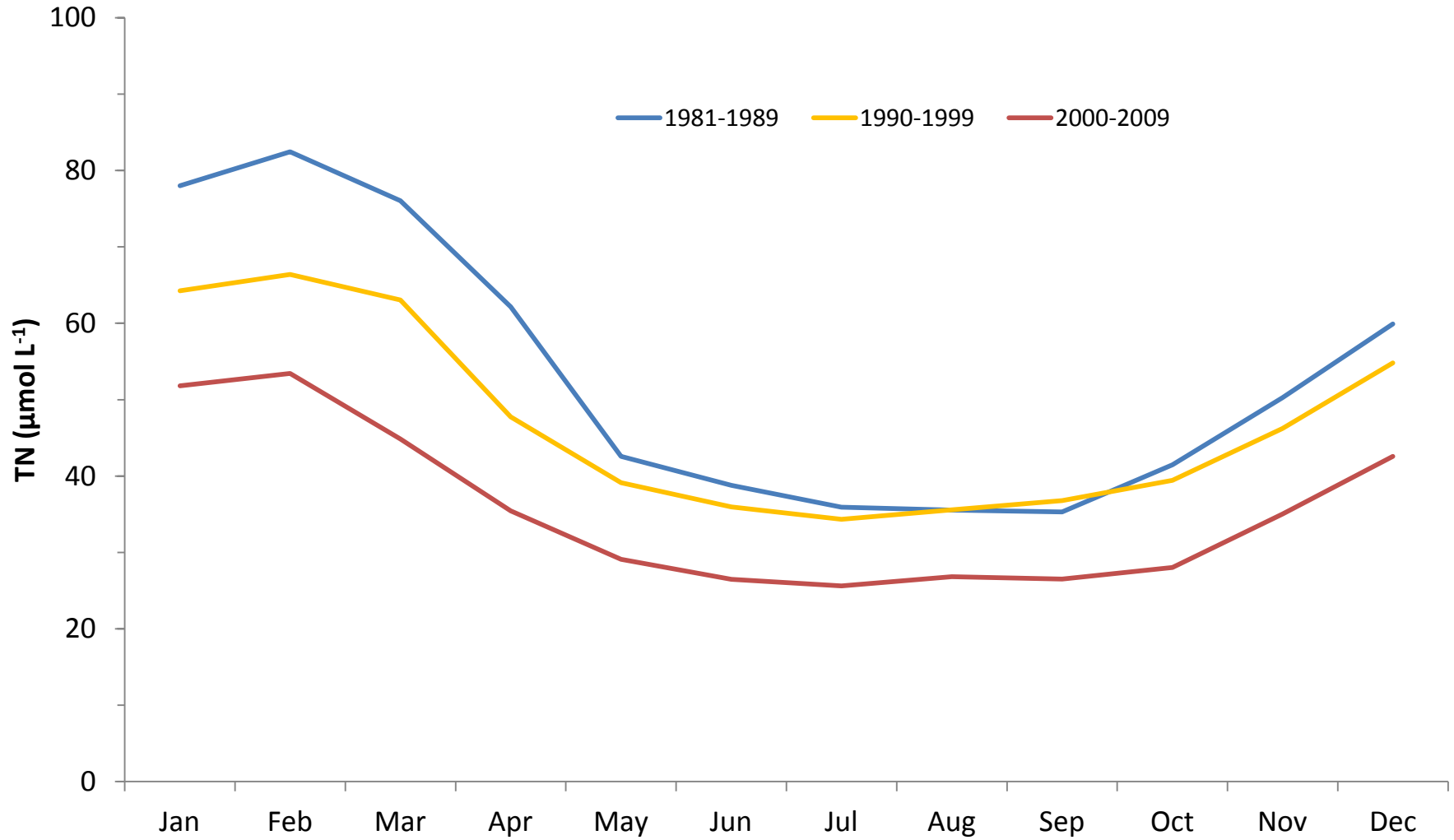
# Nitrogen (total)



# Nitrogen (total)

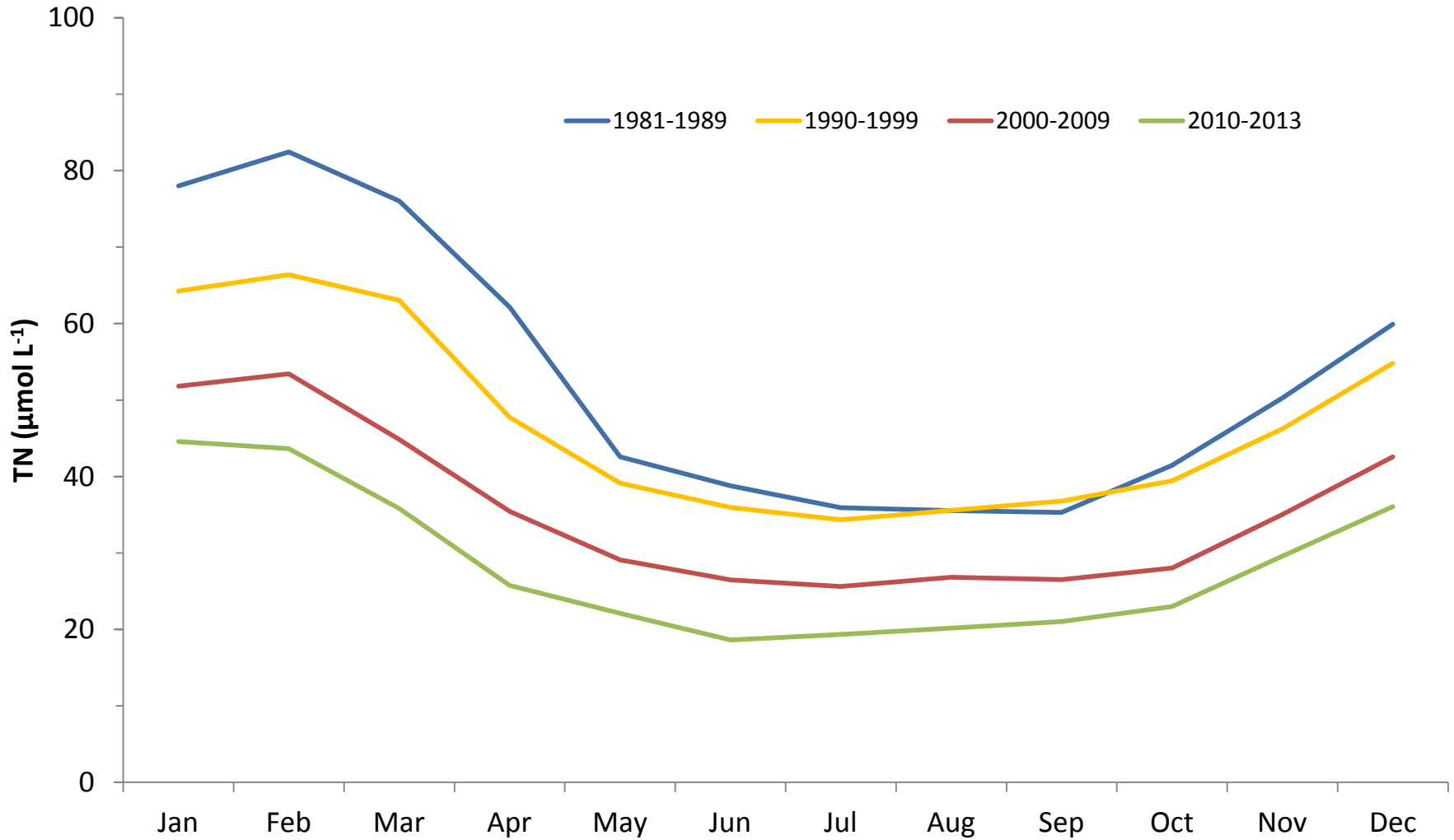


# Nitrogen (total)

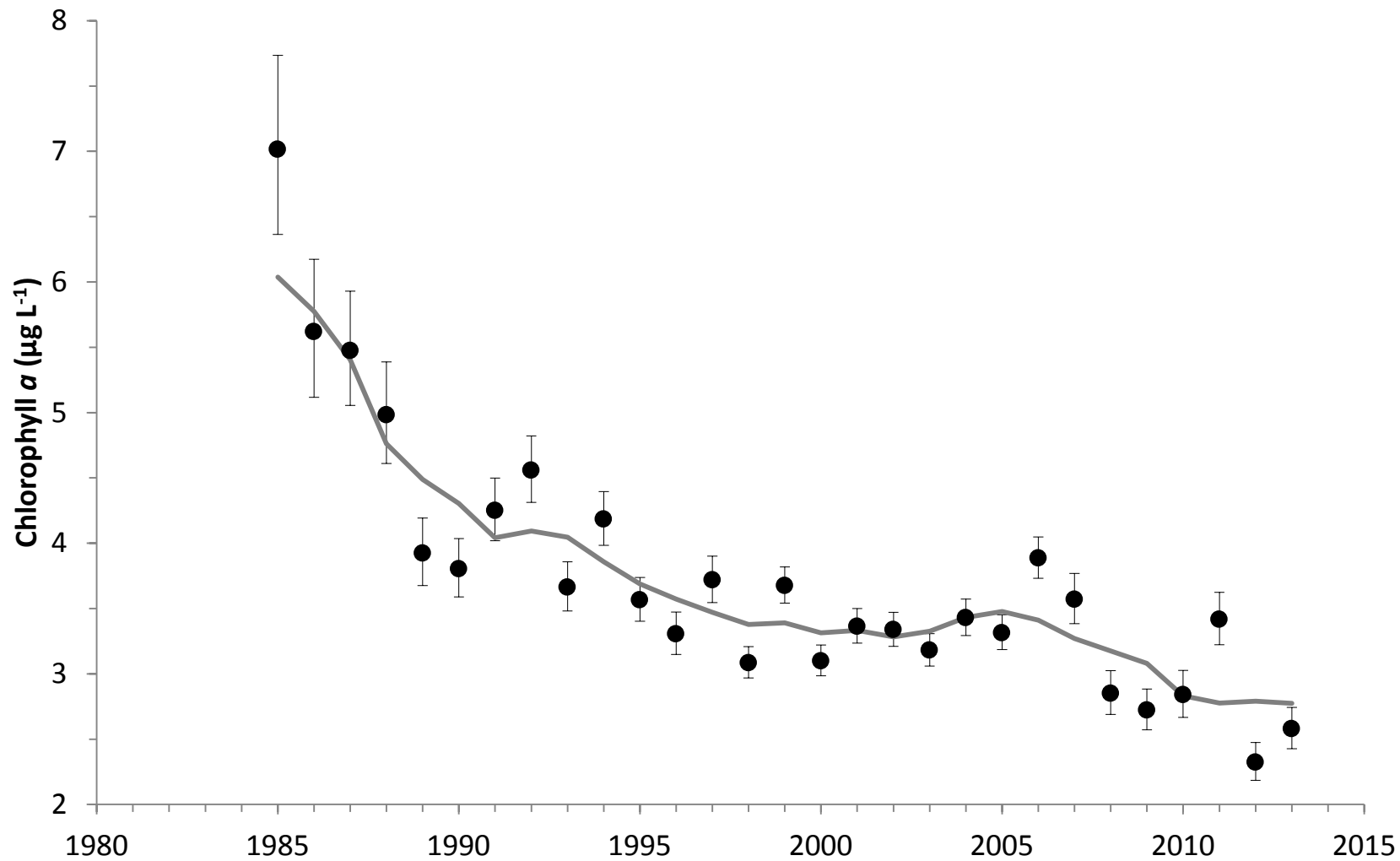




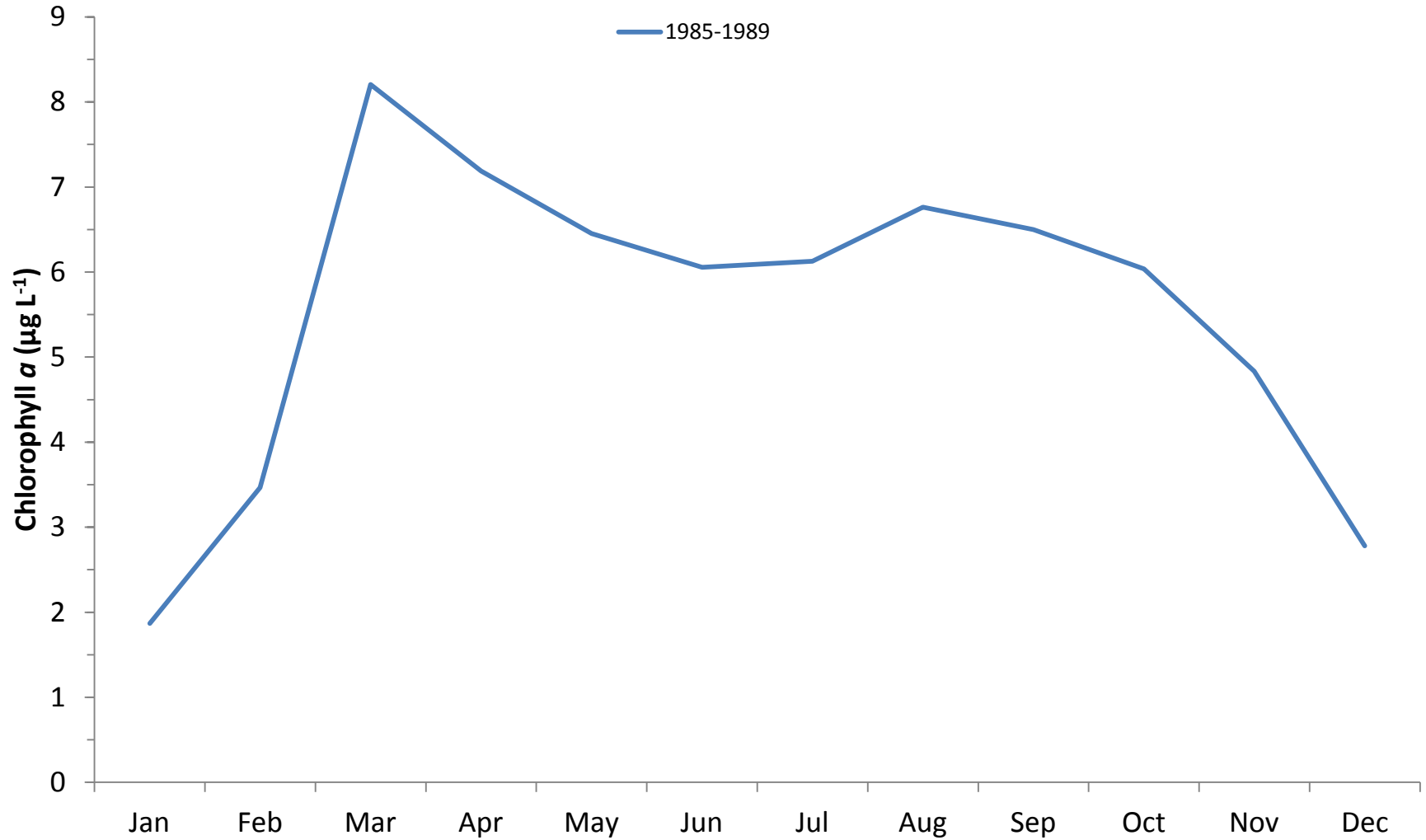
# Nitrogen (total)



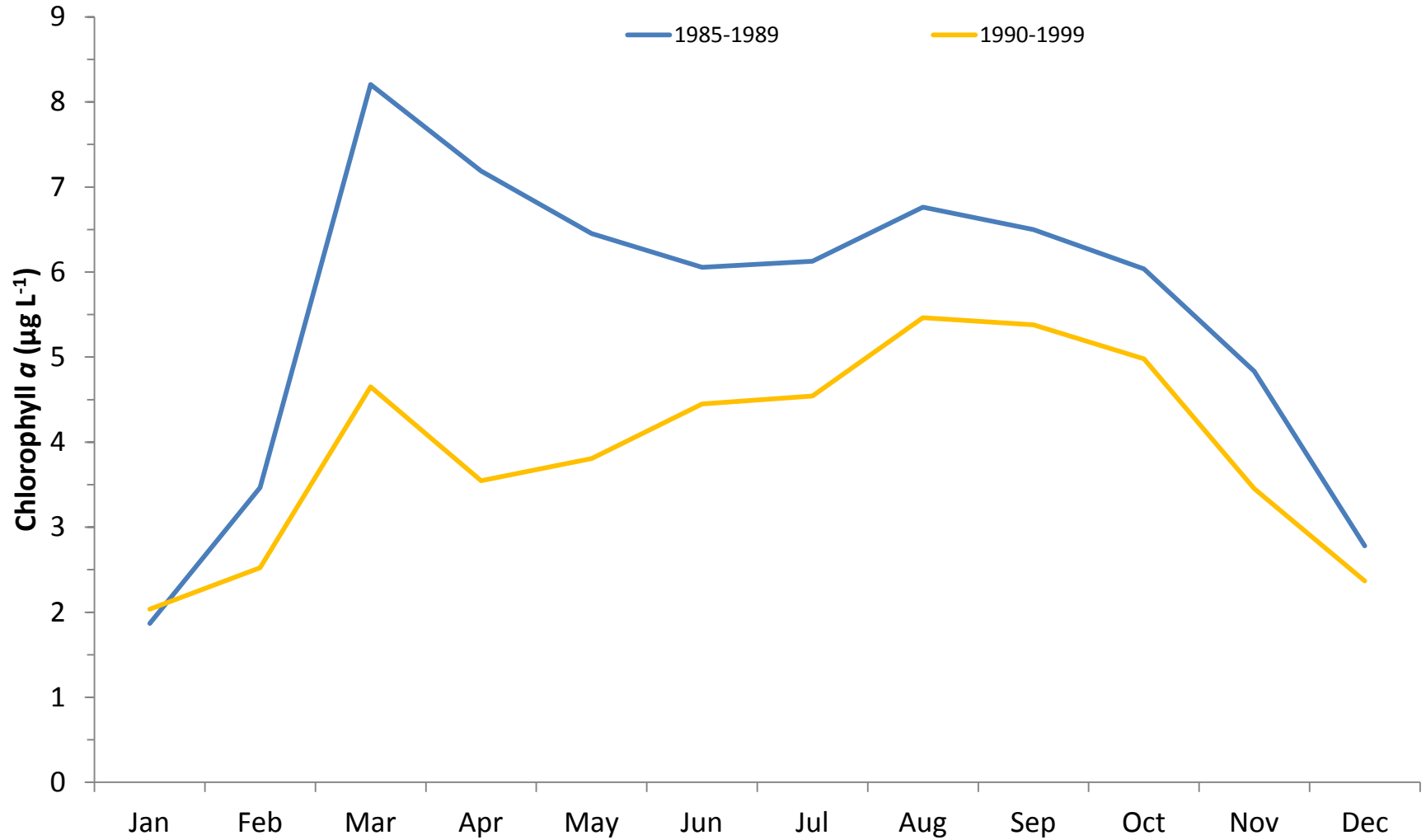
# Phytoplankton (chlorophyll a)



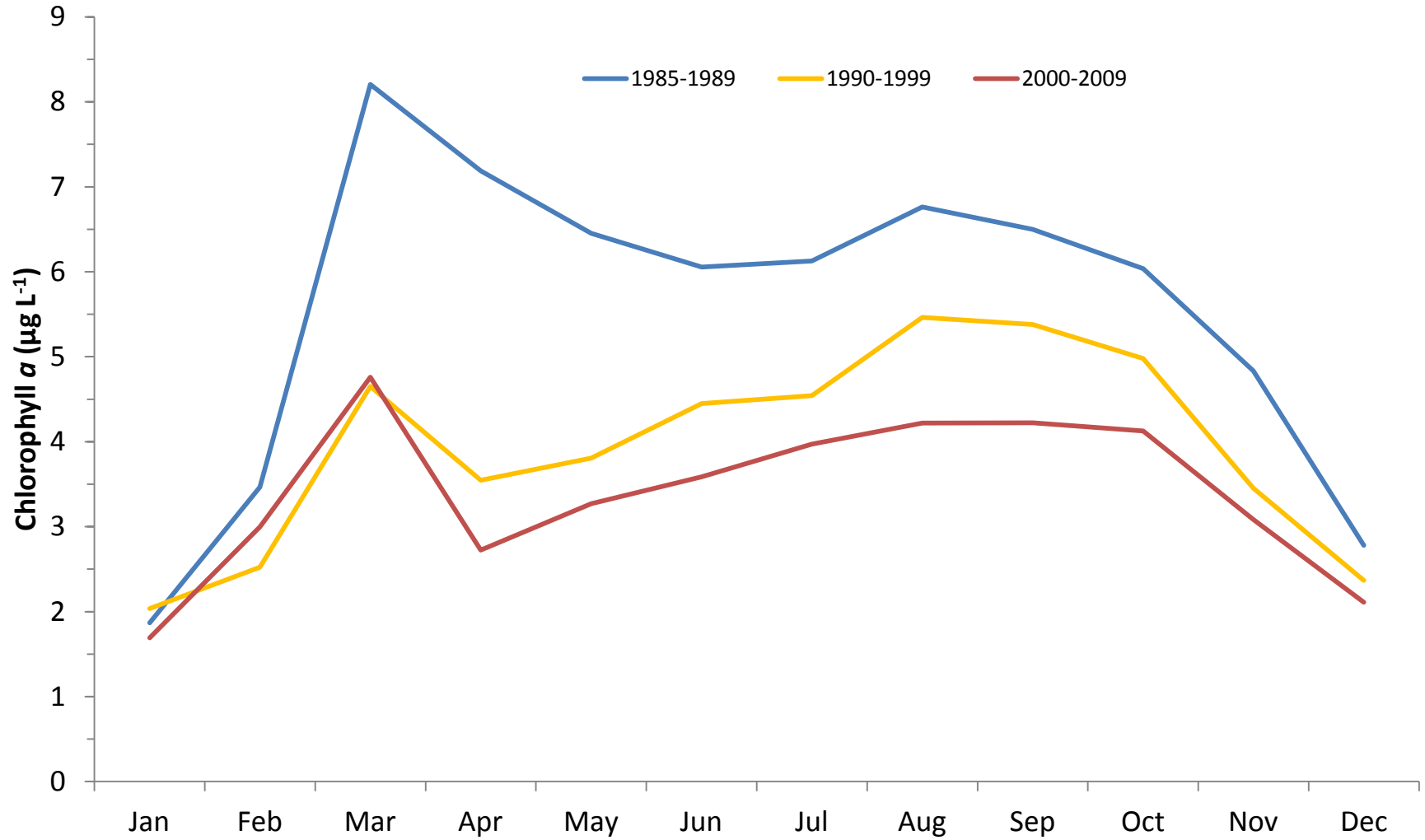
# Phytoplankton (chlorophyll a)



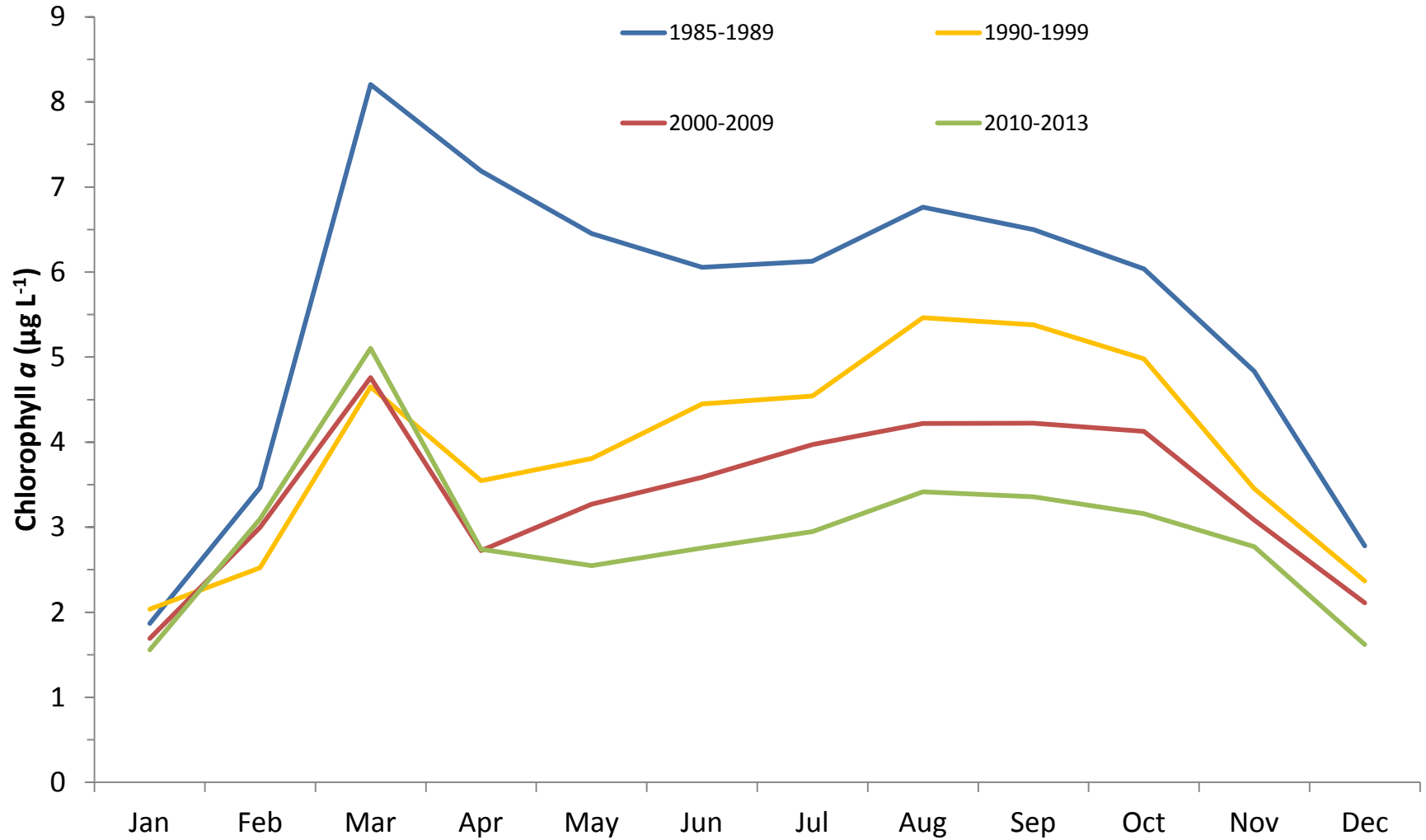
# Phytoplankton (chlorophyll a)



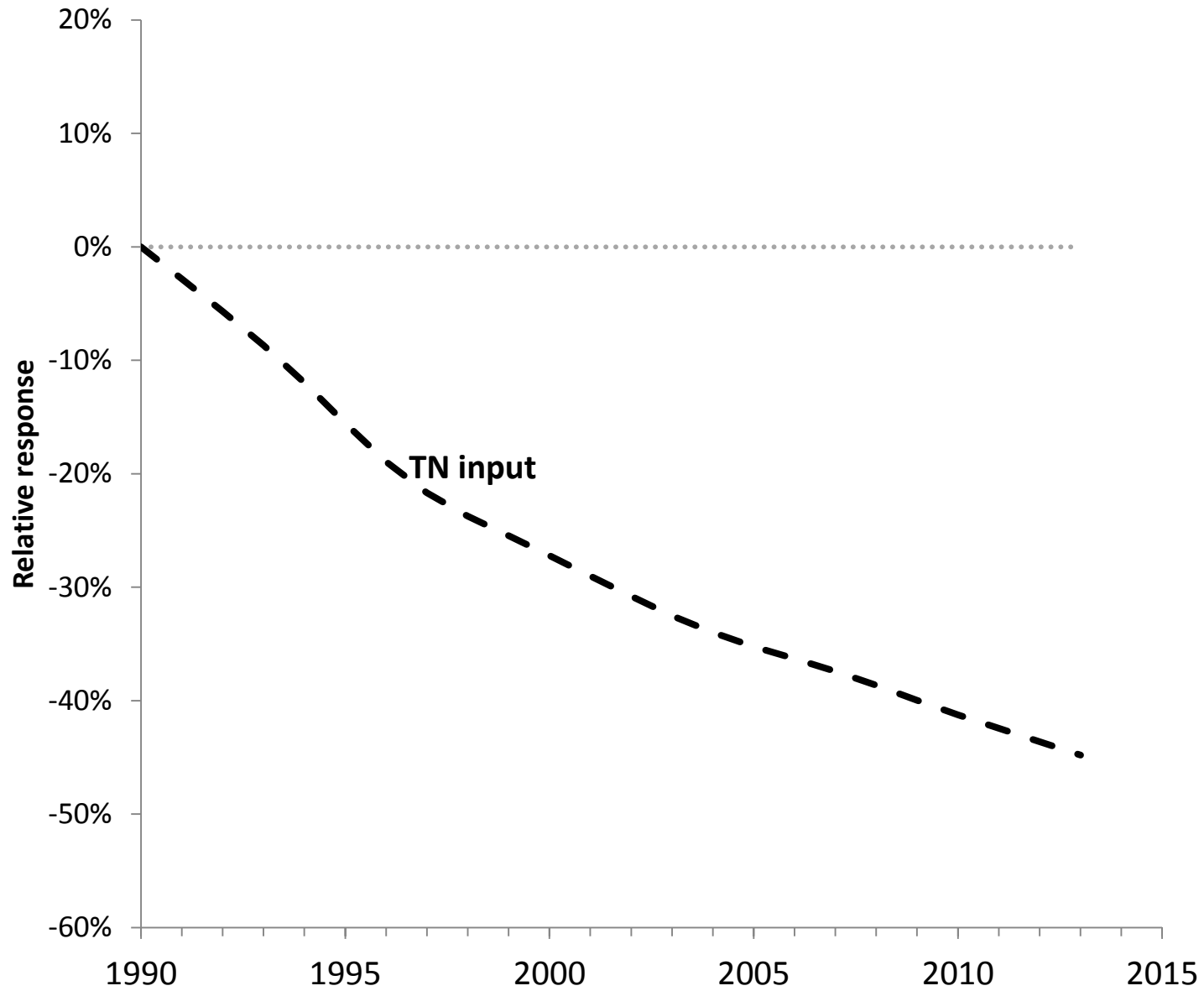
# Phytoplankton (chlorophyll a)



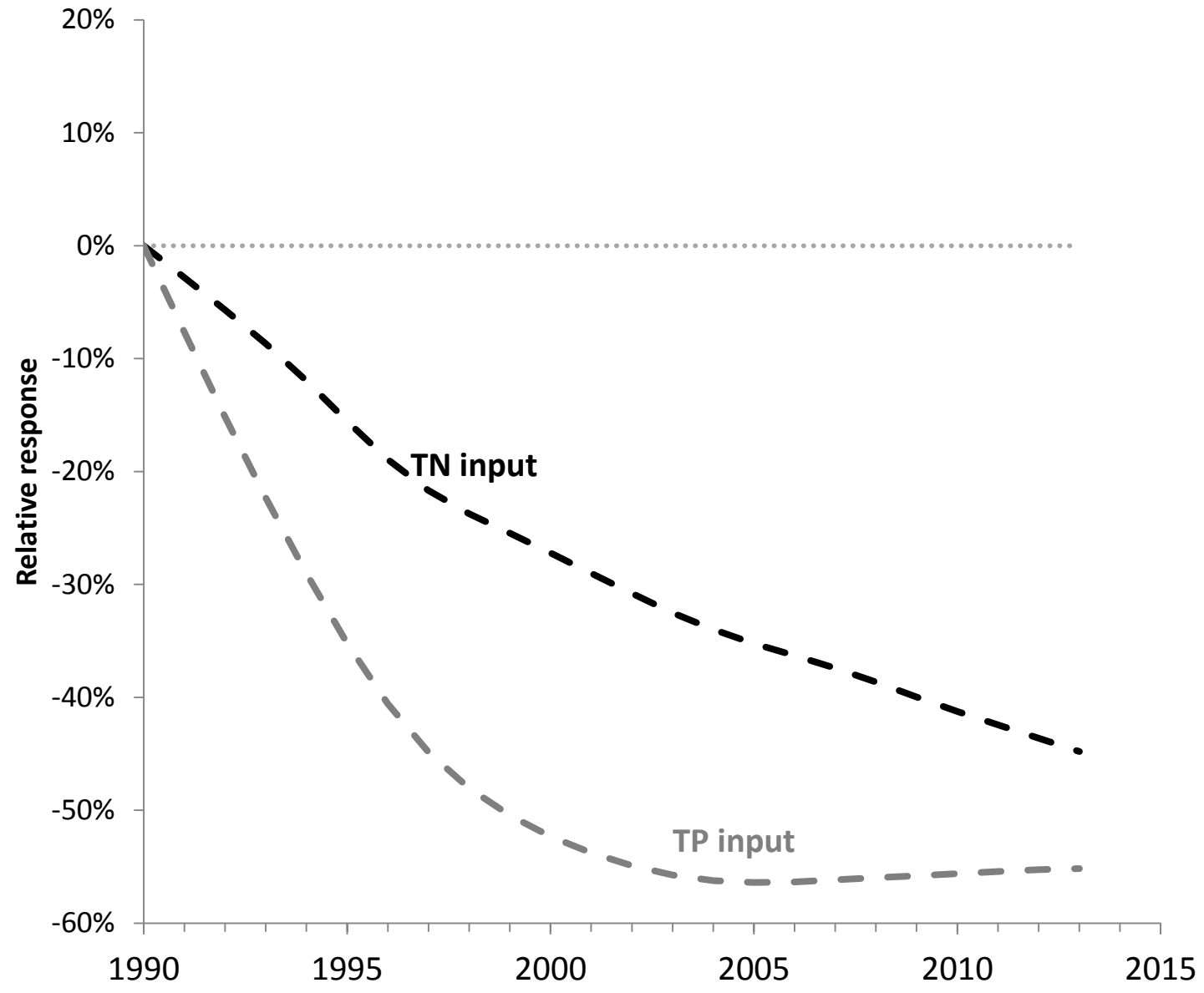
# Phytoplankton (chlorophyll a)



# Physical & chemical parameters

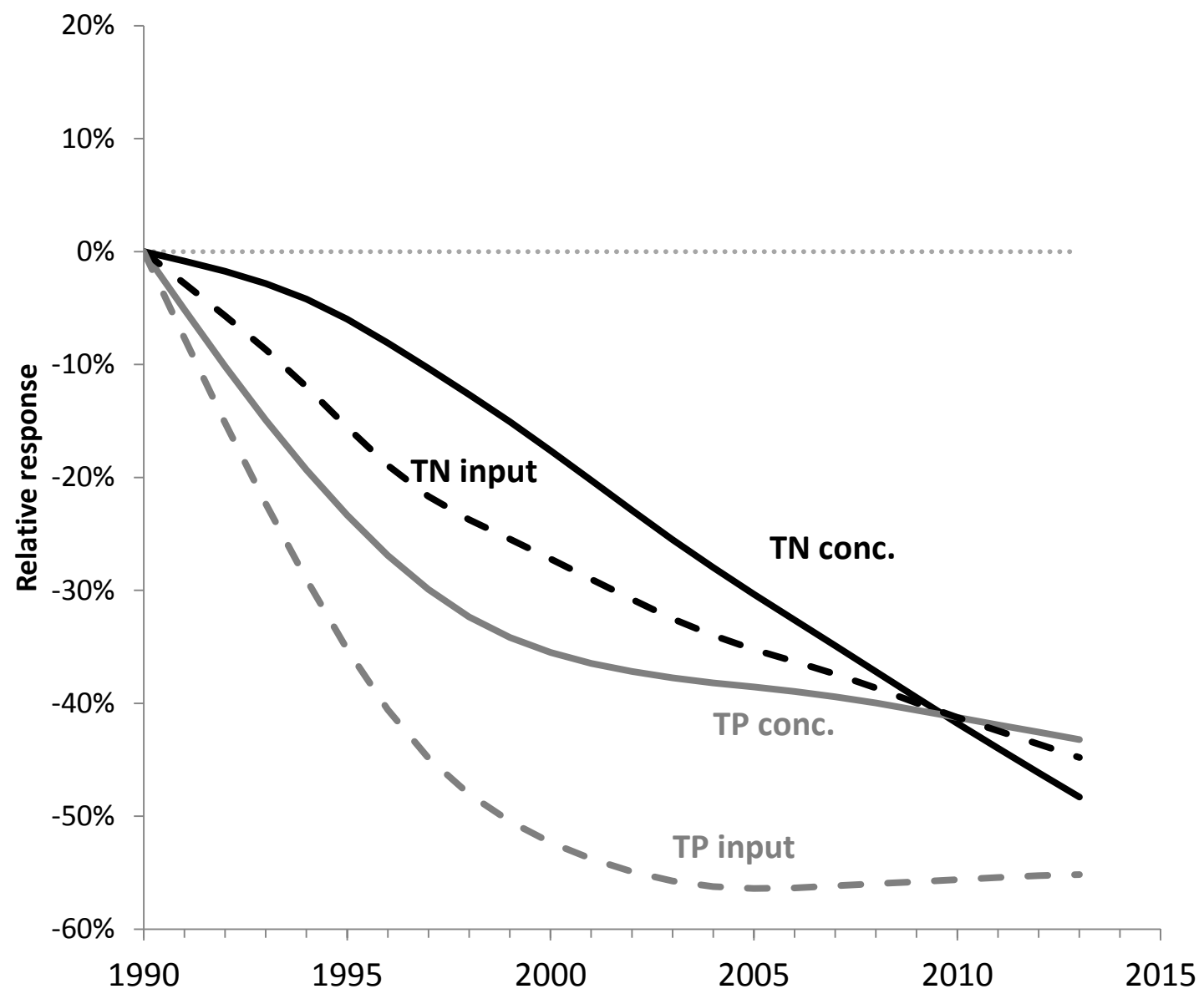


# Physical & chemical parameters

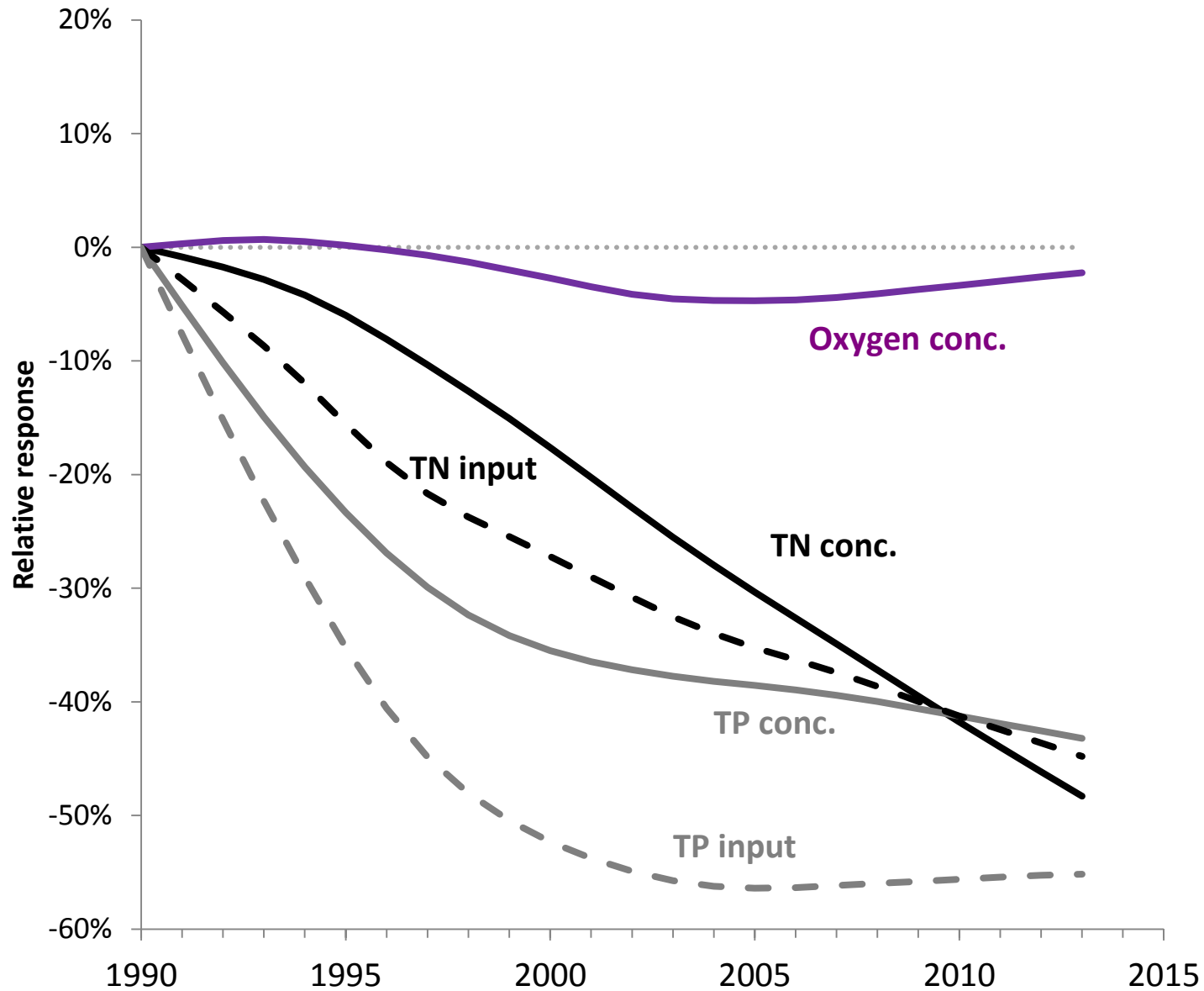




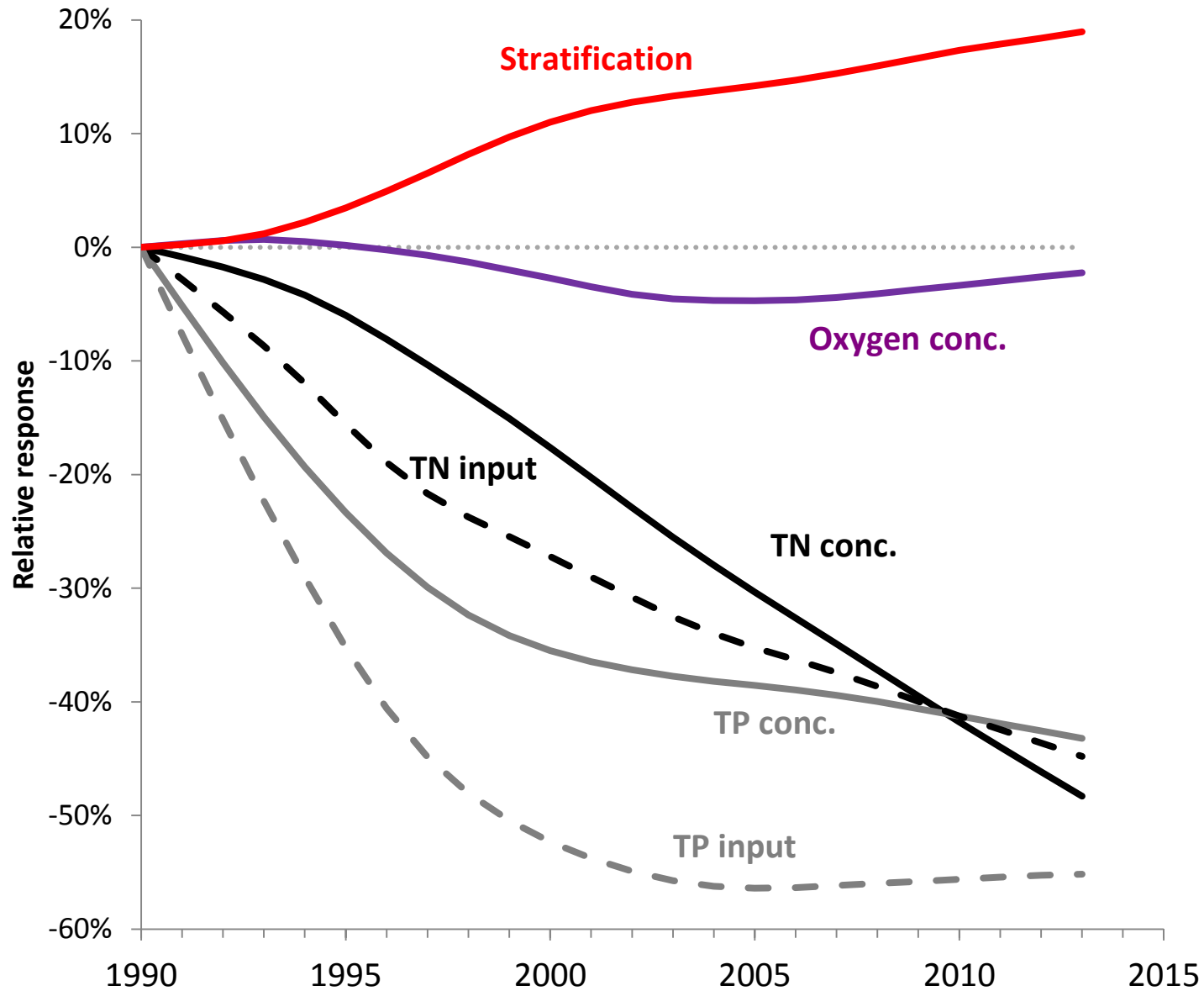
# Physical & chemical parameters



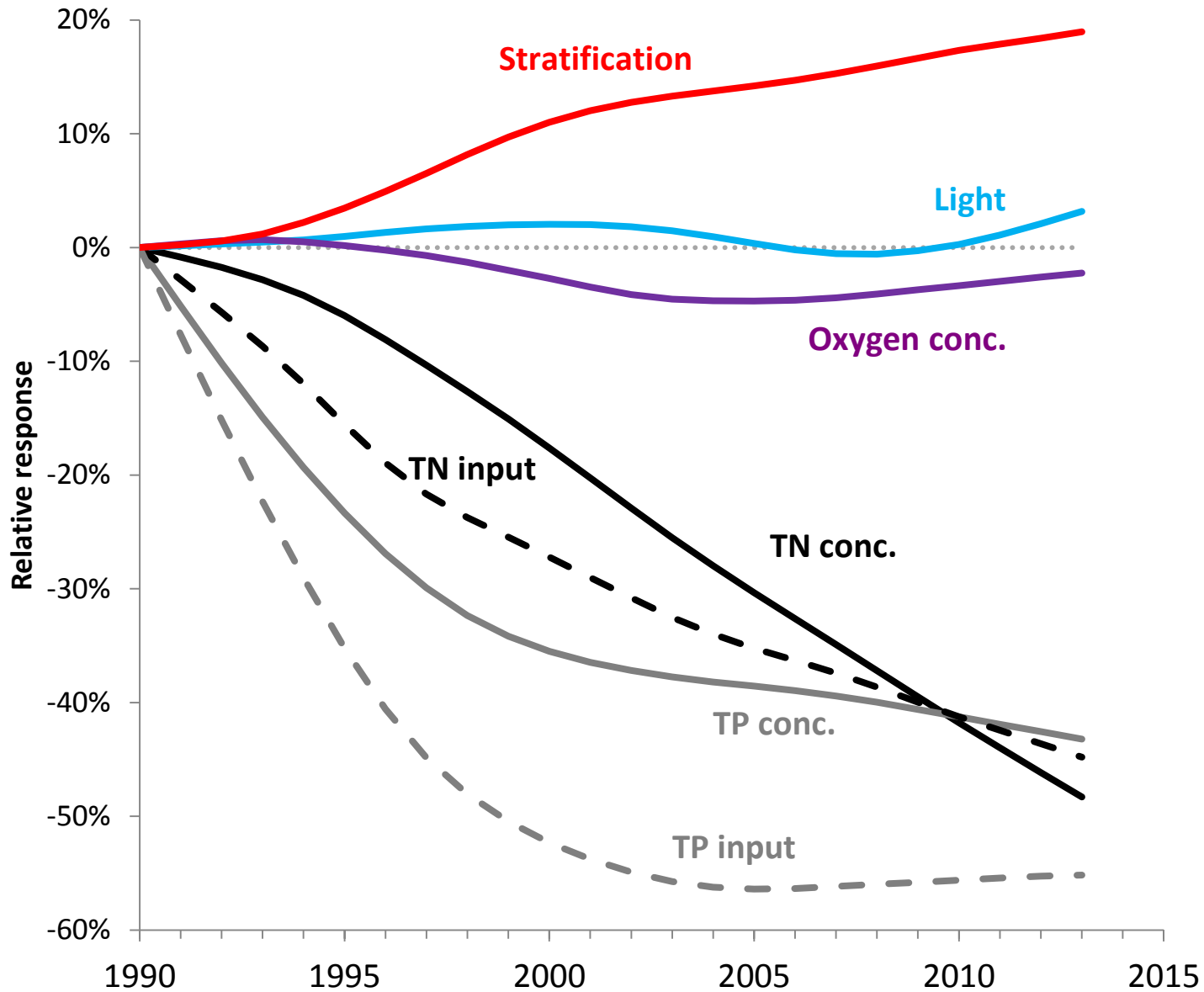
# Physical & chemical parameters



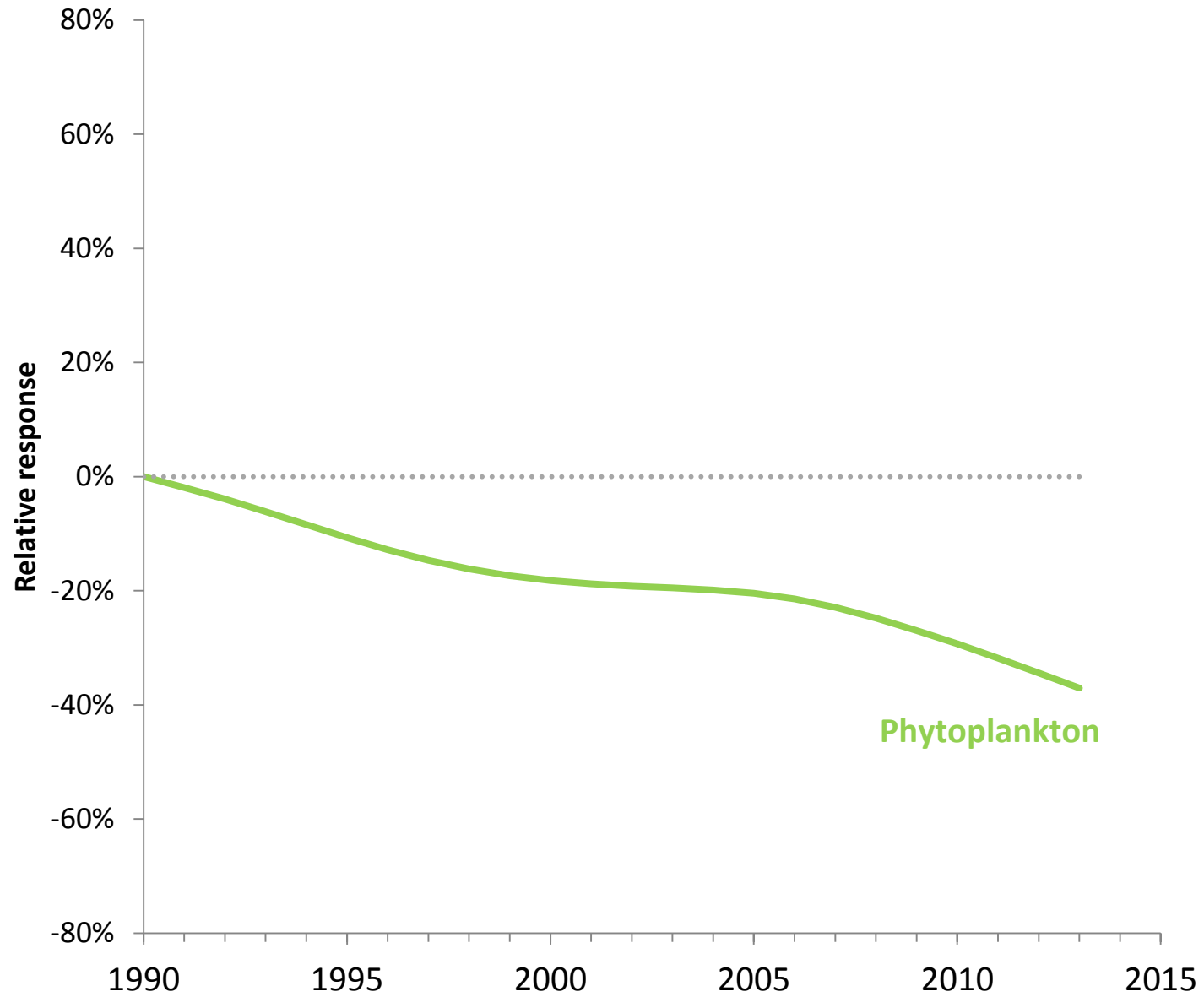
# Physical & chemical parameters



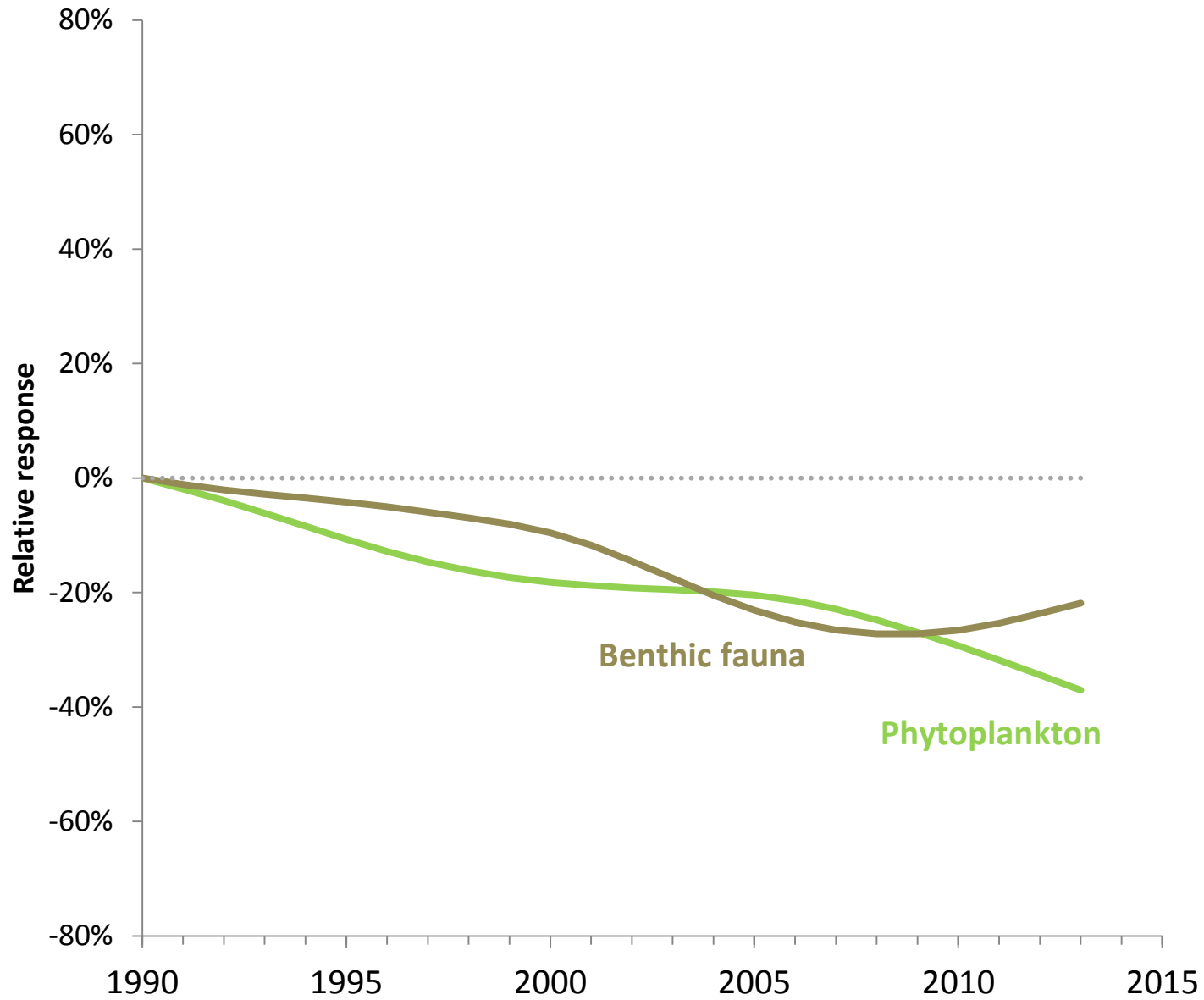
# Physical & chemical parameters



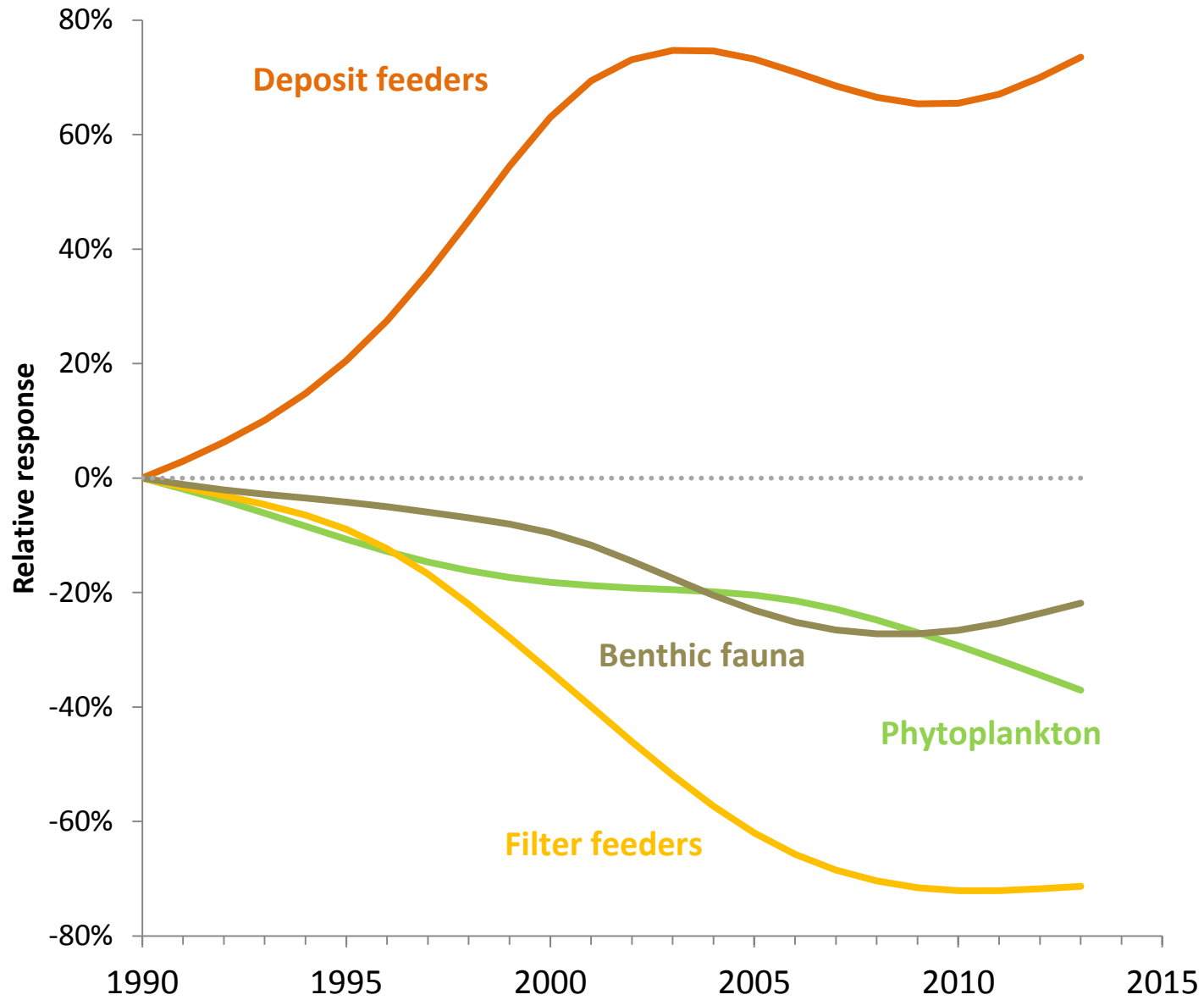
# Biological indicators



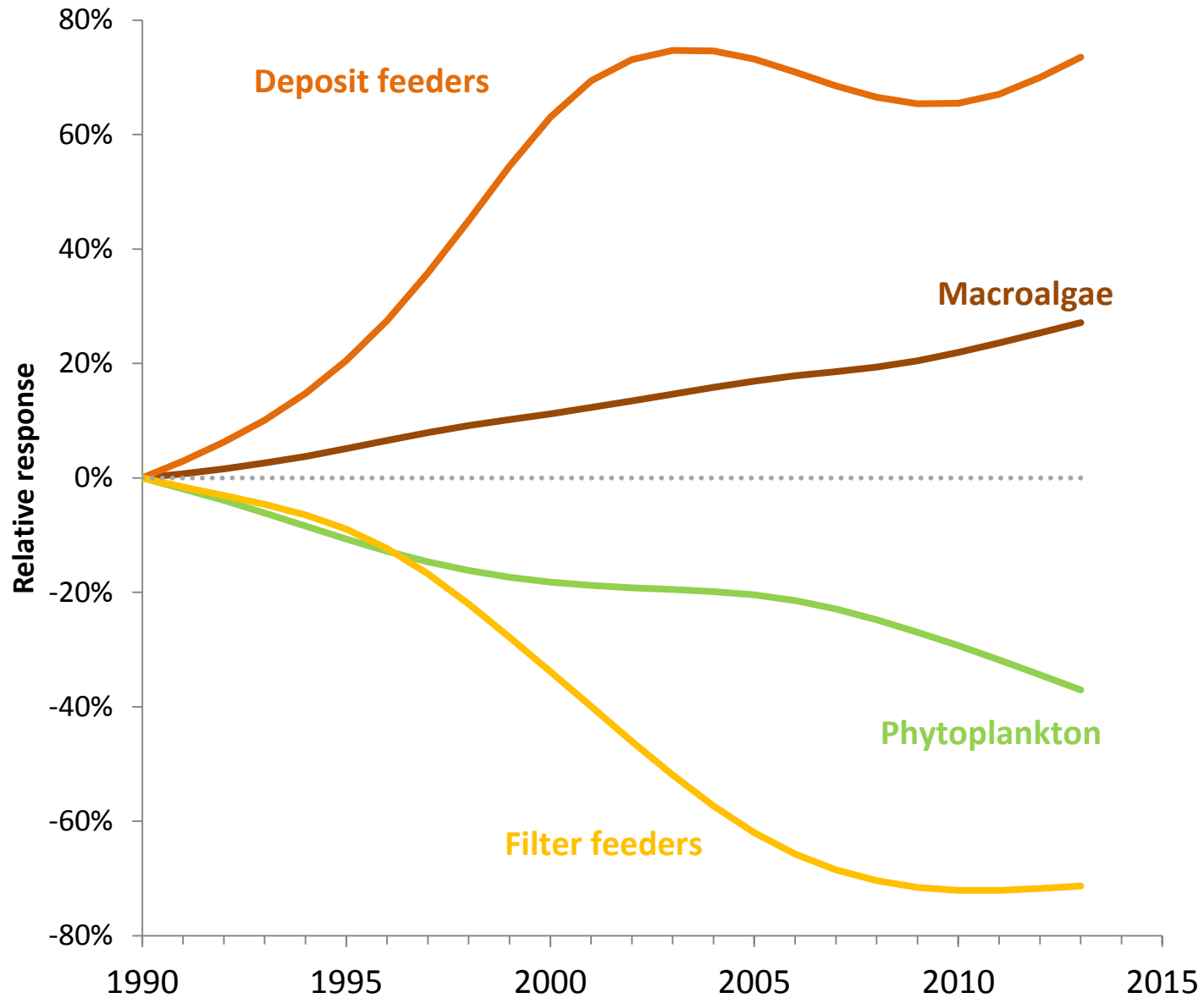
# Biological indicators



# Biological indicators

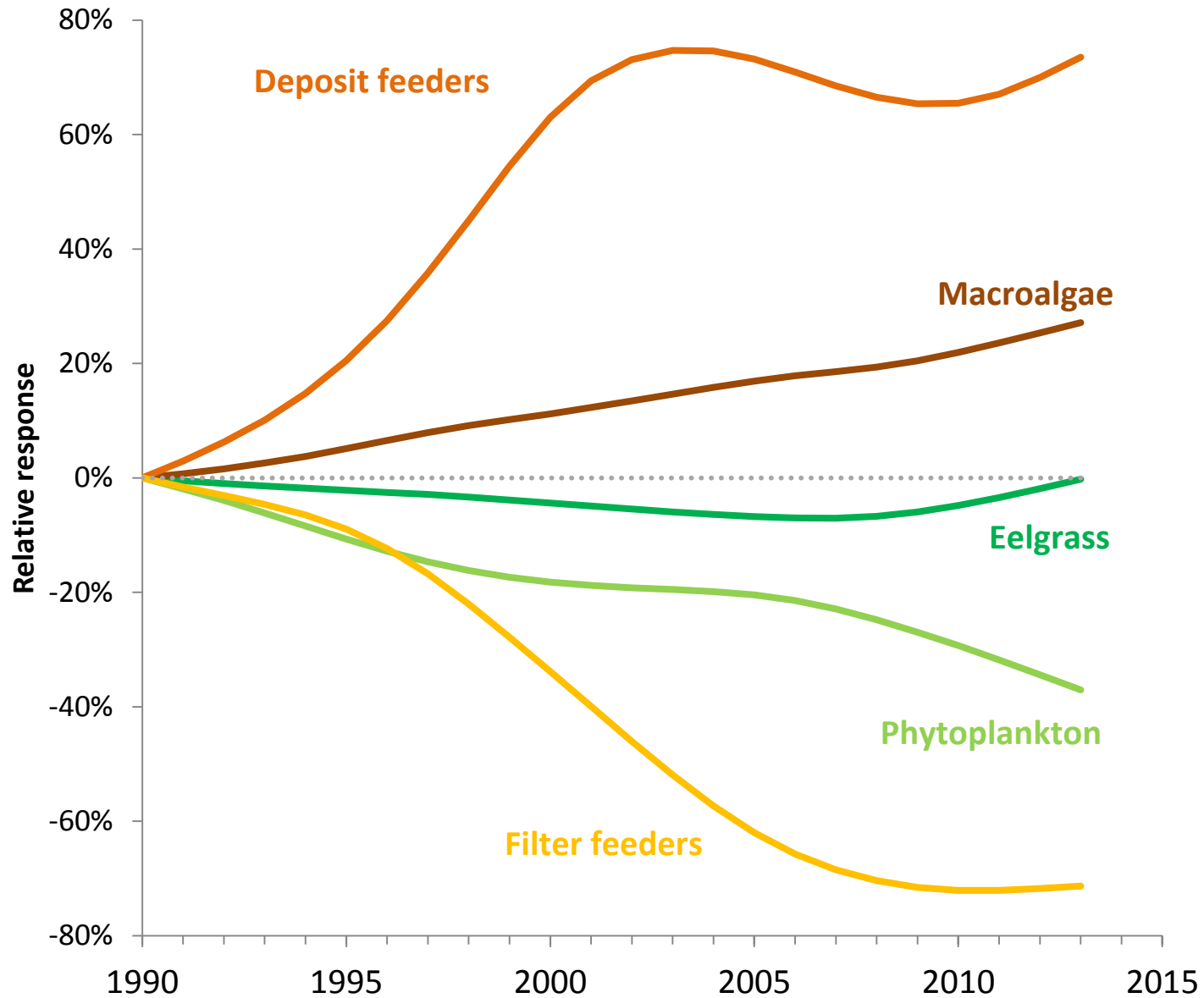


# Biological indicators

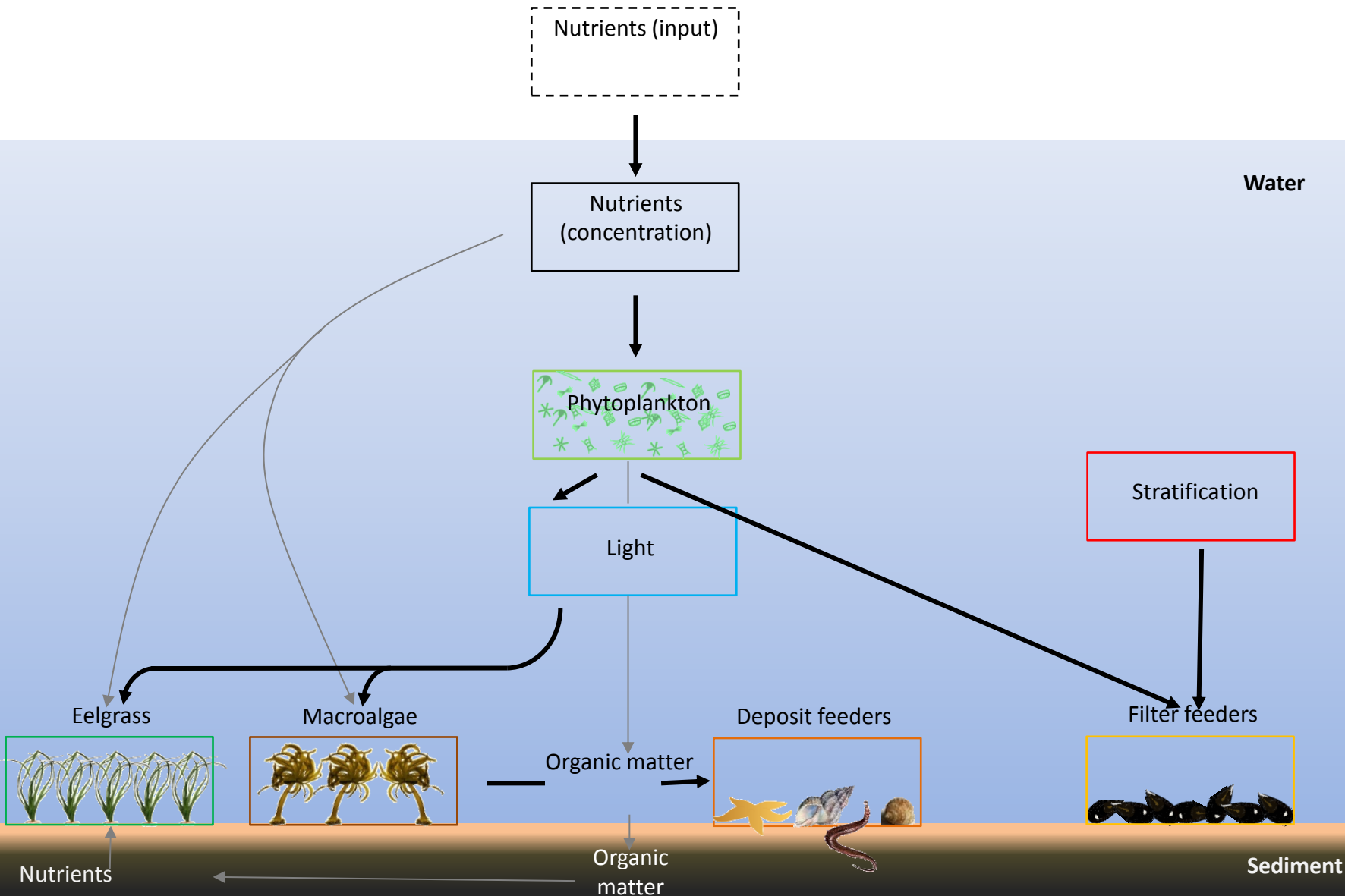


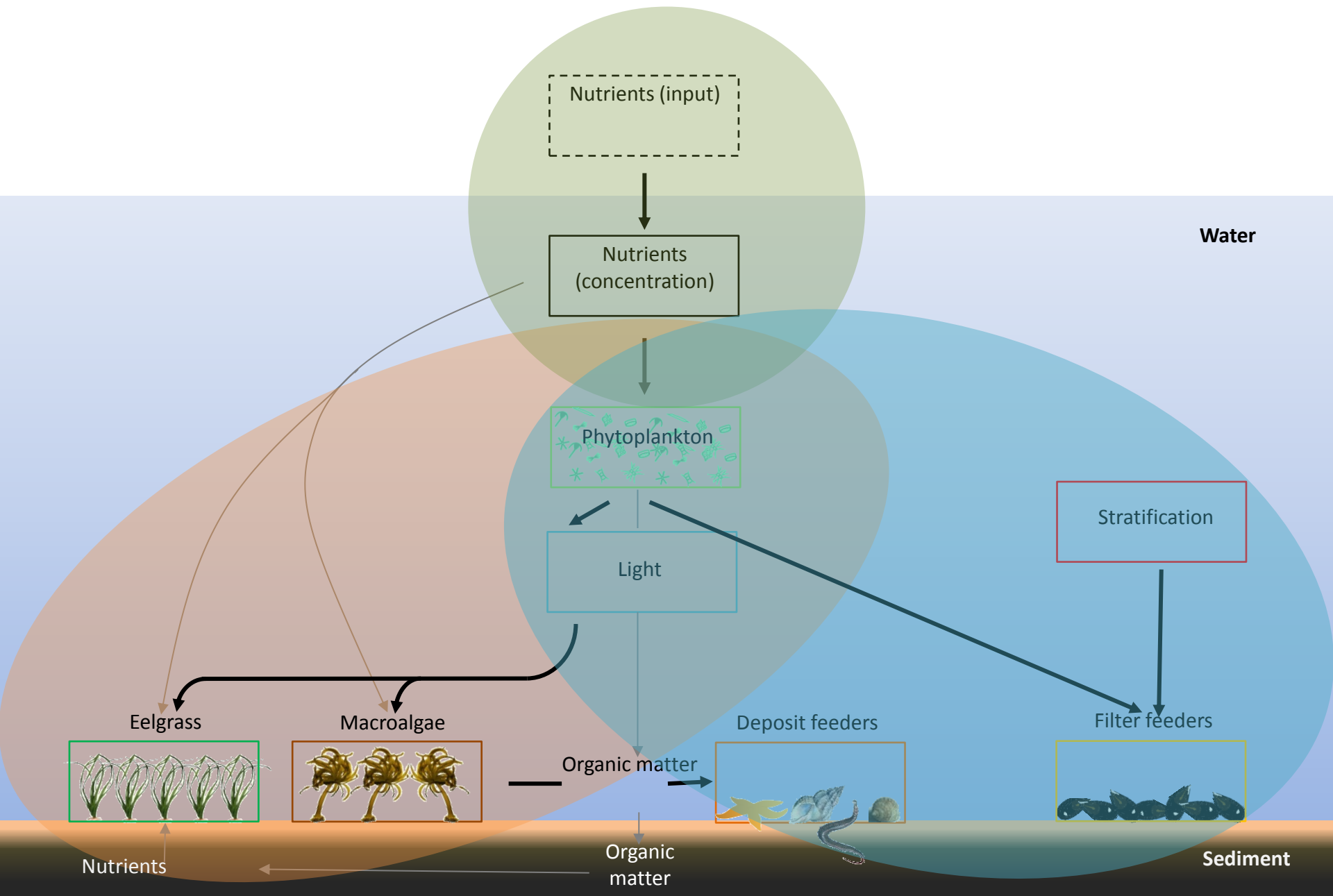


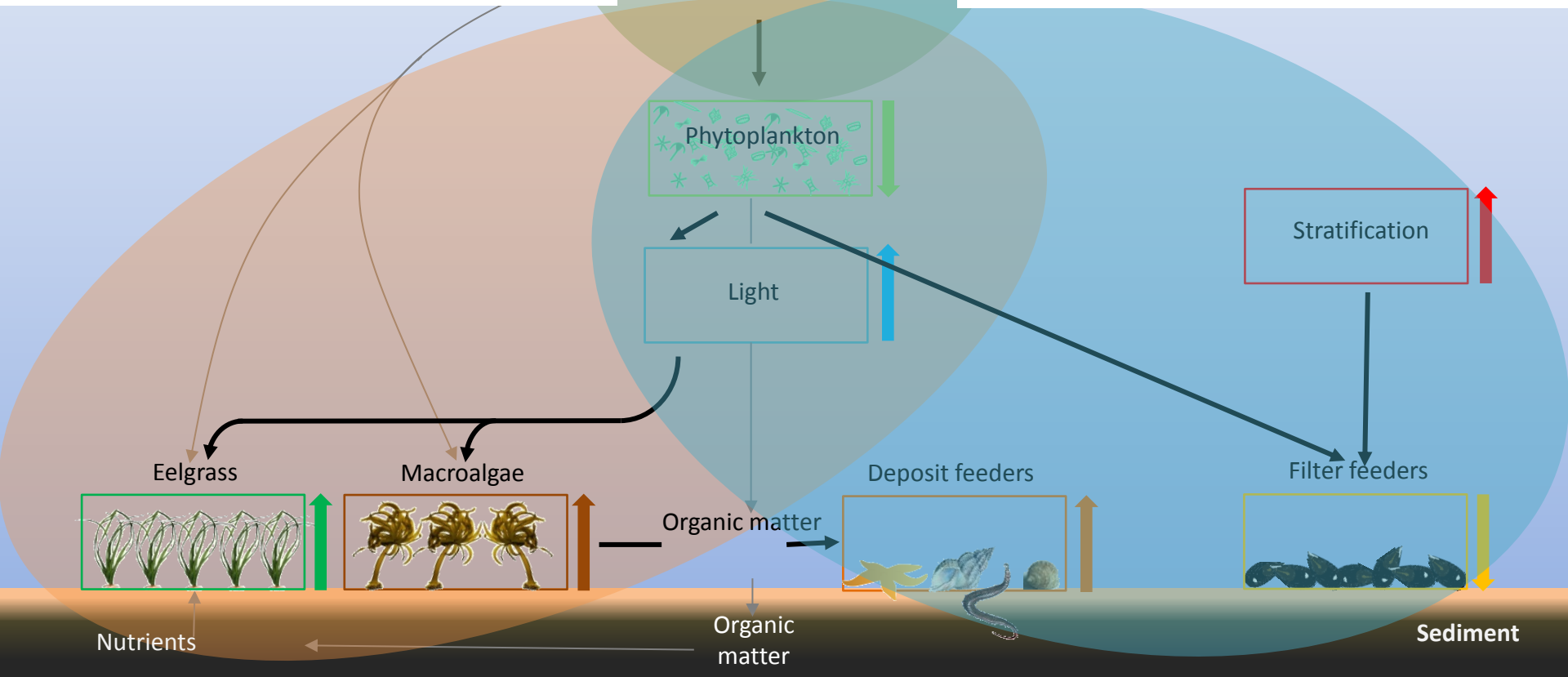
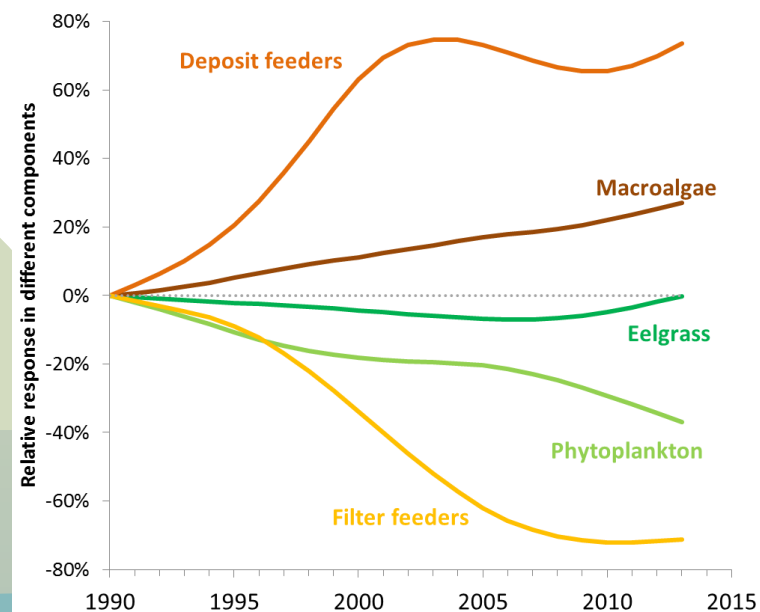
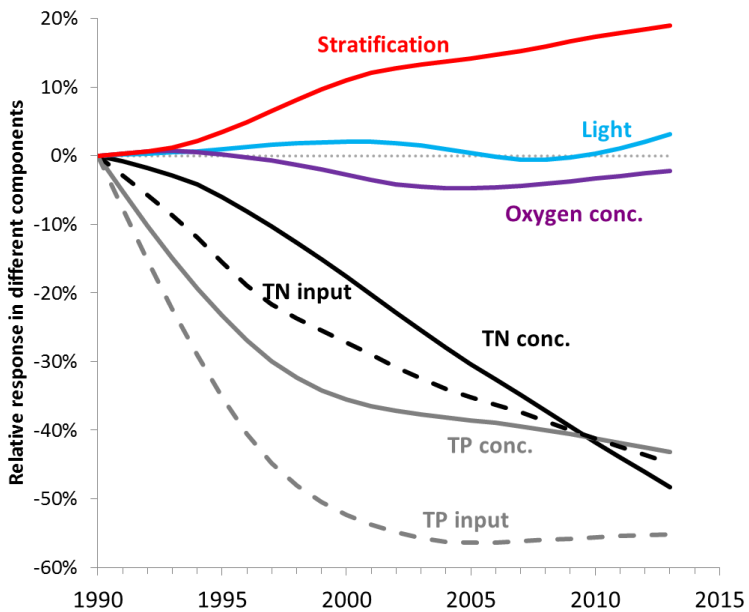
# Biological indicators



# Conceptual model







# **Recovery of Danish Coastal Ecosystems After Reductions in Nutrient Loading: A Holistic Ecosystem Approach**

**Bo Riemann<sup>1</sup> · Jacob Carstensen<sup>1</sup> · Karsten Dahl<sup>1</sup> · Henrik Fossing<sup>2</sup> · Jens W. Hansen<sup>2</sup> · Hans H. Jakobsen<sup>1</sup> · Alf B. Josefson<sup>1</sup> · Dorte Krause-Jensen<sup>2</sup> · Stiig Markager<sup>1</sup> · Peter A. Stæhr<sup>1</sup> · Karen Timmermann<sup>1</sup> · Jørgen Windolf<sup>2</sup> · Jesper H. Andersen<sup>3</sup>**



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