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Project website			
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Context / social problem

The North Sea itself is one of the most intensely used shelf seas in the world. With oil and gas exploration, shipping, fishing, wind-farming and natural conservational issues knowledge on the effects of climate change for these user functions needs to be assessed.

What do we know/not know?

From numerous timeseries it is evident that rather large scaled changes take place in the North Sea ecosystem. There are all kind of speculative reasons for the observed changes. Probably, a large part of the observed changes seem to be linked to climate related factors. However, overview and insight on what these time series tell is to a large extent lacking.

What is being studied?

The project will aim to get insight in the effects of climate change on important aspects of the ecosystem of the Dutch Continental shelf. Additional field measurements and integration of measurements in an dynamic ecological model (ERSEM) will, together with statistical modelling, be used to relate environmental variables with ecological variables.

What are the results and who are they for?

The research will yield insight in the steering factors of the North Sea ecosystem. Results comprise of satellite derived estimates of primary production and its spatial and temporal distribution in the North Sea. Moreover estimates of the spatial distribution of important components of the benthic ecosystem will be determined. Additionally insight will be obtained on the trends in acidification of the North Sea. All results will be integrated in an adapted ecological model of the North Sea (ERSEM) to obtain insight in the consequences of climate change

on various aspects of the ecosystem. With the aid of such model estimates governmental organizations and ministries will be better equipped in decision making because they can incorporate natural variability in a better way. To get overview in the enormous data sets a newly developed tool will be used. Herewith management can take account and get overview of the complexity and dynamic nature of the ecosystem this to enable the optimization of decision making reconciling the various stakeholders involved. The management-tool will be developed as a user friendly interface of a database which contains long term trends of the ecosystem and its steering variables.

