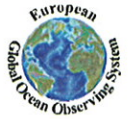


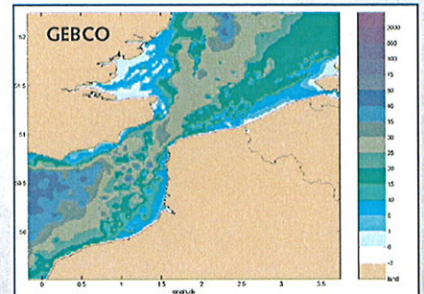
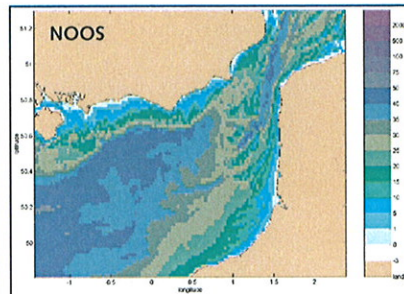
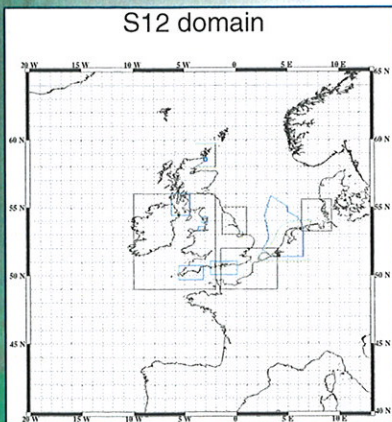
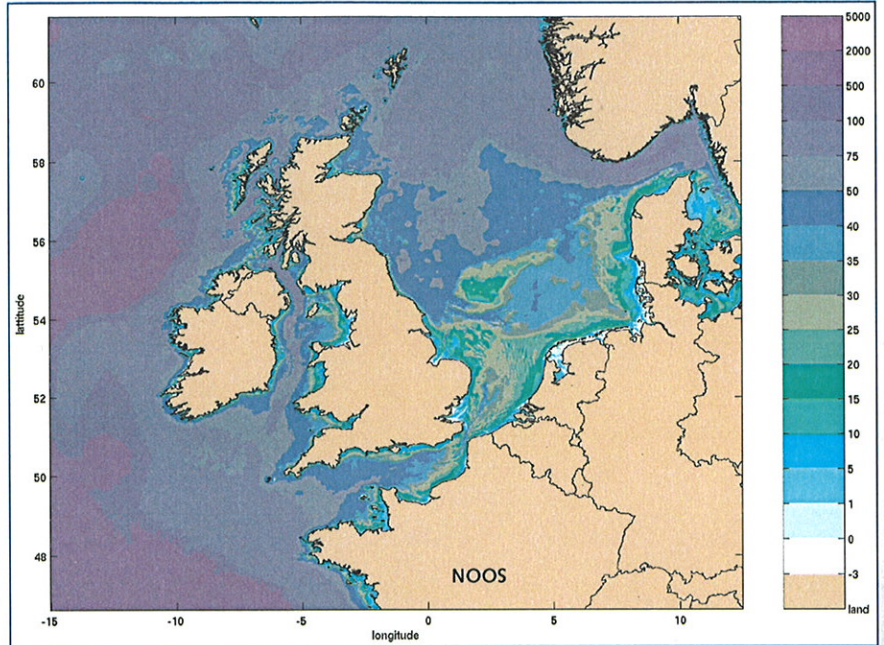
Appendix A

A New Gridded Bathymetry
for Storm Surge Models in the
North Sea

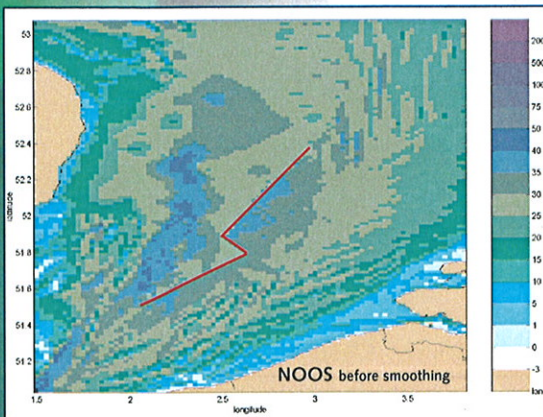


A new gridded bathymetry for storm surge models in the North Sea

NOOS (North West Shelf Operational Oceanographic System <http://www.noos.cc>) was formed by the Eurogoos NW-Shelf regional task team in 2000. This has led to an intensified cooperation between the institutes responsible for producing operational oceanographic forecasts around the North Sea. We expect that the exchange of knowledge and data will be very helpful for the update of our storm surge model in the Netherlands. For example, the use of high quality bathymetry with sufficient resolution is very important for building an accurate model.



Recently several new datasets have become available for the North Sea area such as ETOPO-2 and GEBCO 1-minute gridded bathymetry (<http://www.ngdc.noaa.gov>). Although these datasets are of great value to modellers, they generally lack detail in very shallow coastal regions. Using local knowledge and additional regional datasets we intended to improve them. A number of NOOS institutes supported our work by making local datasets available (POL,DMI, BSH,SHOM,RIKZ). In close co-operation with the Proudman Oceanographic Laboratory we have at this stage enhanced the quality of the original GEBCO gridded bathymetry in several areas of the North Sea and the Irish Sea.



The result will be a high quality gridded bathymetry, which will be used e.g. in the new version of the Dutch storm surge model. We expect that replacing the 20 year old bathymetry in our present operational model with this new bathymetry will substantially improve the accuracy of the new model. In addition, the cooperation and exchange between NOOS partners made the development very efficient - the actual development took less than 2 months - and showed the value of a close co-operation of the NOOS institutes.

We would like to thank all NOOS partners, and especially Roger Proctor from POL, for providing local data sets, time and knowledge for the development of this 'European' North Sea gridded bathymetry.

At some points there are still differences between the datasets, which make further investigations necessary.