



## MARITIME FORUM

# Gaps in marine data for North Sea - climate and coasts

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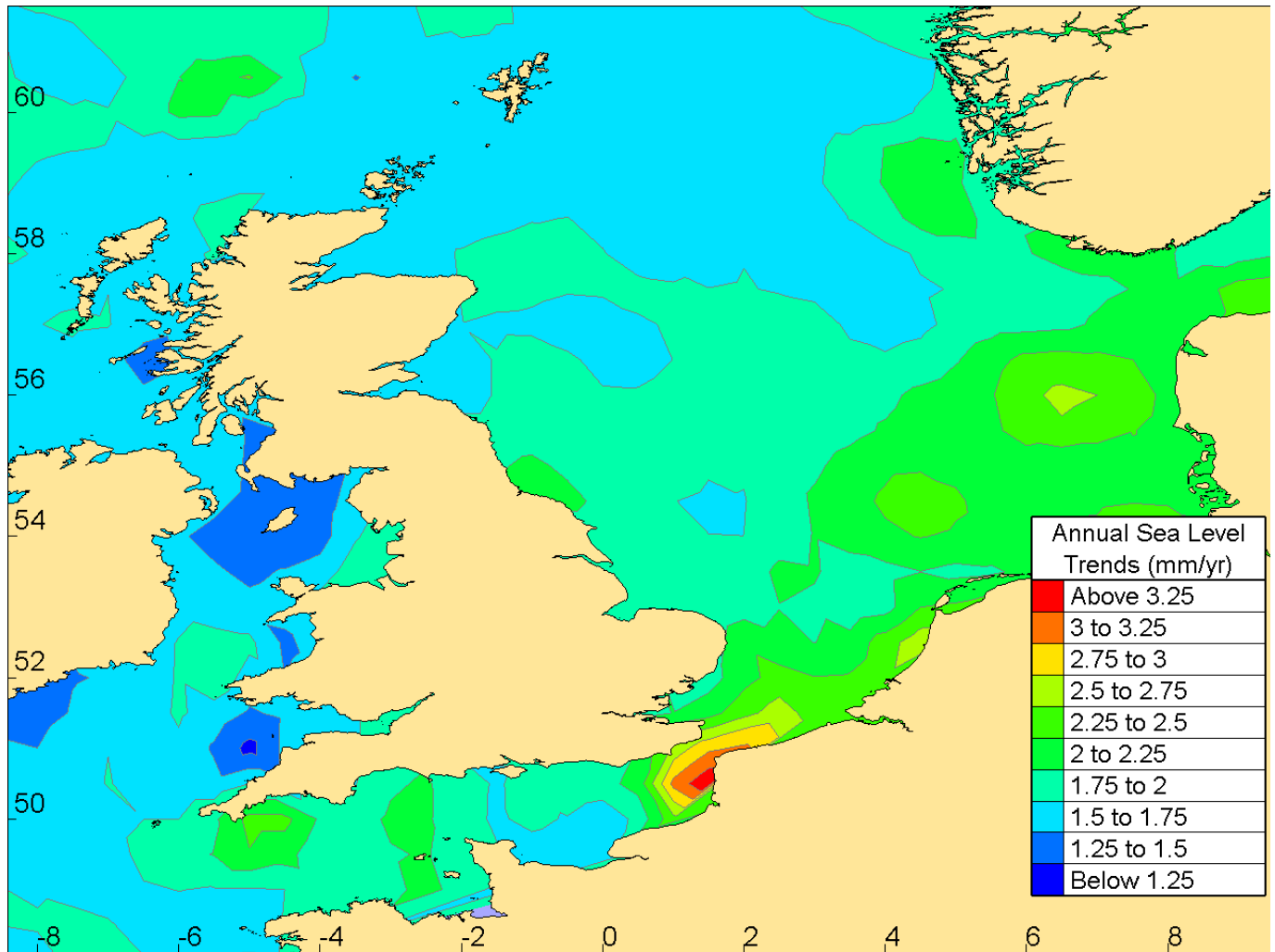
*main gaps are temperature of water below the surface and mass balance of sediments. Records of sea-level rise are quite good for the past 50 years but not before then*

The key conclusions for the Climate and Coastal Protection Challenge are as follows:

- The Climate and Coastal Protection Challenge was partially met with the data available. While one spatial layer was produced (the annual absolute sea level rise for the past 50 years, for illustration purposes), the following spatial layers and time history plots **can be produced** from suitable datasets:
  - Spatial layer of the annual mean sea level rise for the past 10 and 50 years;
  - Spatial layers of the annual change in sea surface temperature for the past 10, 50 and 100 years;
  - Spatial layers of the annual change in temperature at mid-depth and near-bed for the past 10 years;
  - Time plot of the annual mean sea level rise for each NUTS3 region;
  - Time plot of the annual change in sea surface temperature over the North Sea Basin.
- The main gaps identified were the lack of long historical observations and the poor spatial coverage of measurements. Only satellite data allows a near global spatial coverage. Sediment mass balance data also seems to be non-existent. Consequently, the following spatial layers and time plots **cannot be produced**:
  - Spatial layer of the annual mean sea level rise for the past 100 years;
  - Spatial layers of the annual change in temperature at mid-depth and near-bed for the past 50 and 100 years;
  - Spatial layers of the annual sea temperature at midwater and sea bottom over the North Sea Basin;
  - Spatial layer of the sediment mass balance at the coast;
  - Time plot of the annual change in temperature at midwater and sea bottom;
  - Time plot of the sediment mass balance for each NUTS3 region;
  - Time plot of the average annual change in internal energy of sea

The work was done as part of the [North Sea checkpoint project](#) [2]

 [Data Adequacy Report - climate change and coasts](#) [3]



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