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Historical maps of the coastal zone of the North Sea

How would our North Sea look like without any human impact? It is a question that is often asked by scientists but also by policymakers who have to set thresholds for legal instruments. This story of shifting baselines is more and more taken on by scientists, especially in the field of fisheries biology and ecology but also in geomorphological and sedimentological studies.

Historical maps of the coastal zone provide a unique view on the coast line of the North Sea with less human activities and may be used to assess the magnitude of the associated impact. However, there is often doubt about the accuracy and in most cases the relevant maps are not digitally available. In this context, Flanders Marine Institute (VLIZ) has started a new initiative - HisGISKust - in which historical maps of the Belgian coastal zone and the adjacent Scheldt Estuary (16th - 19th century) are digitally disclosed (http://www.vliz.be/hisgiskust/). This project was initiated in collaboration with the Cultuurbibliotheek (Brugge) and was funded by the Province of West-Flanders.

The historical maps are georeferenced in QGis and are subsequently disclosed through GeoServer. Furthermore, all georeferenced maps are analysed with regard to their geometric accuracy using MapAnalyst (Jenny and Hurni 2011). The distortion grids and statistical parameters that are produced with this program allow the end users to assess the possibilities for further analysis and avoid over-interpretation. In addition, certain elements of the maps such as the coastline are vectorised as shapefiles. All these products are disclosed with their metadata in open access to other end users. In the future, more historical maps of the coastal zone will be added to this collection and old aerial photos will be included as well.

Keywords: Historical maps, shifting baselines, Belgian part of the North Sea, Scheldt

