

Towards an international Geopark ‘Delta’ on the border of The Netherlands and Belgium

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In North-western Europe the rivers Rhine, Meuse and Scheldt have created a giant river delta over the past 3 million years. The area is usually observed by people as a flat and featureless type of terrain, although sometimes unexpected elevation differences and sharp contrasts in landscapes occur. Geological phenomena, or ‘geosites’, in the Scheldt region, north of Antwerpen (B) and in the southern Netherlands testify from a dynamic landscape showing a range from very old to very young geological processes. Local exposures in Nieuw-Namen show a Pliocene partly indurated beach sediment witnessing coastal beach conditions in the Pliocene epoch as indicated by the presence of *Aequipecten opercularis*. The very well preserved microfauna, as well as the typical iron sandstone banks reflecting possibly Tertiary soil formation offer a unique geological exposure in the European landscape. Above the beach sands a hiatus of 2.5 million years is exposed, formed by river erosion during ices ages of the Quaternary. The resistent iron-sandstone outcrops are the erosional remains dating from that period. During the last ice age (Weichselian) permafrost conditions have caused frost-crack development, later covered by eolian sands. The sequence is concluded with Holocene soil formation and it represents a geological ‘island’ where fluvial and tectonic history over 3 million years has made a diverse landscape.

Directly north of the Nieuw-Namen site a modern-day tidal regime is present in the Land of Saeftinghe with tidal flats on the flanks of the Westerschelde. The geological monument of Saeftinghe is an excellent example of how the current landscape would be without embankments.

The typical Dutch theme of the ‘battle against water’ in this concept has also gained a growing support from an increasing number of parties. The great diversity in geological processes and resulting landscapes is unprecedented on a global scale and has had its impact on the region’s cultural and economic history, shaping Today’s reality. Our main objective is to gather all relevant primary stakeholders in order to design a bidbook in combined effort, applying for a UNESCO’s Global Network of National Geoparks status of this specified region. The coalition of stakeholders has started a public campaign in order to inform and involve locals. In this presentation the scientific component to the application for the Scheldt Delta region (Belgium/The Netherlands) to apply for a Geopark status is presented. For this occasion we started an in-depth review of sedimentary, tectonic and stratigraphic sequences in this region executed by specialized geological experts from both countries.

We aim to reconstruct a) the Tertiary history in the Dutch-Flemish area, b) the Quaternary fluvial history of the Scheldt River and estuary, c) the Quaternary sedimentary and tectonic history of the Dutch-Flemish coversand area (Brabantse Wal, Maldegem-Stekene, Campanian High), d) the Holocene Dutch-Flemish Scheldt delta history. In conjunction with the entire geological history of the area also the typical lowland theme of the human battle against water in this region will be highlighted with a cultural history of drowned landscapes and settlements in this area over the 15000 years.