

Drowned landscapes of the Belgian Continental Shelf

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The Belgian Continental Shelf is the smallest exclusive economic zone of the North Sea and has one of the thinnest and most fragmented Quaternary (2.6 Ma) stratigraphic records yet it is an area with one of the largest densities in economic claims. These economic claims have and will undoubtedly affect the rich prehistoric history that is preserved within these Quaternary sediments.

This dissertation demonstrates that the Belgian Continental Shelf occupies a key position between the depositional North Sea Basin and the erosional area of the Dover Strait as it is an area where erosional landforms and fragmented sedimentary sequences provide new evidence on northwest European landscape evolution. A new stratigraphic framework of the Quaternary sediments was constructed and demonstrates that the Belgian Continental Shelf hosts a wide variety of depositional environments (estuary, swamp, river, coastline, marine, etc.). Within some of these depositional environments a large amount of mammalian bone material is preserved. Analysis of the bone material in combination with the depositional environments and the landscape evolution allow us to assess the archaeological potential of the remaining Quaternary sediments (in this case the last 160 ka). The results look promising for the preservation of archaeological artefacts and/or human bone material across the shelf.

Archaeological potential maps are of vital importance for the future sustainable economic development of the Belgian Continental Shelf. When the offshore industry has activities and constructions planned at sea (f.e. the Complex Project Kustvisie at <http://www.kustvisie.be>), it is helpful for them to know what areas are archaeologically sensitive. Knowing what the prehistoric landscape looked like is not only crucial for minimising the damage to archaeological artefacts but also helps the industry save time and money, by reducing possible delays due to unexpected finds. Moreover, a better knowledge of the prehistoric landscapes that once existed off the present coast allows us to better evaluate the effects of future sea level change on the present coast.

Some of the results from this study have been summarised into an animation video produced through the Flanders Marine Institute (VLIZ).