

Van Lancker, V. S Degraer, M Fettweis, D Van den Eynde, F Francken, J Monbaliu, T Verwaest, J Janssen, M Vincx & JS Houziaux (2009). "Mapping in support of a more sustainable exploitation of the seabed, the Belgian Continental shelf" in the session "Applied geomorphological mapping". Abstract 7th International Conference on Geomorphology, Melbourne (AUS), 4-22/07/2009.

---

## **Geomorphological mapping supporting sustainable exploitation of the seabed: Belgian part of the North Sea**

Van Lancker, V.<sup>1,2</sup>, Deleu, S.<sup>1,3</sup>, Du Four, I.<sup>1,4</sup> Schelfaut, K.<sup>1,5</sup> & Verfaillie, E.<sup>1,6</sup>

<sup>1</sup>Ghent University, Geology Department. Renard Centre of Marine Geology. Belgium.

<sup>2</sup>Royal Belgian Institute of Natural Sciences. Management Unit of the North Sea Mathematical Models. Belgium.

<sup>3</sup>G-Tec NV. Belgium.

<sup>4</sup>Polar Foundation. Belgium.

<sup>5</sup>Soresma NV. Belgium.

<sup>6</sup>Ghent University. Geography Department. Carto-GIS Cluster. Belgium.

The Belgian part of the North Sea (BPNS) is a classical sandbank-swale system with depths ranging from 0 to 50m. Morphological, as well as sediment gradients are subtle, still ecologically valuable zones exist and mapping is steered in function of a more sustainable exploitation of the seabed.

On the large-scale, thematic maps have been developed on the surficial sediment distribution (median grain-size, silt-clay percentage and gravel); morphology (sandwave fields and their dimensions); as also composite landscape maps, representing a suite of habitat structuring variables. The maps have a grid resolution of 250 m.

Detailed maps, on submetre resolution, have been produced also. They are based on very-high resolution multibeam bathymetry of sandbank-swale areas. Morphological entities (benthic position indices), as also sedimentary facies (validated acoustic seabed classification) have been mapped in detail.

Combination of mapping products served as a basis for recommendations on a more sustainable exploitation of the BPNS.