

EFFECTS OF SAND EXTRACTION ON THE MACROBENTHOS OF THE BELGIAN CONTINENTAL SHELF: A COMPARISON OF LONG-TERM DATASETS

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Stations sampled on the Kwintebank in late seventies, mid nineties and 2001 were used to detect possible changes in macrobenthic communities related to the impact of sand extraction. The community analysis based on data covering the entire sandbank in the nineties, failed to detect a difference between stations subject to high sand extraction and stations subject to low sand extraction on the sandbank. Comparing the community analyses of the seventies and 2001 no real community shift could be detected, except the indications in the depression. But an overall decrease in density and diversity is defined at all stations in 2001 relative to the seventies. The most intensive sand extraction is situated at the centre and the northern part of the sandbank, where both geomorphological and granulometric as meiofauna communities are affected by sand extraction. For macrofauna there is no clear evidence for a change in community structure in the north and the centre due to the impact of sand extraction, although some clear changes in density, diversity and sediment grain size are recorded in these two most impacted areas. Although methodological problems enhanced the difficulties in comparing the results of the seventies with the nineties and 2001, *Hesionura elongata* was considered to be a suitable indicator for human disturbances.