

Seasonal dynamics of coastal North Sea macrobenthic communities from half a century ago

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Ecosystem services provided by the marine environment are affected by its health and functioning. The secondary production of macrobenthos is often used to assess its health and functioning. This secondary production is estimated on the basis of annual sampling in autumn, the season with highest secondary production. However, many marine ecosystems are subject to seasonal variability. Estimating secondary production on the basis of annual autumn sampling may overestimate the state of the ecosystem. In order to get an idea of the deviation from this estimate, data on seasonal variability in macrobenthic secondary production is crucial. Despite the importance of seasonal time series, these data are generally very scarce, as it is very time consuming and labour-intensive work. Nevertheless, in 1970, in the framework of the Lombardsijde project, monthly samples of macrobenthos were taken in the North Sea near the Belgian coast. Not all monthly samples were processed back in the days. Now, half a century later, the macrofauna densities and biomass of these unprocessed samples are being quantified as part of an ongoing master thesis. With the obtained data, an attempt is made to form a historical baseline of the seasonal variability of the macrobenthic communities at the Belgian coast.

Keywords: Macrobenthos; Seasonal variability; Historical data; Belgian North Sea; Master thesis