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The Little Belt strait in the inner Danish waters is characterised by a high biodiversity, and continuous monitoring of flora and fauna and the water quality is undertaken by the authorities. However, the surface sedimentology and geomorphology, i.e. elements of the geodiversity, are less well-constrained. The aim of this study is to investigate the surface sediment and morphology of a large meander bend (with a channel width of  $\sim 1$  km) located between the two bridges crossing the strait (a channel reach of  $\sim 4$  km) in order to assess a potential coupling between geodiversity and biodiversity. More specifically, the objectives are 1) to identify and classify morphological units for creating a geomorphological map, 2) to quantify surface material characteristics for creating a surface material map, and 3) to develop a conceptual model of the substrate and the morphology and morphodynamics in the meander bend between the two bridges in the strait.

Preliminary results reveal a diverse morphology in the meander bend; and the annual morphological changes reveal complex sediment transport patterns along and across the bend. Likewise significant sediment sorting trends exist along and across the meander bend. Hence, the preliminary results indicate a high geodiversity in the strait.

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