Buried under the sand: 'Integrated geophysical mapping of ancient peat exploitation at Raversijde beach'

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The Belgian coastline has been subject to major changes during the last few thousand years, not only as a result of sealevel change but also due to human interference. This has had a direct impact on the land-use and human settlement in the coastal area. In spring 2012 a geophysical test survey was carried out in an intertidal area at Raversijde, combining (for the first time) marine seismic profiling at high tide with electromagnetic measurements on the beach at low tide. The main goal was to map the previous state of the coast by tracing geomorphological and anthropogenic features that are no longer visible but instead lie buried underneath a thick layer of sand. The geophysical data allowed to map the traces of peat exploitation and possible settlement remnants of Late Medieval time, as well as the complex palaeogully system consisting of shallow and deeper channels. The research is unique since it combined both marine and terrestrial data from the same area with a vertical and horizontal resolution that was previously unfeasible. It clearly shows that the integrated use of complementary geophysical methods (seismic and electromagnetic) gives a new and promising perspective for a better understanding of shallow intertidal environments and their archaeological potential.

References

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