

environmental reconstructions. If insufficient evidence is found, then the proglacial lake hypothesis needs to be reassessed.

References

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Conference details:

QRA Postgraduate Symposium 2023
Durham University
7 and 8 September 2023

Title: Proglacial lakes in the southern North Sea: In search of reflection-seismic and sedimentary evidence during the Middle- and Late-Pleistocene glaciations

Presenter: Despina Kyriakoudi

During the Middle and Late Pleistocene, parts of the North Sea were covered by ice sheets in three different phases, known as the Elsterian (MIS 12), the Saalian (MIS 10-6), and the Weichselian (MIS 4-2) glaciations. It has been proposed by various studies that large proglacial lakes developed in front of these ice sheets during each of these glacial periods, due to glacial meltwater and drainage of numerous great northern European rivers. However, no widespread, convincing geomorphological and sedimentological evidence about the existence or exact location of these lakes has yet been found. The goal of the WALDO* project is to assess the hypothesis that these proglacial lakes existed and were significant features in the southern North Sea during the three ice ages. In 2022, two offshore surveys were conducted with RV Belgica, during which datasets of high-resolution seismic reflection data and vibrocores were acquired in various areas across the southern North Sea. This newly gathered data, together with available datasets from various British and Dutch offshore wind farms, are currently being analyzed. During this presentation, we will show the current state of the project and some preliminary results. An additional dedicated research survey is planned to take place in October 2023 to acquire more geophysical and ground-truthing data. Over the coming years, we hope that this data will bring us

one step closer to understanding the glacial landscape evolution of the southern North Sea, and that detailed palaeoenvironmental reconstructions of the southern North Sea during the Middle and Late Pleistocene can be made.

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