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Are there Stone Age megastructures on the Baltic Sea floor? Research project SEASCAPE starts with kick-off at the IOW

The western Baltic Sea may harbour more of humanity's cultural heritage than previously thought: underwater landscapes with monumental structures built by Stone Age huntergatherers. The interdisciplinary joint research project SEASCAPE, led by the Leibniz Institute for Baltic Sea Research Warnemünde (IOW), now wants to investigate these unique traces. Today, researchers from all SEASCAPE partner institutions are meeting at the IOW to kick off the three-year collaboration.

Starting point of the project is the discovery of a one kilometre long stone row at the bottom of the Mecklenburg Bight off Rerik at a water depth of around 21 metres adjacent to the shoreline of a former, now submerged lake. Initial analyses indicate a man-made hunting site from the late Pleistocene, which was created around 11,000 years ago, when the landscape was not yet flooded by the Baltic Sea. This hypothesis will now be examined with the help of geophysical, geological and underwater archaeological investigations as part of the now launched SEASCAPE project.

However, the project is not only focussing on this one site. Older hydroacoustic recordings indicate further potential megastructures in the Flensburg Fjord and Fehmarn Sound, which so far have barely been explored scientifically and which are now to be analysed in detail using high-resolution mapping. In addition, the environmental conditions back in the past are to be reconstructed and the question of the human origin and cultural function of these structures clarified. The ultimate aim of SEASCAPE is to reconstruct a more comprehensive picture of the formerly terrestrial cultural landscapes at the bottom of today's Baltic Sea and thus gain new insights into the way of life of the early Stone Age hunter-gatherers, thereby also opening up new perspectives on the early historical development of Northern Europe.

"With SEASCAPE, we are breaking new scientific ground, not only in the truest sense of the word below the sea surface, but also through the close collaboration of very different disciplines — geophysics, archaeology and palaeo-environmental research — which are all essential for a meaningful interpretation of the structures," emphasises Jacob Geersen on the occasion of the kick-off meeting. Geersen is a marine geologist at the IOW and heads the project. Other scientific partners alongside the IOW are the Leibniz Centre for Archaeology (LEIZA), the University of Rostock and Kiel University (CAU). In addition, the Mecklenburg-Vorpommern State Office for Culture and Monument Preservation and the State Archaeology Department of Schleswig-Holstein are supporting the project as the responsible authorities for cultural heritage protection. At today's kick-off meeting with presentations and in-depth discussions, the involved researchers want to get to know each other better, present practical work already carried out as part of the project and prepare future activities.

SEASCAPE also builds on earlier research work carried out at the IOW in the early 2000s, in which sunken lakes and old shorelines on the Baltic Sea floor were geophysically recorded and mapped. These investigations provided important insights into the palaeolandscape development of the western Baltic Sea and are a valuable basis for SEASCAPE.

The SEASCAPE project is funded as part of the "Cooperative Excellence" funding line of the Leibniz Competition, which specifically supports projects for which cooperative networking – both within the Leibniz Association and with outside institutions – is an important prerequisite for success. The funding amounts to just under 1 million euros and is set to run for three years. In December 2024, the SEASCAPE research project was already awarded the recognition prize of the North German Science Prize in appreciation for the visionary combination of marine geology, archaeology and cultural landscape research.

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