

Unconformities in the stratigraphic division of strata in a formerly glaciated semi-enclosed basin, the Baltic Sea

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Sediments filling formerly glaciated epicontinental basins are characterized by frequent unconformities for two reasons: 1) the dynamics of the retreating ice-sheet, and 2) relative sea-level changes (including post-glacial rebound).

This study examines the kinds of unconformities (regional/local) recognized in the Baltic Sea basin in seismic-acoustic profiles and sediment cores (e.g. Virtasalo et al., 2014). The potential of these unconformities in the stratigraphic classification and basin-wide correlation of sediments is explored using the combined allostratigraphic and lithostratigraphic approach (CUAL by Räsänen et al., 2009).

It is expected that defining stratigraphic units based on unconformities will facilitate mapping the lateral extent and geometry of those units by seismic-acoustic methods, which eventually will improve our capability to visualise and predict the kinds of sediments that are exposed on the seafloor for the benefit of e.g. maritime spatial planning.

References:

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