In many parts of the Netherlands the transition from the Roman period (RP) to the Early Middle Ages (EMA) coincided with declining population. This contribution explores landscape dynamics of the Dutch coastal area in the first millennium AD and its possible influences on occupation patterns.

To achieve this, we developed a GIS containing geological-geomorphological elements from tidal systems (channels, tidal flats, and salt marshes). Knowledge on the geological development of the tidal systems is documented in the GIS allowing mapping of coastal evolution. By comparing these coastal-evolution maps with archaeological data, interaction between landscape changes and settlements can be hypothesized.

At the onset of the Early Middle Ages, first results suggest silting up of tidal inlets along the Dutch coast coinciding with an increased settlement density in the waning tidal areas. Meanwhile, large-scale extension of tidal systems at the expense of habitable land occurred in the SW part of the Netherlands. Adversely, at the end of the Early Middle Ages the SW part of the Netherlands silted up and some large sea ingestions took place in the northern part of the Netherlands. In both of these regions the current archaeological data does not yet reveal a clear pattern.

Methods

Landscape reconstruction

Integrated time series of landscape reconstruction

Palaeogeography: 110 AD
Settlements: Red: 70 - 270 AD / Black: 12 BC - 450 AD

Palaeogeography: 285 AD
Settlements: Red: 725 - 900 AD / Black: 450 - 1050 AD

Palaeogeography: 550 AD
Settlements: Red: 725 - 900 AD / Black: 450 - 1050 AD

Palaeogeography: 885 AD
Settlements: Red: 725 - 900 AD / Black: 450 - 1050 AD

Palaeogeography: 1050 AD
Settlements: Red: 900 - 1050 AD / Black: 450 - 1050 AD

Conclusions

Additional information:

- Project website
- Poster pdf
- References