The Wadden Sea –
archive of landscape evolution, climate change and settlement history

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Aims

- Depicting the archaeological potential of the Wadden Sea
- Raise the public awareness of cultural heritage within the Wadden Sea
- Landscape reconstruction as prerequisite for predictive modelling
Settling and Cultural history of the Sower Saxony Wadden Sea area

Funding 2012-2015:

Niedersächsisches Ministerium für Wissenschaft und Kultur

1986 national park
1993 UNESCO biosphere reserve
2009 UNESCO worldheritage
Known Artefacts

Burial of a woman found in 1993, 5th century AD

Bottom part of a wooden sluice, 1464 AD
- Geological archive data (LBEG, Hannover)
- Historical maps
- Archive / Literature:
  - Archaeological data base of Niedersächsisches Landesamt für Denkmalpflege (ADAB-web)
  - Publications and archives
- Public relations (rangers and guides, gatherers)
- Aerial photographs
- Field campaigns
Field campaigns

- Check site information from desk-based assessment (aerial photographs, archives)
- Investigate potential settling areas
Find spot Horumersiel
finds: 16./17. c.
Find spot Horumersiel
finds: 16./17. c.
Before and after
Geological data base
Geological data base
Landscape reconstruction

3500 BP

tidal flats
lower salt marsh
upper salt marsh
peat
Pleistocene deposits
Landscape reconstruction

1400 BP

- tidal flats
- lower salt marsh
- upper salt marsh
- peat
- Pleistocene deposits

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Landscape reconstruction

Barrier islands and mainland coast

Georgia, USA

Eastfrisian coast

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Morphodynamic processes triggered by diking of the mainland coast

- Mobilisation of ebb-deltas
- Erosion of exposed western parts
- Deposition at the eastern spits
- Reduction of tidal basins
- Westward shift of tidal watersheds
Landschaftsrekonstruktion

Besiedlungs- und Kulturgeschichte des Niedersächsischen Wattenmeerraumes

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Mapping archaeological potential areas

793-485 cal BC
2882-2499 cal BC
4360-3993 cal BC
WASA - The Wadden Sea as an archive of landscape evolution, climate change and settlement history: Exploration – Analysis – Predictive modelling

Funding: 2016-2019
WASA - The Wadden Sea as an archive of landscape evolution, climate change and settlement history: Exploration – Analysis – Predictive modelling

Geology

Biology

Geochemistry

Archaeology

Landscape data

Archaeological data

Source: WHOI.edu
Re-interpretation of maps "upper peat" is basal peat i.e. fen peat, development while RSL was at -15m NHN
WASA - The Wadden Sea as an archive of landscape evolution, climate change and settlement history: Exploration – Analysis – Predictive modelling

Landscape reconstruction

Land use and settlement structure

11000 a BP 5000 a BP today 11000 a BP 5000 a BP today

Predictive modelling

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Thank you