Exploitation and settlement dynamics of the Frisian coastal peat zone during the Iron Age and Roman Period

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Summary

(source: R. van Eerden)
Introduction: Frisian coastal peat zone

Current area of interest

(Modified after: Vos & Knol 2013)
Introduction: early peat reclamations

First habitation (ca. 650 BCE):

- Salt marshes
- *Terps*: artificial dwelling mounds.
- *Terps* raised on natural ridges near creeks

Colonization during Iron Age and Roman Period:

- Expanding salt marshes
- Reclamation of peat lands
Introduction: “classic” *terp* versus single-house *terp*
Introduction: “classic” terp versus single-house terp
Introduction: Early peat reclamations

Not only in the northern Netherlands!

The Netherlands divided in 8 macro-regions:
1. Westergo
2. Oostergo
3. Groningen
4. Vlie estuary
5. Oer-IJ estuary
6. Rhineland
7. Meusse estuary
8. Zeeland

 Especially the areas of the Oer-IJ, Meusse and Zeeland have been researched by large scale fieldwork.
Relevance of the current research

Archaeological research themes

- Starting conditions
- Reclamation strategies
- The usage of the land (farming and other activities)
- Connection between the reclaimed peat lands and the salt marshes
- The influence of the reclamation on the environment and vice versa
- Starting conditions and the character and development of the local settlements

Peat oxidation ➔ threatens not only current usage of peat lands, but also the archaeological heritage contained in the peat
Relevance of the current research

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Research history

Observations

(Van Giffen, Cnossen, Santema, Halbertsma, Janssen, etc.)

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Research history

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Excavations e.g.:
1) Wartena-Warstiens (Elzinga: 1965)
2) Sneek-Jachthaven (Elzinga: 1966)
3) Hempens-Teerns (GIA/ARC: 1998)
4) Sneek Stadsrondweg-Oost (ARC: 2001)
5) Leeuwarden-Bullepolder (ARC: 2001)

Various coring surveys
(Aalbersberg 2006, etc.)

(Bewerkt naar: Vos & Knol 2013)
Research history: Wartena-Warstiens 1965

Settlement shape:
(Wartena-Warstiens 1965 → iconic)

1. Settling on clay-on-peat soil
2. Always on small mounds
3. Round mounds with circular ditch
4. Small farmsteads/sheds

Recent fieldwork-campaigns

**Excavation campaigns:**
1. Arkum (2012)
2. Wartena-Noord (2013)

**Locations based on:**
- Importance for research
- Permission

*Besides excavations, also additional coring surveys are carried out and other kinds of fieldwork.*

★ = New excavations  ★ = Important old excavations
Settling the peat area: the onset

*Not only on clay-on-peat!*

**Also on fen peat:**
- Arkum (150 BCE ± 50)
- Wartena (70 CE ± 25)

**Even on raised bogs:**
- Sneek-Harinxmaldan (0 CE ± 25)
- Leeuwarden-Bullepoorder (350 BCE ± 50)
Not only on clay-on-peat!

Also on fen peat:
- Arkum (150 BCE ± 50)
- Wartena (70 CE ± 25)

Even on raised bogs:
- Sneek-Harinxmaland (0 CE ± 25)
- Leeuwarden-Bullepolder (350 BCE ± 50)
Settling the peat area: the settlement character

In the reclaimed peat lands:

- Single farmsteads
- High density: 5-6 sites per square km

Type of peat

- Bog peat → initially no mound (*flachsiedlung*)
- Fen peat → Early sites initially no mound (Arkum); younger sites seem always on a mound (area around Wartena)

Initially also rectangular farm yards
Also Wartena-Warstiens 1965 was rectangular
Settling the peat area: about abandonment

In general, settlements seem to be abandoned after about 4 generations

- Most likely cause: drainage problems due to continuing subsidence of peat land
- After abandonment, the peat land became backwater swamp or marsh (clay-on-peat)

Where do they go?

- Not all reclamations date from the same period
- Younger reclamations lay deeper in the peat area → \textit{People move on to new stretches of peat land}
Settling the peat area: temporary abandonment

Initial abandonment, but not necessarily the end:

After some time sites were often reused for habitation or other activities

Arkum is a good example →
Settling the peat area: temporary abandonment

Some sites even transformed in moderate terps

Leeuwarden-Bulлепolder Iron Age:
• Started in the 4th century BCE as a farmhouse on a reclaimed bog peat
• Linear ditch pattern

Leeuwarden-Bulлепolder Roman Period:
• Reoccupied → now clay-on-peat
• In the 3rd century CE it was a terp of c. 2 ha with a radial allotment
The end of these reclamations

Like a large part of the Frisian salt marshes:
- Most reclamations stop during the 3rd century CE
- The last settlements were likely abandoned in the early 4th century CE (Sneek-Jachthaven)

After abandonment:
- Often renewed peat growth in the abandoned peat lands (Tinga-complex)
- And/or silting up with marine clays
Summary

- The early Frisian peat reclamations started (at least) around the 4th century BCE and took place as well on fen-peat as on bog-peat.

- Individual farmsteads (*einzelhöfe*), but high density (5-6 per sq. Km) and initially not always a dwelling mound → younger fen-peat reclamations always a mound, like the area of Wartena.

- The initial shape of a mound → always rectangular and never round (later caused by trampling, terp expansion and silting up of clay.

- After time abandonment (due to problems with water table) → reclamation of new stretches of peat land → youngest reclamations are positioned the furthest in the peat area

- When balance was restored in abandoned reclamations → renewed interest, even re-habitation and expansion of former terp settlements

- The early Frisian peat reclamations end in the 3rd and early 4th century CE.
Thank you for your attention

Any questions?

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