

The Heathland Farm

Combining nature conservation
with food production

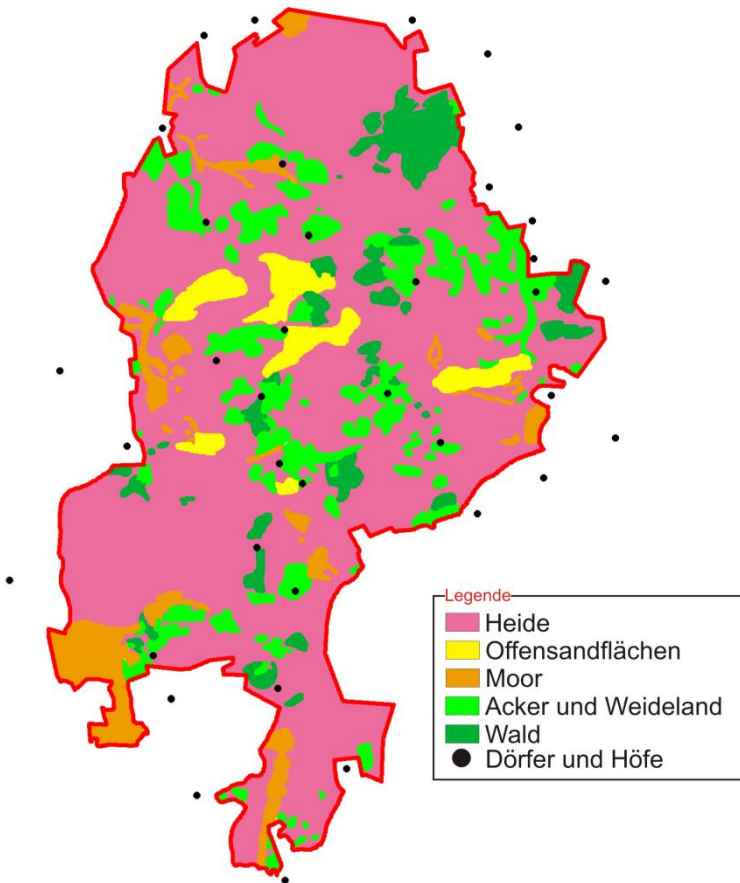
Martin Woestenburg
Freelance landscape journalist and researcher
European Heathland Workshop 2017

The Heathland Farm

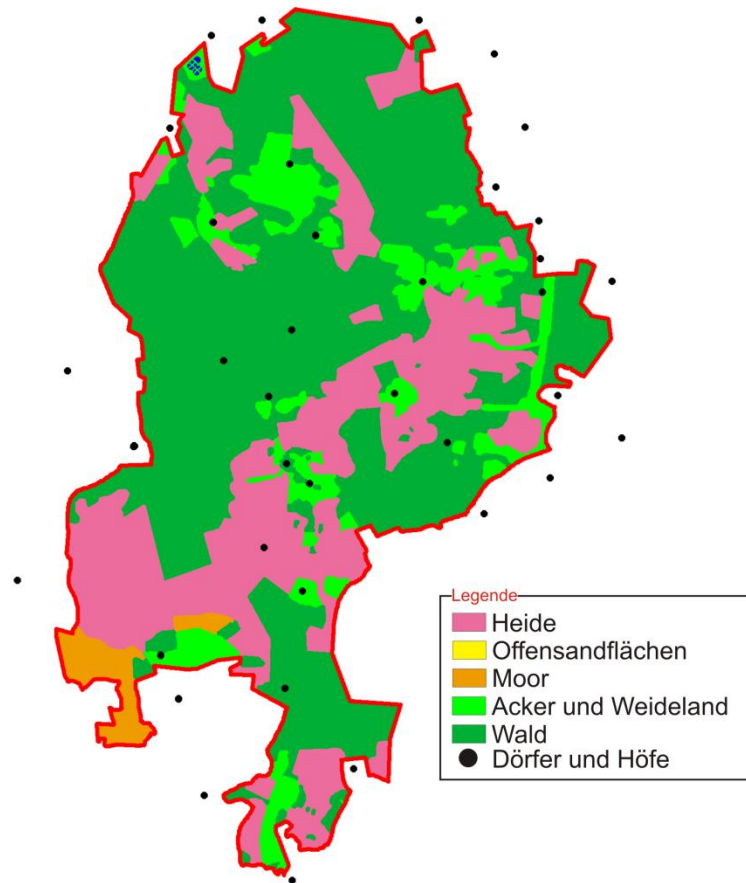
- Founding father: Loek Hilgers
- Example: Lüneburger Heide
- The concept: nutrient cycle, herd of sheep, socio-economic cycle
- Goal: system restoration and innovation
- The Lüneburger Heide system
- Heathland Farms in the Netherlands

Lüneburger Heide

1801



2006



Luneburger heide

Naturschutzpark 23,440 hectares:

- 5,200 hectares of moorland
- 450 hectares of corn fields
- 400 hectares of grassland
- 40 hectares of carp ponds

Managed by:

- 18 people
- 2,200 Graue gehörnte Heidschnucke
- 300 goats
- 30 Dülmener horses
- 80 head of cattle

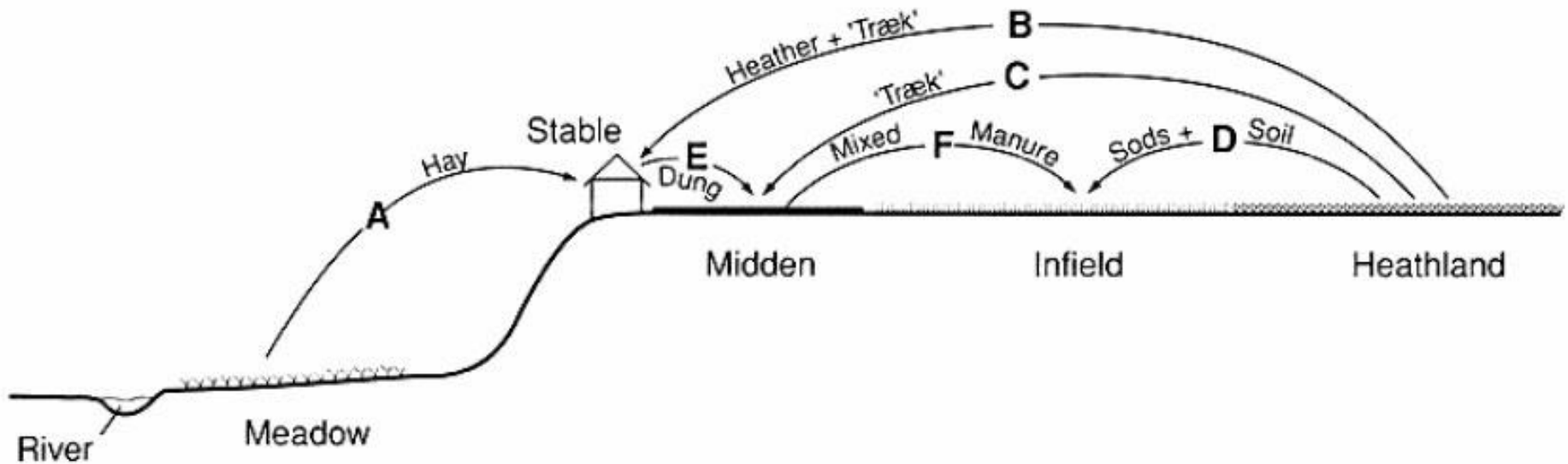


System restoration and innovation



- Traditional heathland farming system:
 - Reinstating the nutrient cycle: heath - herd of sheep - arable fields - meadow
- Commons:
 - Reinstating communal and co-operative nature and landscape management
- Guilds and craftsmanship:
 - Craftmanship of shepherd, miller, baker, brewer, etc.

The base: nutrient cycle



Source: Christiansen, Sofus, (2002). *Flows of matter in a traditional heathland farm about 1840. An example from northern West-Jutland. Geografisk Tidsskrift*, 101, 43-66.

The motor: shepherded herd of sheep



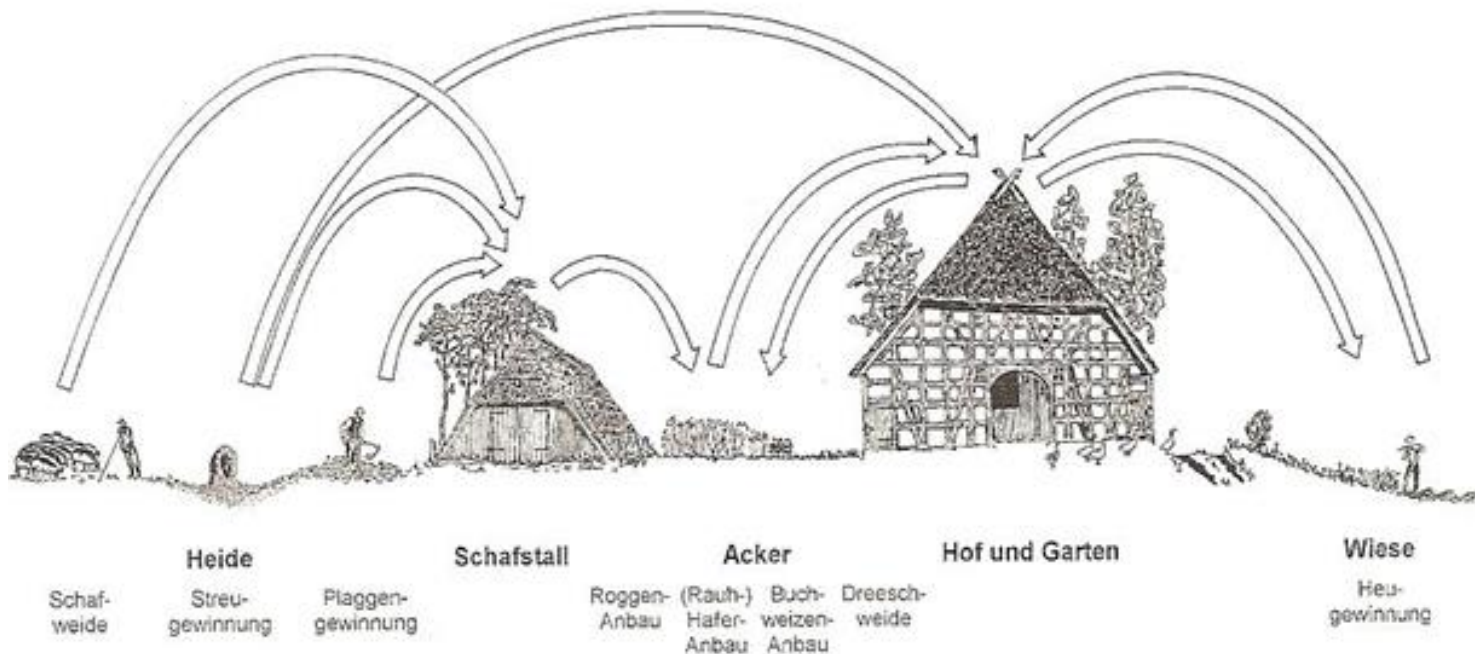
Shepherd Van der Berg at Quadenoort in Renkum, 1931

Socio-economic cycles

Heide:
Nährstoffentnahme

Acker, Hof und Garten:
Nährstoffanreicherung

Wiese:
z.T. Nährstoffentnahme,
z.T. Nährstoffanreicherung



Ecosystem products & services

- Products: meat, vegetables, wool, grains, honey, beer, fish, game, wild herbs, manure
- Regulating services: nature conservation, water management, 'closed' nutrient cycle, carbon management
- Cultural services: participation, culture and nature education, care, re-integration, workshops (wool, culinary, personal and management trainings)

Components and people

- Heath - nature manager
- Arable fields - arable farmer
- Meadows and grasslands - (dairy) farmer
- Herds of sheep - shepherd
- Food producers - baker, brewer, beekeeper, vegetable gardeners, foragers
- Service providers - educators, marketeers, care workers, trainers
- Landscape - local community, tourists

Lüneburger Heide

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Lüneburger Heide

Managed by:

- 18 people
- 2,200 Graue gehörnte Heidschnucke (6 herds) in 6 sheepfolds
- 300 goats (1 herd, mixed with herds of sheep)
- 30 Dülmener horses (meadows)
- 80 head of cattle (meadows)

Maintaining the black € o

- Ratio heath : arable fields = 1:10
- Ratio heath : meadow/grass clover = 1:10
- Grazing density 0,85 ewe/ha
- Herds of sheep pass the night in sheepfolds
- Sheep manure mixed with pig manure, straw and heath

Maintaining the black € o

- Arable fields produce grains and seeds
- Temporary arable fields in heath
- 100 ha meadows produces 4,500 ton fodder
- 350 ha meadows managed as nature
- Arable fields also produce herbs and birds
- **Primary goal: nature management**

Products

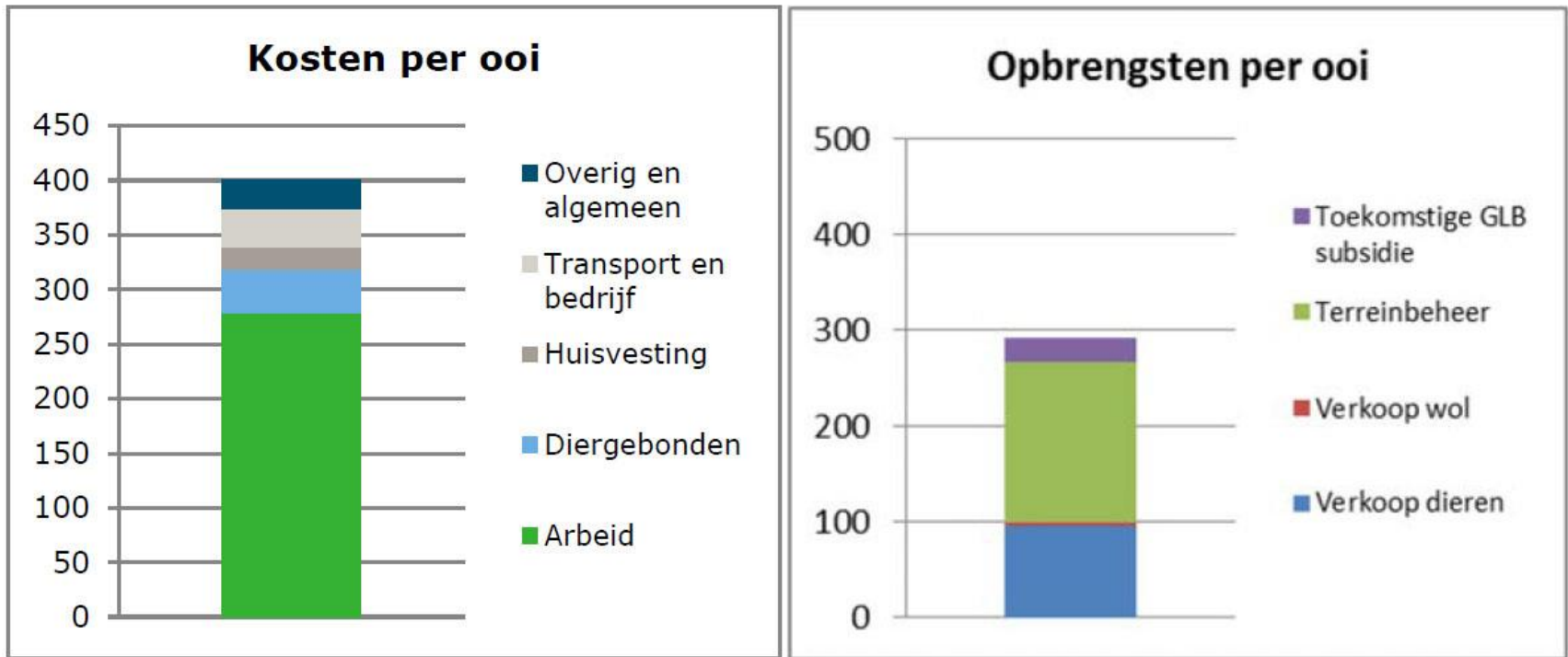
- Grain - kuchen, bread
- Seeds - organic seed reproduction for organic agriculture
- Meat - mutton and lamb sold by two local butchers
- Honey - Heidehonig
- Potatoes - Heidekartoffeln
- Spirits - Heidegeist



The Netherlands

- 1956: last pastoral shepherd retires
- 1970's: new generation of shepherds
- 2003: ± 30 shepherds (Alterra)
- 2016: 47 companies managing 10,000 ha heathland (90 shepherds) (Alterra)
- 2016: 73 smaller companies grazing grassland, city parks and dikes (Alterra)

Costs & revenues



Costs and revenues of a shepherded herd of sheep (€/ewe) in South NL.

Costs (left): other, transport, housing, animal costs, labour.

Revenues (right): future CAP, nature management, wool, meat and animals.

Source: Schrijver, Raymond (2016). *Wie stuurt de herder? Concurrentie of coöperatie? Natuur- en cultuurproductie met schaapskuddes*. Wageningen: Alterra-rapport 2708.

Financing shepherds

- Average herd: 250 sheep
- 80-90% of revenue from nature management
- Labour costs 70-80%
- Income:
 - Nature management: 80-90%
 - Meat:
 - Wool:
- **Yearly deficit of 30%**

Grazing areas

- Areas used by sheep companies:
 - Heath: 9,516 ha
 - Natural grassland: 6,568 ha
 - Other areas: 8,240
- Nature areas that can be grazed:
 - Peat moor, grassland and dikes: 15,041 ha
 - Wet and dry heath, and dunes: 61,365 ha

Source: Schrijver, Raymond (2016). *Wie stuurt de herder? Concurrentie of coöperatie? Natuur- en cultuurproductie met schaapskuddes*. Wageningen: Alterra-rapport 2708.

Bottlenecks

- Structural yearly deficit of 30%
- Mix of market and co-operative model:
 - Tenders based on market model aimed at competition and short term contracts
 - Government planning based on co-operation between governments and companies
- Conclusion: shepherded herds of sheep have a weak market position

Solution: Heathland Farm

- Structural position of shepherded herds of sheep in heathlands
- Nature development in extensive arable fields
- In situ management of gene pools of rare heath sheep breeds
- Maintaining and developing cultural history of nature and cultural landscape

Heathland Farms NL



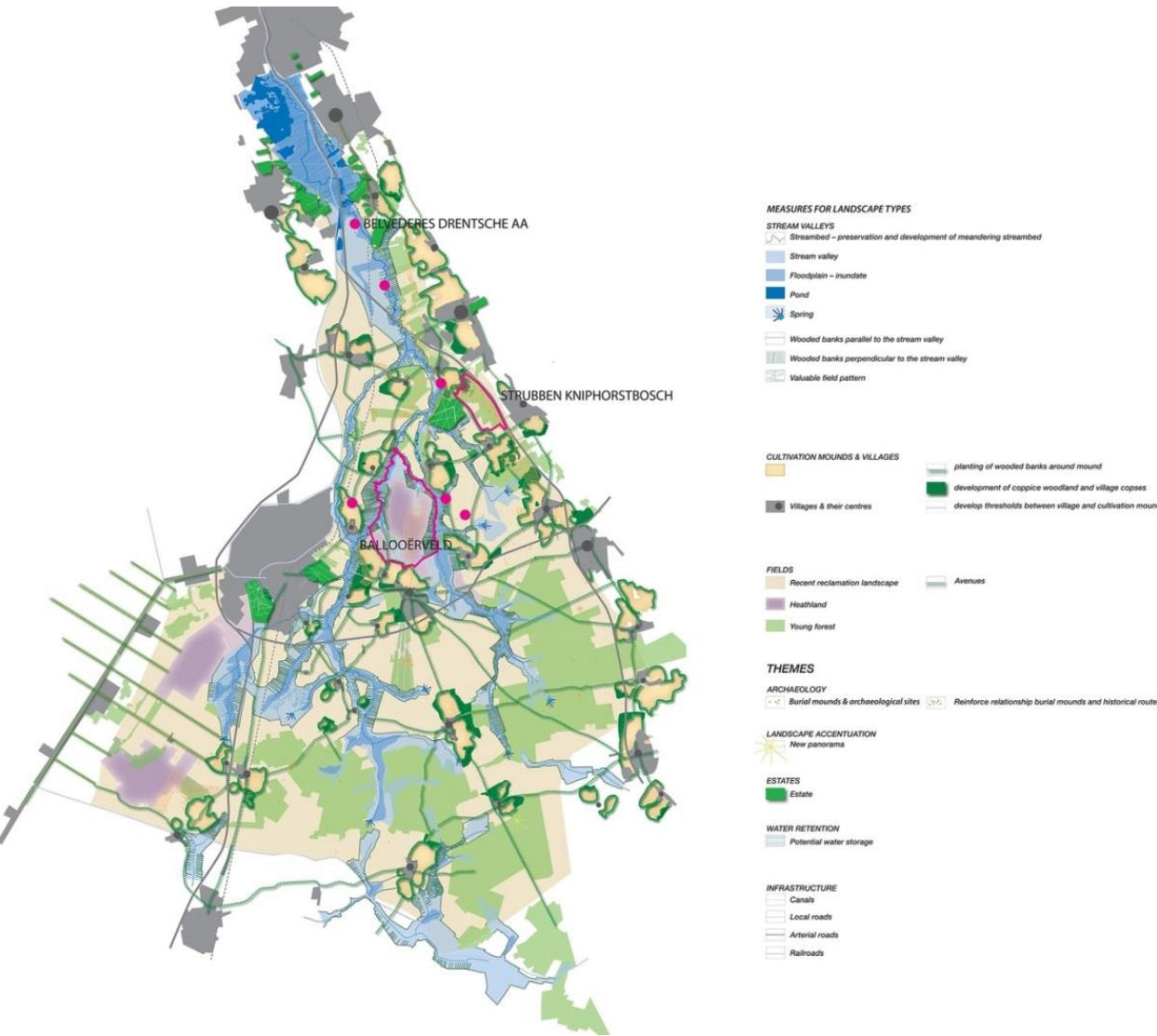
1. Drentsche Aa
2. Ruinen: Dwingelderveld
3. Sallandse Heuvelrug
4. Hof van Twente
5. North West Veluwe
6. Region FoodValley
7. Utrechtse Heuvelrug
8. Region Ede-Renkum
9. Winterswijk
10. Biesbosch
11. North-Brabant
12. Epener Heide

Heathland landscape: Sallandse heuvelrug



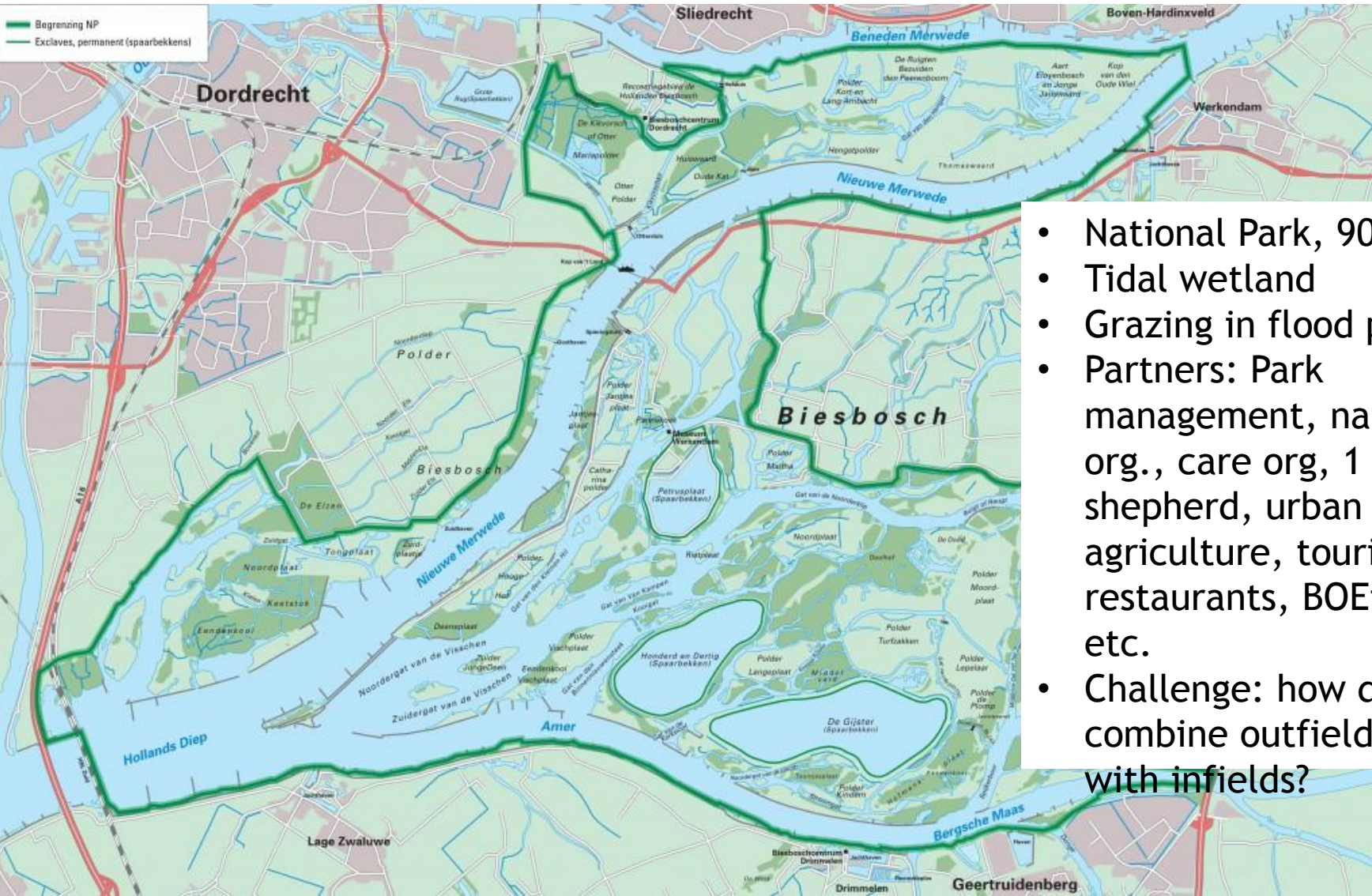
- National Park, 35 km²
- Moraine with forest and heather, black grouse
- Partners: Nature org. (SBB), 2 private forest owners 2 shepherds, several farmers, breweries, bakeries, care org., tourist org.
- Challenge: broadening nature management beyond the park boundaries

Heathland landscape: Drentsche Aa



- National Park. 100 km²
- River valley
- Es villages
- Landscape biography
- Partners: Nature org., 3 shepherds, arable farmers, dairy farmers, bakeries, tourist org., etc.
- Challenge: Park management is forerunner and wants no interference

Tidal landscape: Biesbosch



- National Park, 90 km²
- Tidal wetland
- Grazing in flood plains
- Partners: Park management, nature org., care org, 1 shepherd, urban agriculture, tourism, restaurants, BOEi, etc.
- Challenge: how do we combine outfields with infields?

Heathland landscape: Dwingelderveld



Heathland landscape: Dwingelderveld



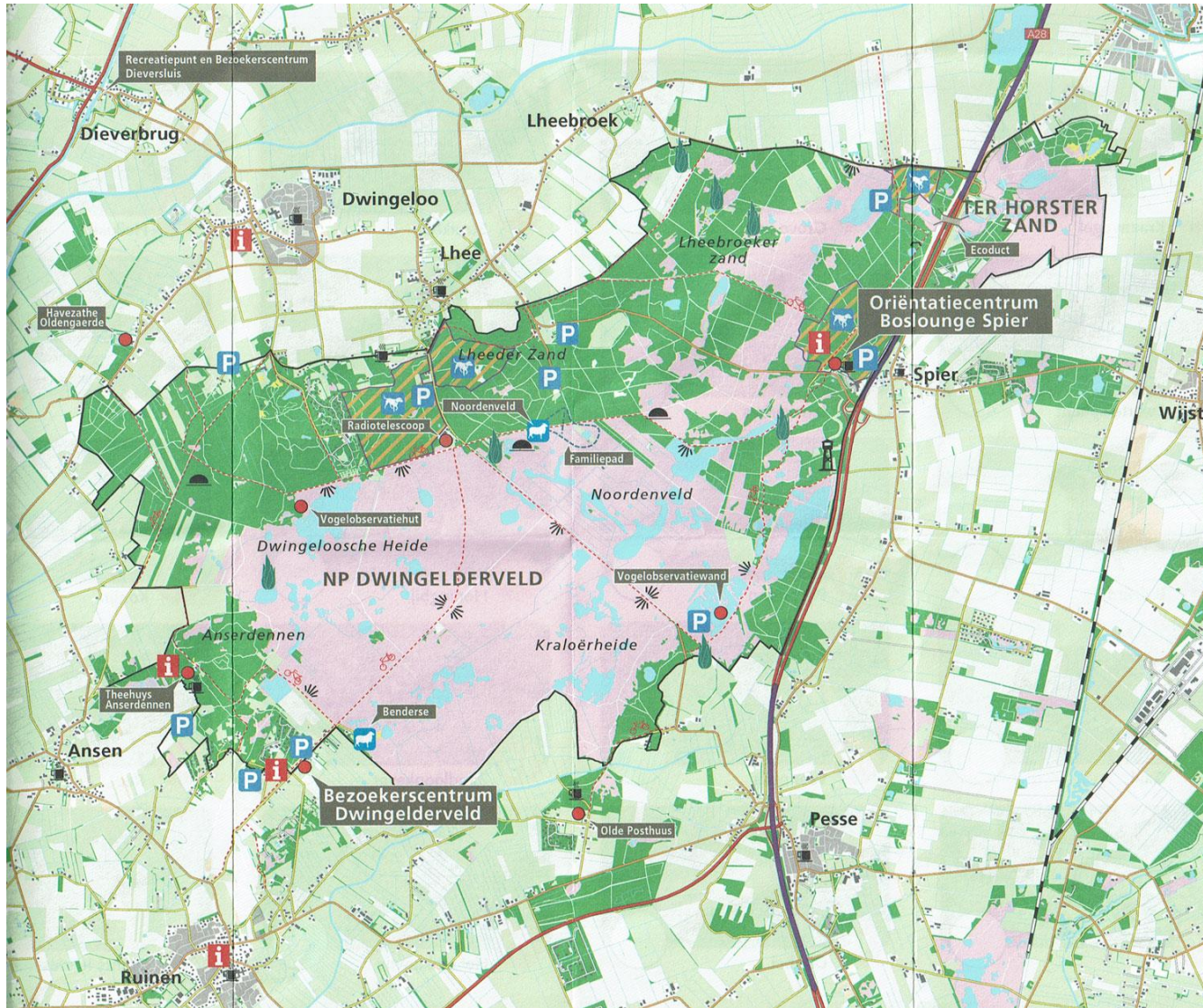
Heathland landscape: Dwingelderveld



Heathland landscape: Dwingelderveld



Heathland landscape: Dwingelderveld



Heathland landscape: Dwingelderveld



- National Park
- 2 herds of sheep
- Schaapskudde Ruinen: 270 ewes graze 500-600 hectares of heath
- Anscher & Ruinen es: 45-50 hectares of arable land: oats, barley, rye
- New sheepfold near visitors centre
- No socio-economic cycle

Conclusion

The Heathland Farm is a concept for:

- Using and revitalising heritage for the integrated management of cultural landscapes
- Using and revitalising old traditions, cultivations and crafts
- Binding nature and agriculture through heritage
- Translating the landscape biography of cultural landscapes into new forms of landscape management

Conclusion

The Heathland Farm is a concept for the system restoration and innovation of nature conservation and food production through cultural heritage.

Thank you for your attention.

Martin Woestenburg

martin@woestenburg.nl