Landscape Economics

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Toronto, March 23-24, 2011

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1. Definitions

Article 1 of the European Landscape Convention:

Landscape means an area, as perceived by people, whose character is the result of the action and interaction of natural and/or human factors

Landscape Economics is the systematic application of economics to the valuation and design of landscapes

2. Landscape (i)

- Land is the carrier (or substrate) of functions
- Landscape is the physical appearance of the land
- When the use of land changes the landscape changes also and the other way round
- Landscape used to be an externality (an unintended consequence) of productive functions of land
- Parts of the landscape are developing from an externality to a public good (an intended consequence of policy), e.g. National Landscapes in the Netherlands

2. Landscape (ii)

In other words:

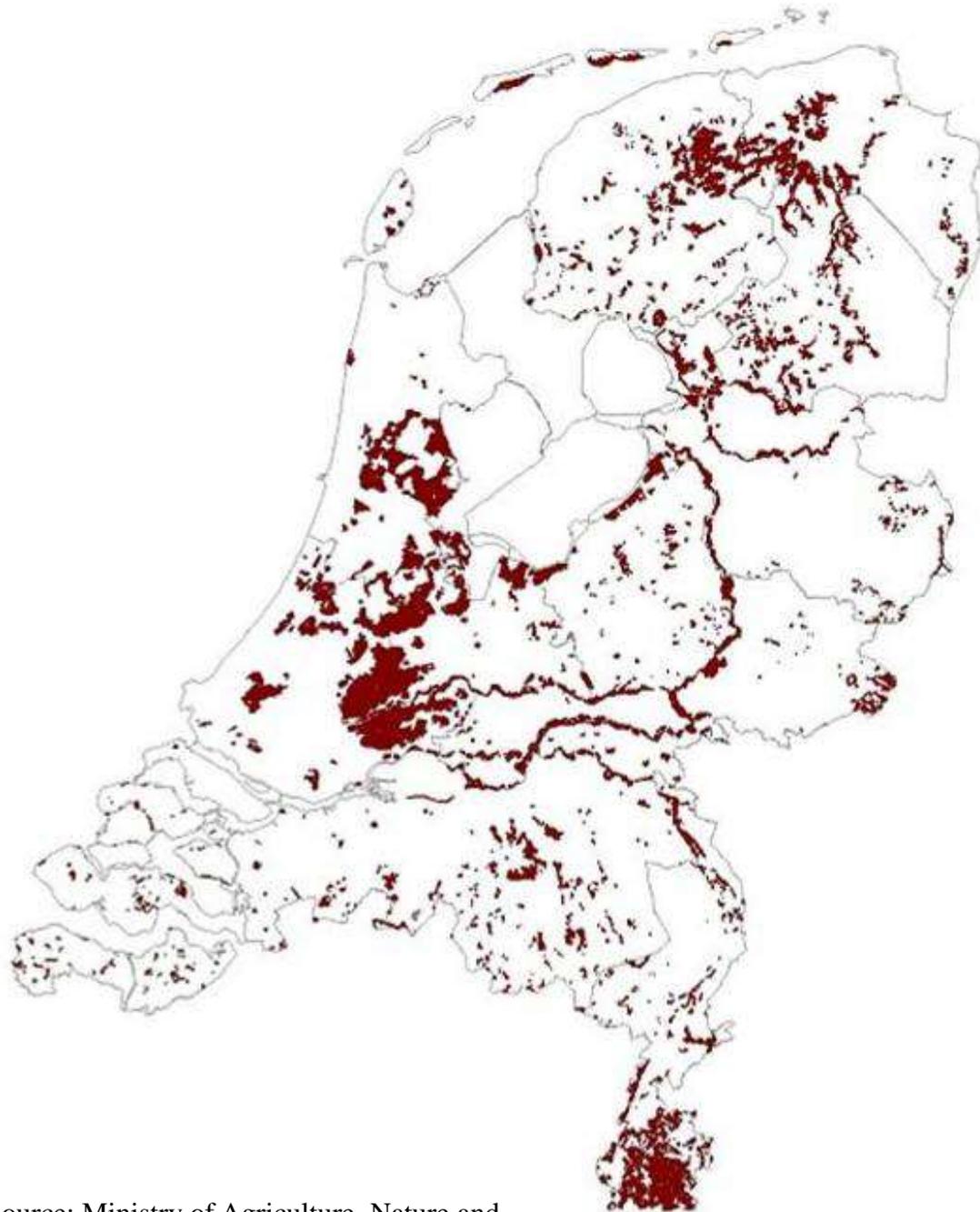**"The landscape of the economy"**

is transformed into

"The economics of the landscape"

Less Favoured Areas
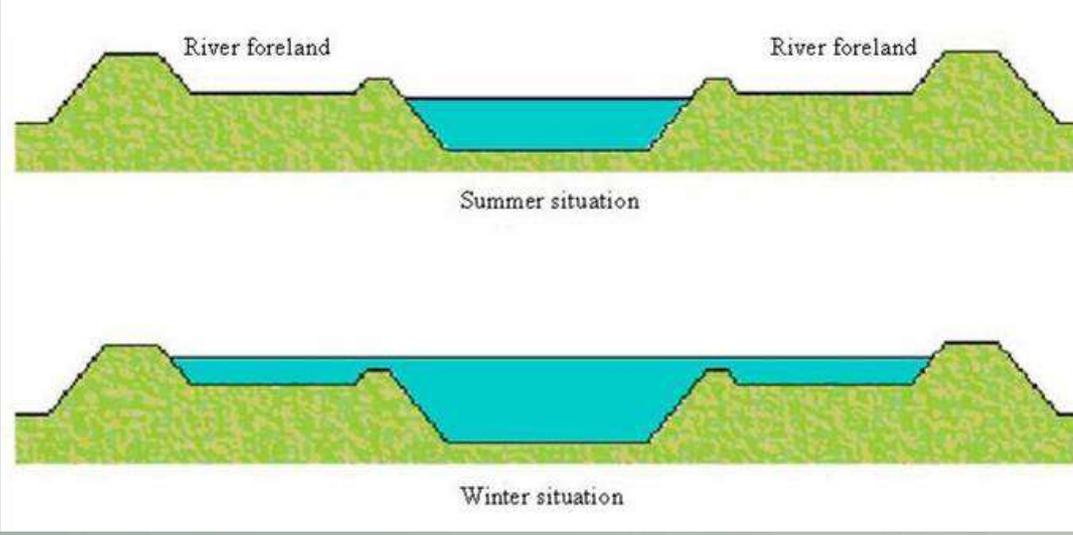# The Netherlands 2007

Legend:

: Less Favoured Area

Source: Ministry of Agriculture, Nature and
Food Quality, 2007

Deep peat meadows

Brook valley and inundation areas

River foreland · River foreland

Summer situation

Winter situation

River forelands

Small scaled sand landscapes

Slopes

2. Landscape (iii)

- Landscape planning should be based on all the necessary information

- Complex interaction between ecological and biophysical processes, economic activities, and institutions

- All necessary information is not available on the central level, nor available to researchers only

- Therefore: interactive decentralised planning with the help of stakeholders is preferred

2. Landscape (iv)

- Landscape planning is based on subjective choices

- → Spatial planning for landscape is 'challenging', for example:
  - Nature is the basis for ecological functions.
  - Nature is the basis for economic functions.
  - Ecological and economic functions can be rival.

- Decisions about landscapes can lead to misuse if not guided by some concept of value or trade-off

3. RITAM: Choice Experiment (i)

- Develop a method to get insight in the consequences of spatial choices
  - Multidimensional / Trans-disciplinary
  - *Interactive*
  - Spatial
  - *Trade-off*
- Multifunctional participatory landscape planning (RITAM in Dutch)

3. RITAM: Choice Experiment (ii)

- Two steps:
  - Measuring individual landscape preferences by way of a choice experiment
  - Aggregation of individual preferences

- Result: Optimum landscape

3. RITAM: Choice Experiment (iii)

1. Aims and characteristics

2. Develop choice experiment

3. Choice experiment

4. Analysing results

5. Discuss the results and possible application of these results

Representatives of stakeholder groups ⟷ Researchers

3. RITAM: Choice Experiment (iv)

- Stakeholder / representative approach rather than a large sample drawn from the entire population
  - Advantage:
    - Not based on a large sample
    - Specific knowledge
    - Involved
  - 'Challenge':
    - Representative for population?
    - Representatives may have own targets
    - Willingness-to-pay (WTP)

3. RITAM: Choice Experiment (v)

- Choice experiment: trade-off method to retrieve preferences

- Used in environmental economics since begin '90

- Assumption: consumers retrieve utility from different characteristics of a good (Kelvin Lancaster)

- Makes use of an experimental design to make it possible to trade-off the different characteristics of the good

- Advantage: Multi-dimensional (as landscape)

4. Project '*Friese meren*' / Friesian Lake District

(Arianne De Blaeij, Martijn van der Heide, Wim Heijman)

- Stakeholders:
  - Government
  - Nature Conservation Organisations
  - Recreation Sector
  - LTO: Farmers Organisation
  - Polder Board (Waterschap)

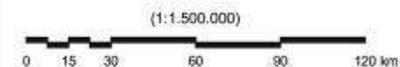# 4. Project '*Friese meren*' / Friesian Lake District (ii)

PKB –kaart 7: Nationale landschappen

begrensd nationaal landschap: Groene Hart (1)

Nieuwe Hollandse Waterlinie (19) en Stelling van Amsterdam (20)

nader te begrenzen nationale landschappen

2. Middag-Humsterland
3. Noordelijke Wouden
4. Hoeksche Waard
5. Zuidwest-Friesland (Hemmen, Friese meren en Gaasterland)
6. Drentse Aa
7. IJsseldelta (Mastenbroek en Kampereiland)
8. Noordoost-Twente
9. Graafschap
10. Achterhoek
11. Gelderse Poort
12. Veluwe
13. Rivierengebied
14. Noord-Hollands Midden
15. Zuidwest-Zeeland (Walcheren, Zak van Zuid-Beveland en West Zeeuws-Vlaanderen)
16. Groene Woud
17. Heuvelland
18. Arkemheen-Eemland

ondergrond

vereenvoudigde topografie (exclusief hoofdinfrastructuur)

grens Exclusieve Economische Zone (EEZ) en 12-mijlszone

(1:1.500.000)

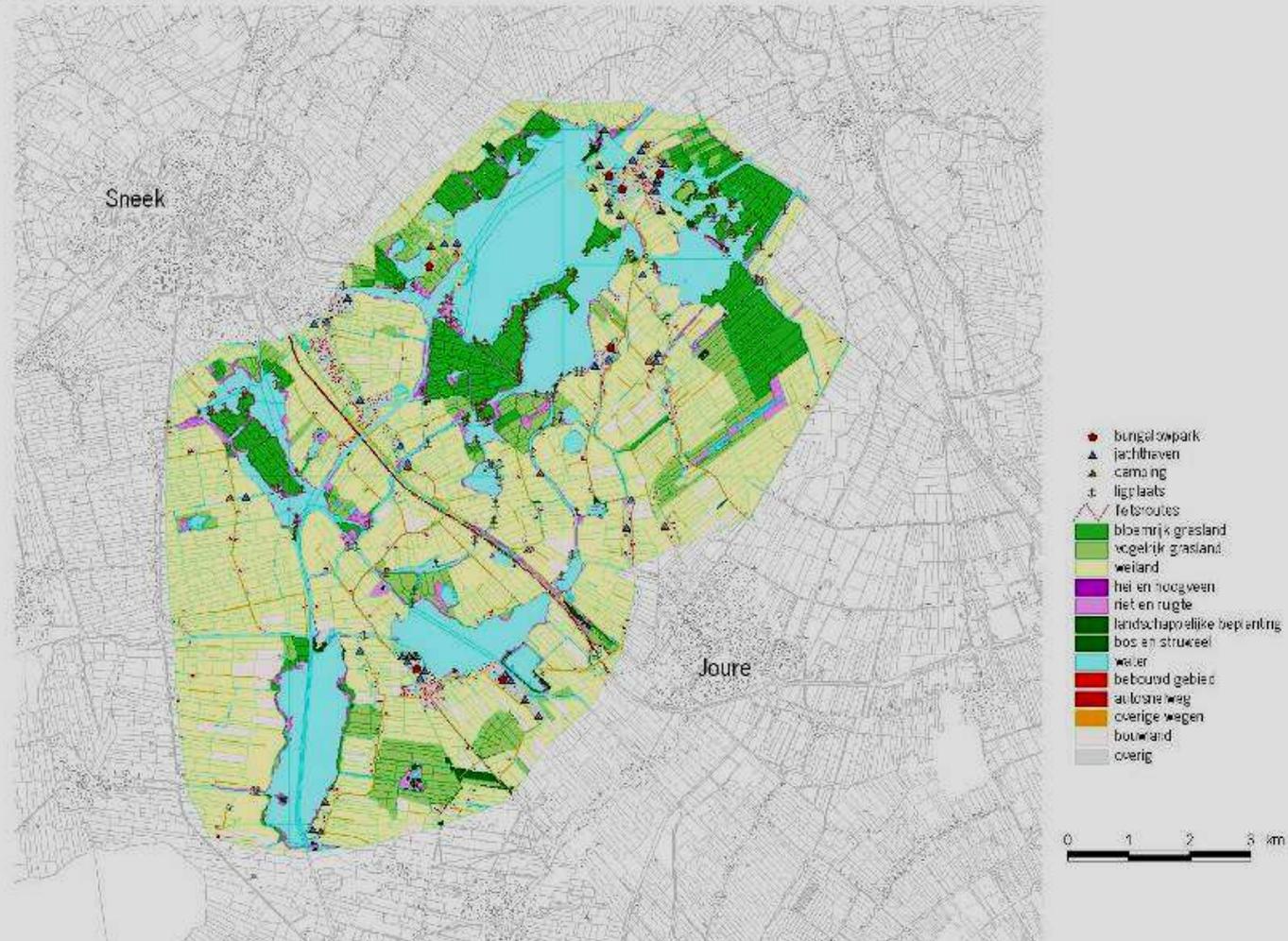0   15   30   60   90   120 km

Het kaartbeeld betreft een indicatieve weergave van de in de legenda vermelde eenheden.

4. Project '*Friese meren*' / Friesian Lake District

(iii)

Kaart 1. Overzicht studiegebied Friese Meren

4. Project '*Friese meren*' / Friesian Lake District (iv)
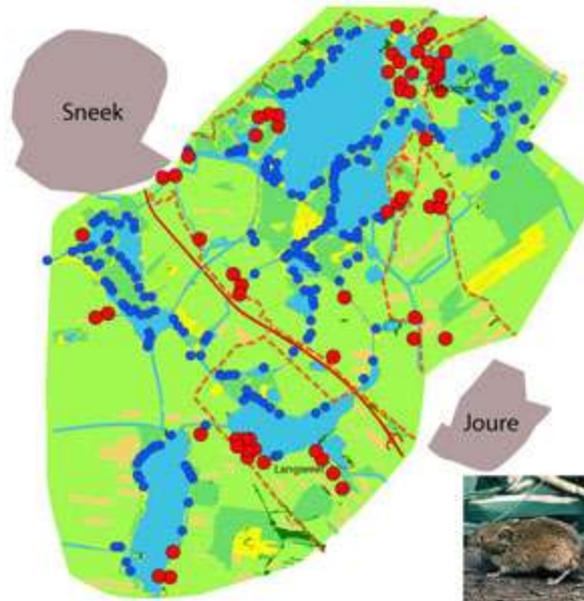
- **Variables**
  - Nature
  - Water Quantity
  - Bicycle Tracks
  - Landing Stages
  - Marinas
  - Water Quality

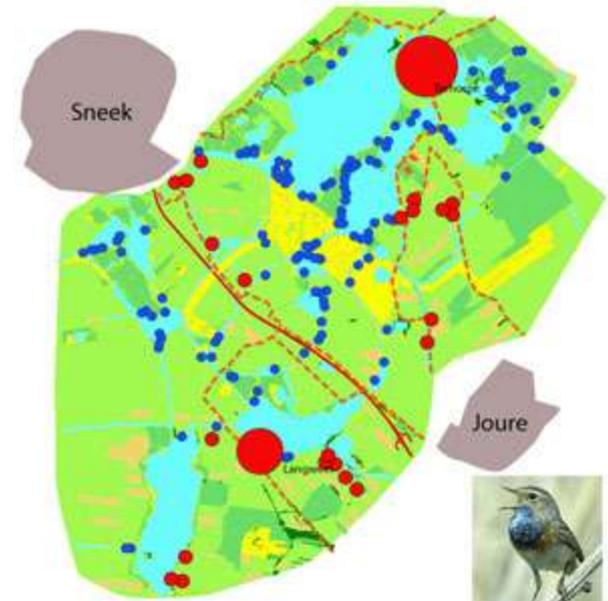# 4. Project '*Friese meren*' / Friesian Lake District (v)

"Knowing that the realisation or maintenance of a spatial plan would cost a lump sum of ... euro per househould, which plan would you choose on behalf of your supporters?"
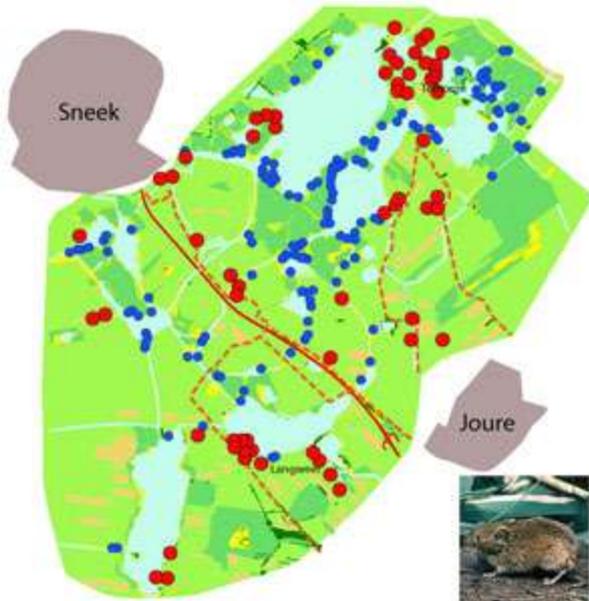
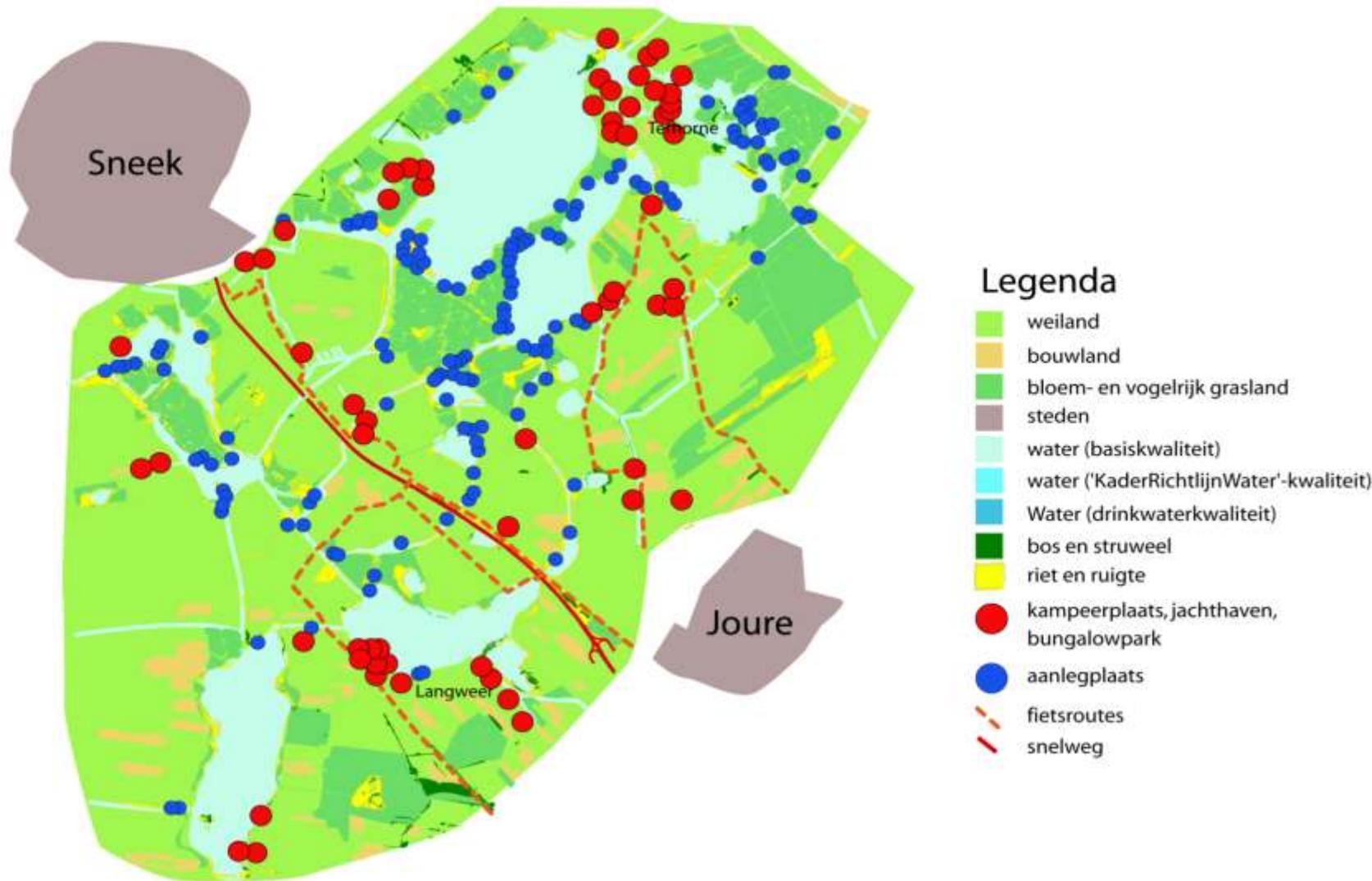€ 25,- per household   € 10,- per household   € 10,- per household

4. 'Friese Meren'-project: Present Situation

Legenda
- weiland
- bouwland
- bloem- en vogelrijk grasland
- steden
- water (basiskwaliteit)
- water ('KaderRichtlijnWater'-kwaliteit)
- Water (drinkwaterkwaliteit)
- bos en struweel
- riet en ruigte
- kampeerplaats, jachthaven, bungalowpark
- aanlegplaats
- fietsroutes
- snelweg

4. 'Nature Conservationist's preferred

Legenda

- weiland
- bouwland
- bloem- en vogelrijk grasland
- steden
- water (basiskwaliteit)
- water ('KaderRichtlijnWater'-kwaliteit)
- Water (drinkwaterkwaliteit)
- bos en struweel
- riet en ruigte
- kampeerplaats, jachthaven, bungalowpark
- aanlegplaats
- fietsroutes
- snelweg
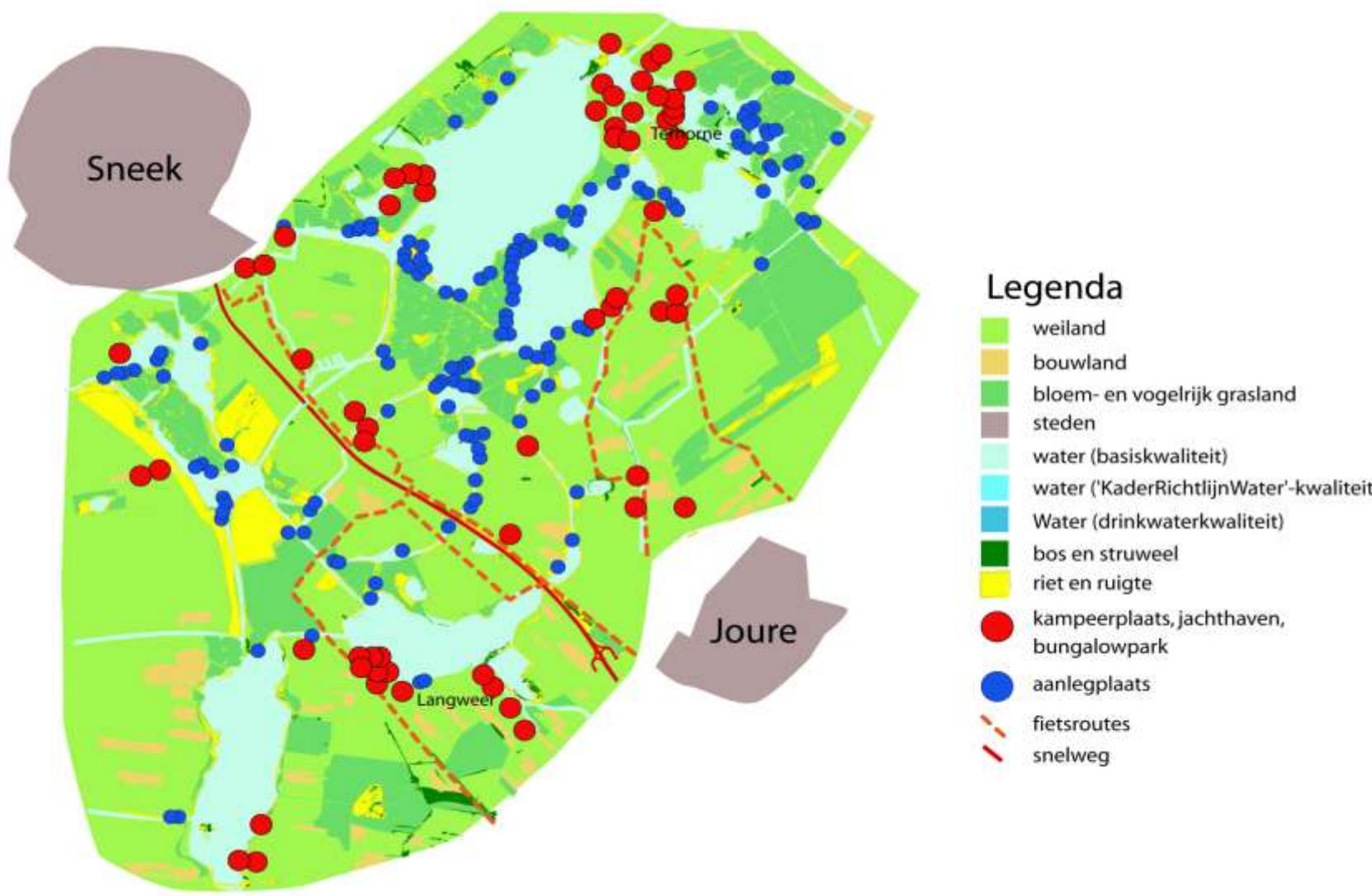
4. Recreationist's preferred Landscape

Legenda

- weiland
- bouwland
- bloem- en vogelrijk grasland
- steden
- water (basiskwaliteit)
- water ('KaderRichtlijnWater'-kwaliteit)
- Water (drinkwaterkwaliteit)
- bos en struweel
- riet en ruigte
- kampeerplaats, jachthaven, bungalowpark
- aanlegplaats
- fietsroutes
- snelweg

4. Non-preferred Landscape

Legenda

- weiland
- bouwland
- bloem- en vogelrijk grasland
- steden
- water (basiskwaliteit)
- water ('KaderRichtlijnWater'-kwaliteit)
- Water (drinkwaterkwaliteit)
- bos en struweel
- riet en ruigte
- kampeerplaats, jachthaven, bungalowpark
- aanlegplaats
- fietsroutes
- snelweg

Sneek

Terhorne

Joure

Langweer

5. Further Research

- RITAM only focuses on the 'optimum landscape'

- It is not a Social Cost Benefit analysis of landscape scenarios

- Therefore present research focuses on the development of a SCBA method for landscape scenarios

Landscape Preferences

- http://www.myplacetobe.eu

- Username: p
- Password: p

6. Conclusions

- Decentralised interactive planning is necessary,

- RITAM is a useful tool for this

- An SCBA for Landscape Scenarios seems possible

- The proof of the pudding…

http://www.landscapeeconomics.wur.nl/UK/