

Hans Farjon, Nickie van der Wulp & Leon Crommentuijn

Monitoring program of perception and appreciation of landscapes in the Netherlands



Time table

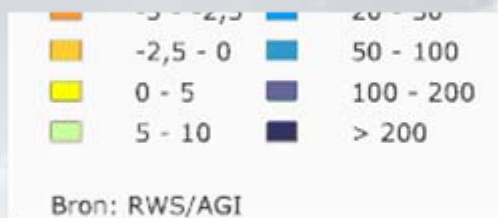
- Introduction: Dutch landscapes
- Why landscape monitoring
- How monitor appreciation and perception
- Results of the first enquiry
- Conclusions

Dutch landscapes

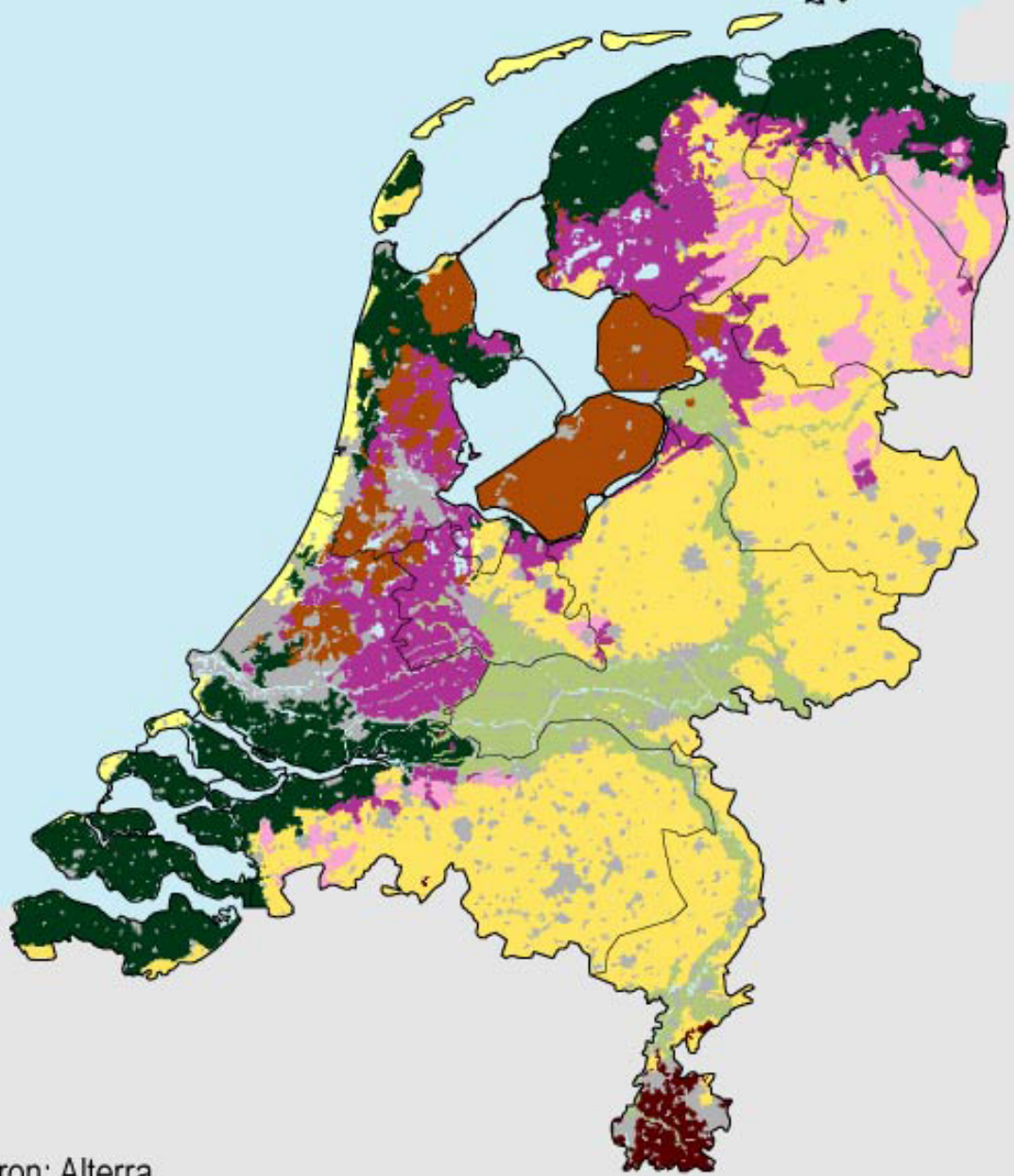
- Biogeo-genesis X occupation process
- Historically: major driving force was agricultural reclamation & (re-)organization



Elevation



Landscapes



-  hills
-  uplands
-  reclaimed peat bogs
-  river valleys
-  reclaimed fen lands
-  reclaimed tidal flats
-  drained lakes
-  sea dunes
-  water
-  built up area

Bron: Alterra



Reclaimed tidal flats





Uplands





Reclaimed fenlands

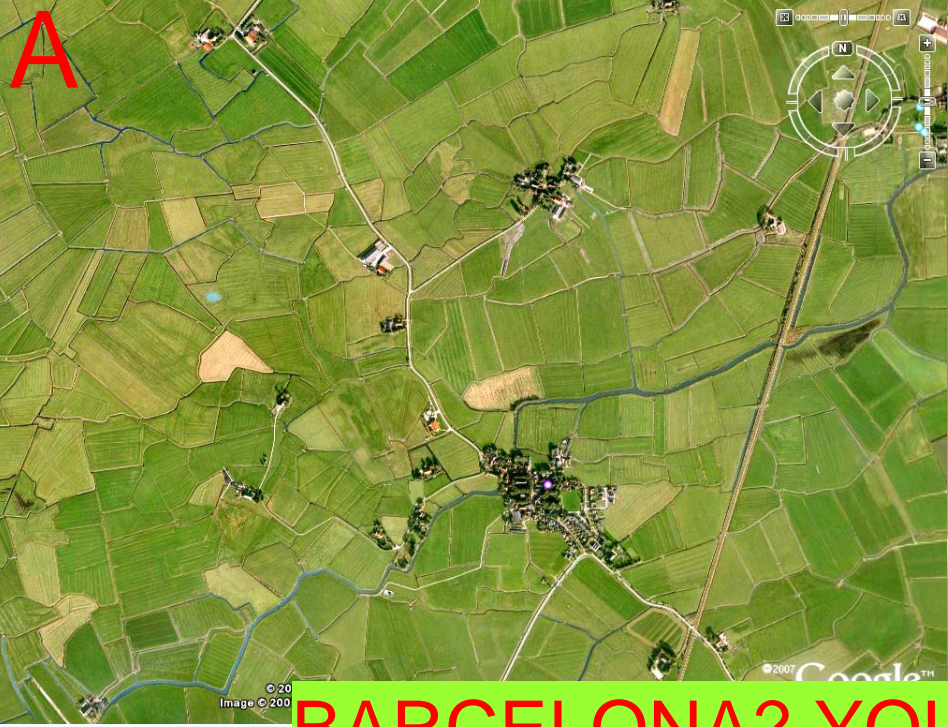




Reclaimed lakes







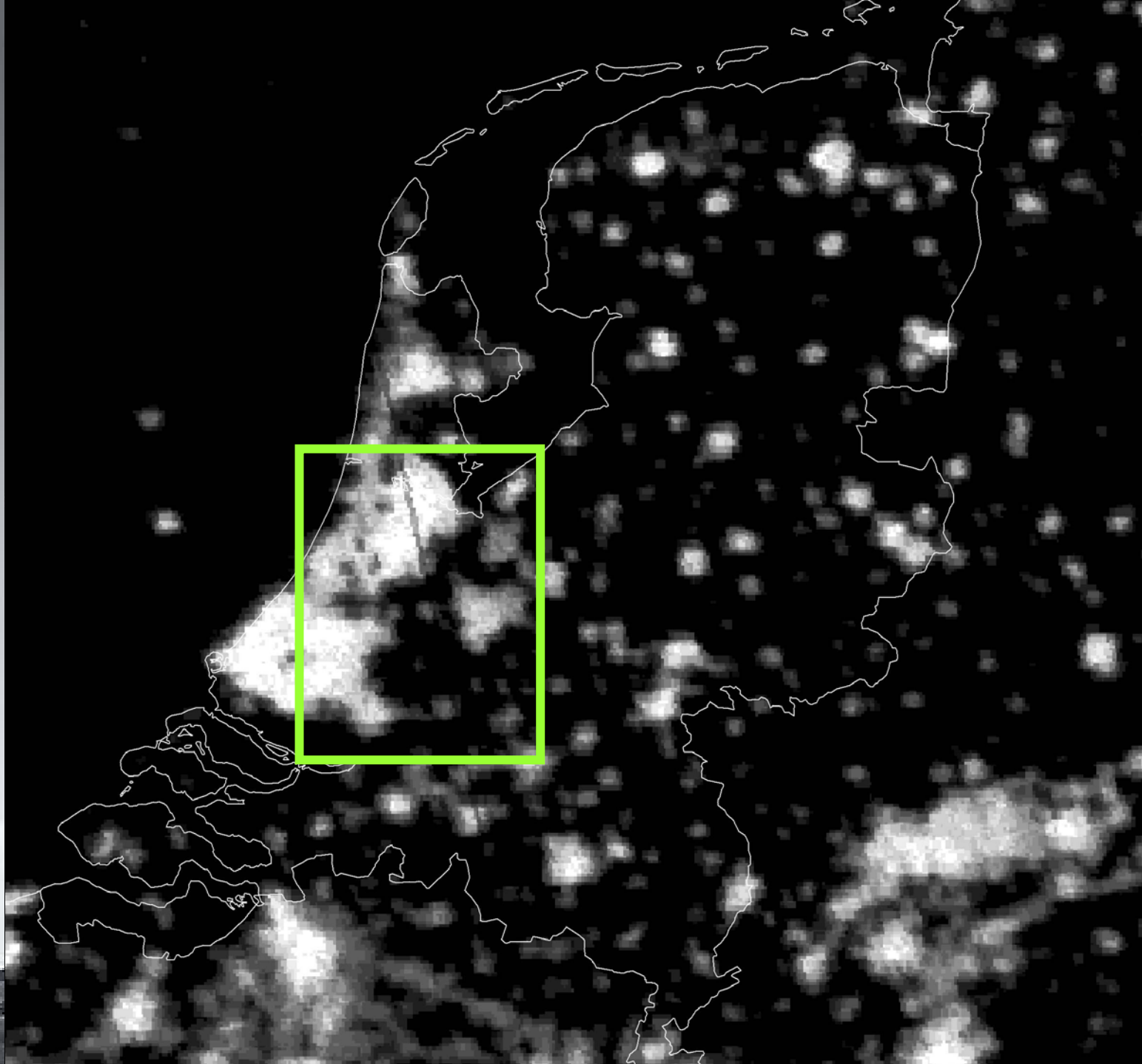
BARCELONA? YOUR VOTES PLEASE

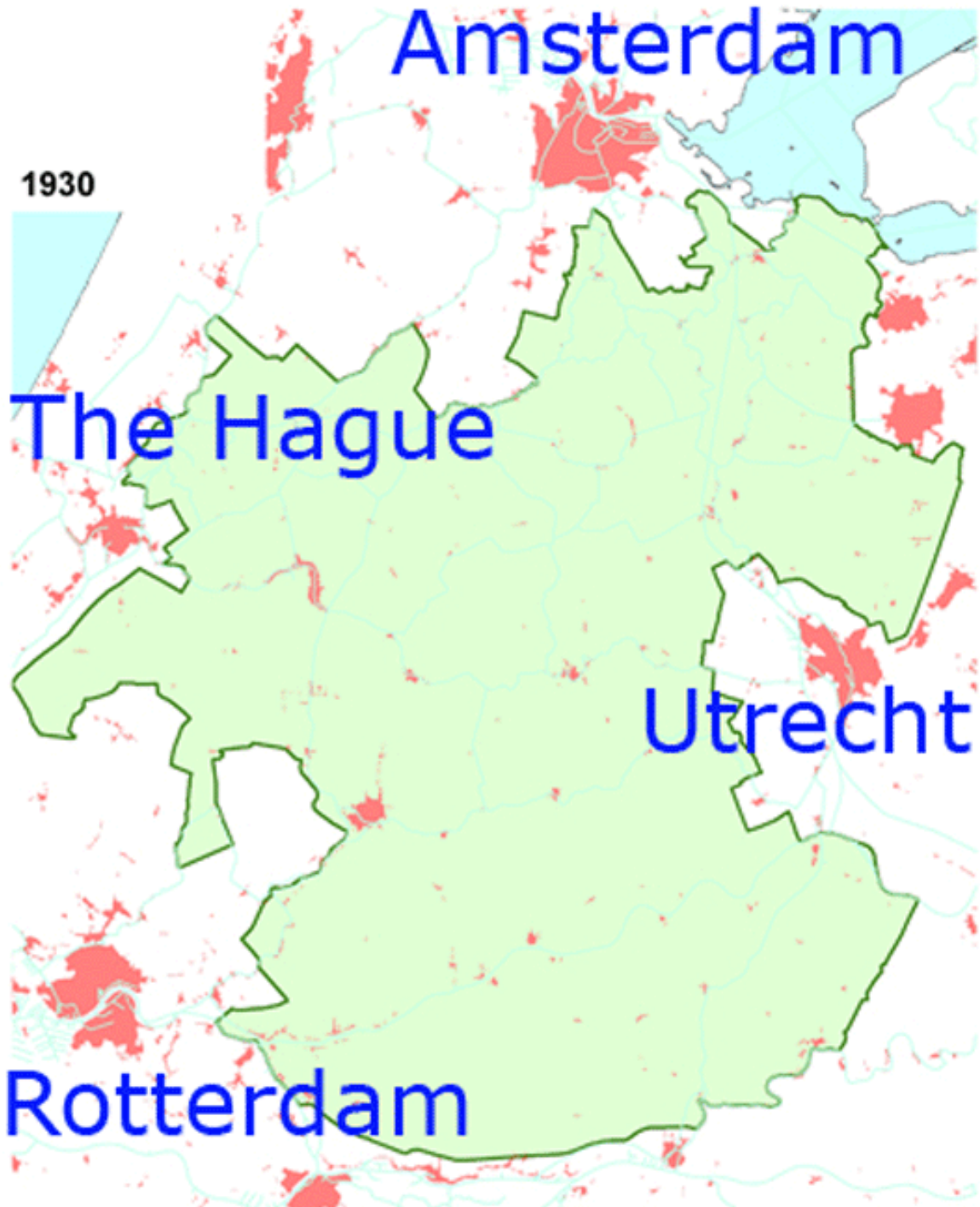


Characteristics of Dutch agricultural landscapes

- Till end 20th century the highly productive agriculture dominated landscape changes
- lowlands vs uplands = a wide horizon vs small scaled matrix
- At end of the century leisure industry is more dominant than agriculture







Nature development



Watermanagement



Infrastructure



Urbanization



The Dutch landscape is cluttering

The open Dutch landscape is under considerable pressure. Along motorways and the outskirts of cities in particular, seemingly **haphazard development fills the once wide horizon**. This gives the landscape a **fragmented and urbanized character**, which we refer to as 'landscape cluttering'. Landscape cluttering is often **a subtle process**, an **unintentional** result of trying to achieve various different interests instead of striving towards one preconceived plan.

Landscape policy

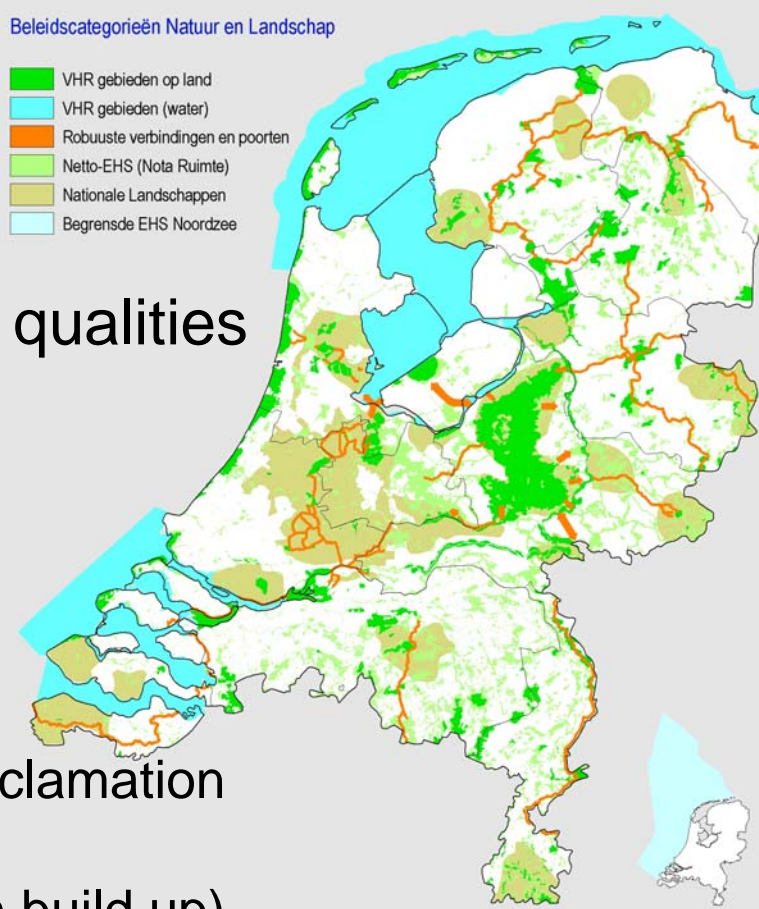
- Landscape qualities are guiding spatial developments
- Central when necessary, local when possible:
 - Strict spatial development rules in the national framework
 - Elsewhere: objective to develop new qualities

National spatial framework

- (Inter) national nature & landscape qualities are limiting developments
 - Natura 2000 sites
 - National Landscapes
- Landscape qualities:
 - Earth scientific values
 - Cultural values (archeological sites, reclamation patterns, historical buildings)
 - Wide horizon of open landscapes (non build up)
 - Density of linear plantings in small scale landscapes
- Monitoring of physical characteristics

Beleidscategorieën Natuur en Landschap

- VHR gebieden op land
- VHR gebieden (water)
- Robuuste verbindingen en poorten
- Netto-EHS (Nota Ruimte)
- Nationale Landschappen
- Begrensdde EHS Noordzee



Policy outside national framework

- Objective: in 2020 the appreciation of landscape quality should be increased by 25% compared to 2007
- Monitoring of perception and appreciation

Why monitor perception and appreciation

- As quality should guide spatial development
- You have to discuss landscape quality
- As quality does not have just an objective but also a personal and social dimension
- Than evaluation of policies is not just the domain of experts and monitoring physical characteristics

Three dimensions of landscape quality

Matterscape	Powerscape	Mindscape
Physical reality	Social reality	Inner reality
Assessment	Appreciation	Perception
Measurement	Enquiry	Interview

Jacobs, 2006

3-daagse autovakantie Bodegraven

Het GROENE HART van Nederland

TOP-
aanbieding!



vanaf
79

Supervoordelig genieten in prachtige omgeving!

Even helemaal weg in eigen land? Dan heeft KRAS voor u een geweldige aanbieding! Boek nu 3 heerlijke dagen naar **Tulip Inn in Bodegraven** vanaf **slechts € 79**. Dit is bovendien **inclusief uitgebreid ontbijtbuffet**. Boek snel!

UITSTAPJES IN DE OMGEVING

Bodegraven, midden in het **Groene Hart** van Nederland maar toch op steenworpafstand van de steden **Amsterdam**, **Rotterdam**, **Den Haag** en **Utrecht**. Deze steden bieden u meer dan genoeg vertier; winkels, cultuur en een keur aan restaurants en bars. In Bodegraven zelf kunt u o.a. een kijkje nemen bij de **Weijpoortse molen** die bijna elke zaterdag geopend is. Liever de **natuur** in? Een **stevige wandeling** of een fietstocht behoren tot de mogelijkheden in deze groene omgeving. De **gezellige restaurants** zorgen voor de innerlijke mens!

HOTEL TULIP INN BODEGRAVEN

Dit 3-sterren hotel ligt in Bodegraven, omringd door de natuur van het Groene Hart. Het hotel beschikt over o.a. zelfbedieningsrestaurant, brasserie met Mediterrane keuken, hotelbar en gezellige loungebar.

INCLUSIEF: verblijf in het 3-sterren Hotel Tulip Inn Bodegraven, in een 2-persoonskamer met ontbijt.

Aankomstdata: vrijdag van 23/11 t/m 29/2
3 dagen
November-januari v.a. € 79
Februari v.a. € 89
Reserveringskosten € 15 per boeking (verplicht).
Prijzen zijn per persoon, o.b.v. 2 personen. Voor een uitgebreide reisbeschrijving/reservering zie www.kras.nl/24423

KRAS.NL
waarom zou je verder zoeken

boek online
of bel 0900 - 9697 =€



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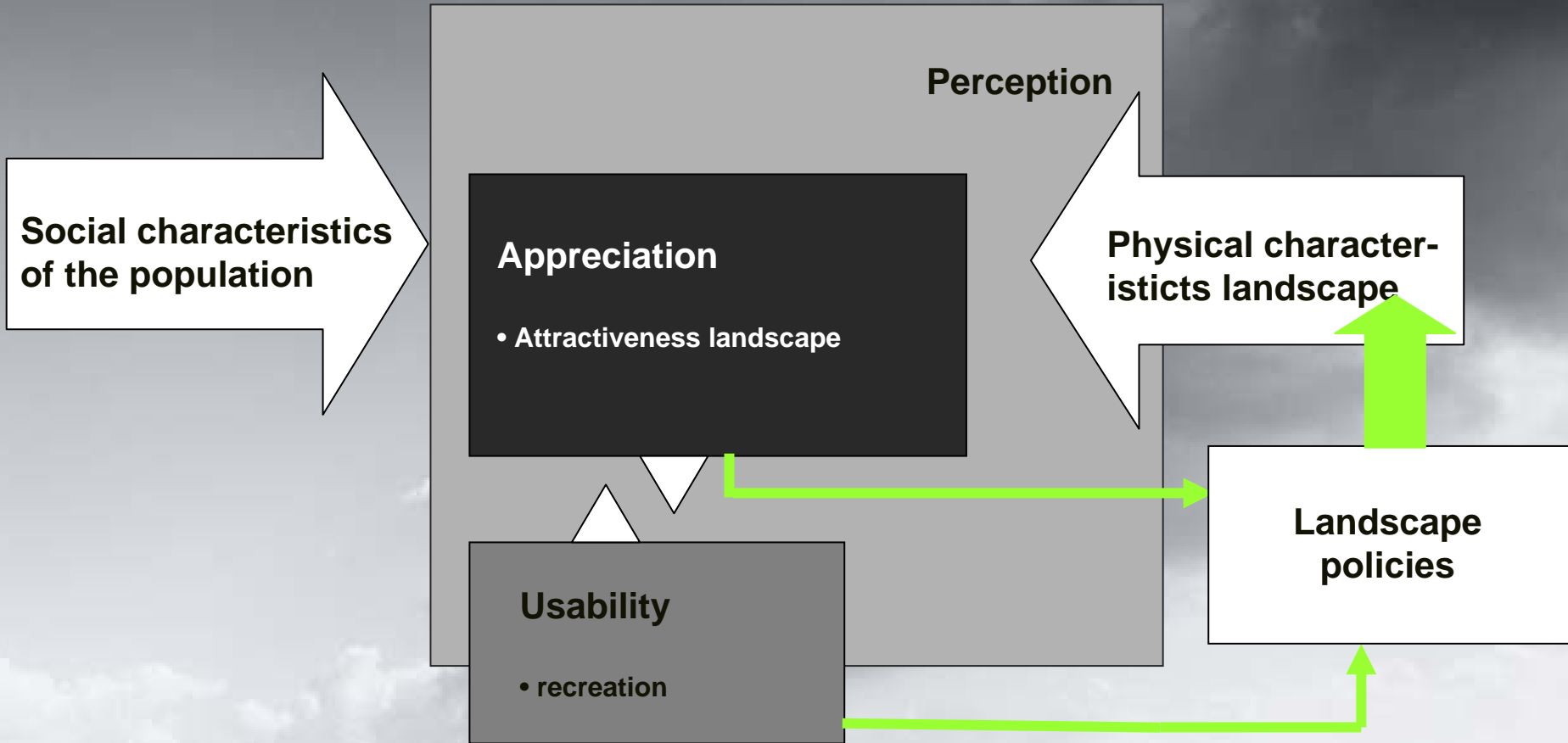
waar Holland
echt Holland is



Method

- Enquiry with questionnaire each three years by representative sampling
- First enquiry in 2006
- Oversampling to describe physical and personal characteristics that determine the appreciation
- Two samples:
 - Representative for Dutch landscapes: 4800 persons
 - Representative for Dutch population groups: 1800 persons

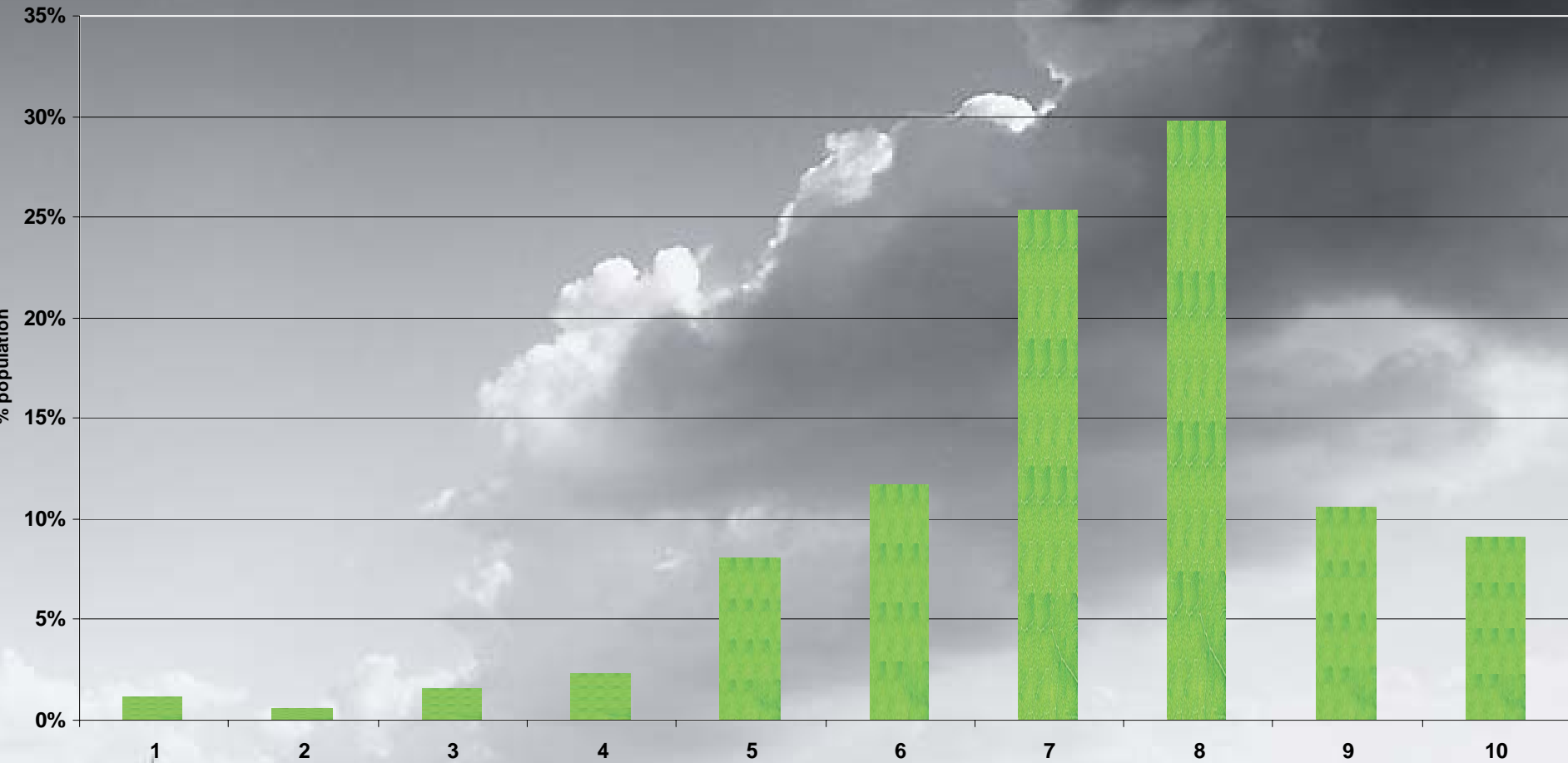
Conceptual model



SPEL questionnaire (Coeterier 2000)

- Scales for Perception and Evaluation of Landscape
- Perception of 7 basic qualities determined appreciation of attractiveness:
 - Unity / Coherence
 - Order/Organization of functions
 - Usability for own activities
 - Historical character
 - Naturalness
 - Spatial dimensions
 - Sensorial impressions
- For each quality several questions on 1 to 10 index
- Information on recreation activities

Appreciation attractiveness landscape: 7.3



Schiermonikoog 9.5



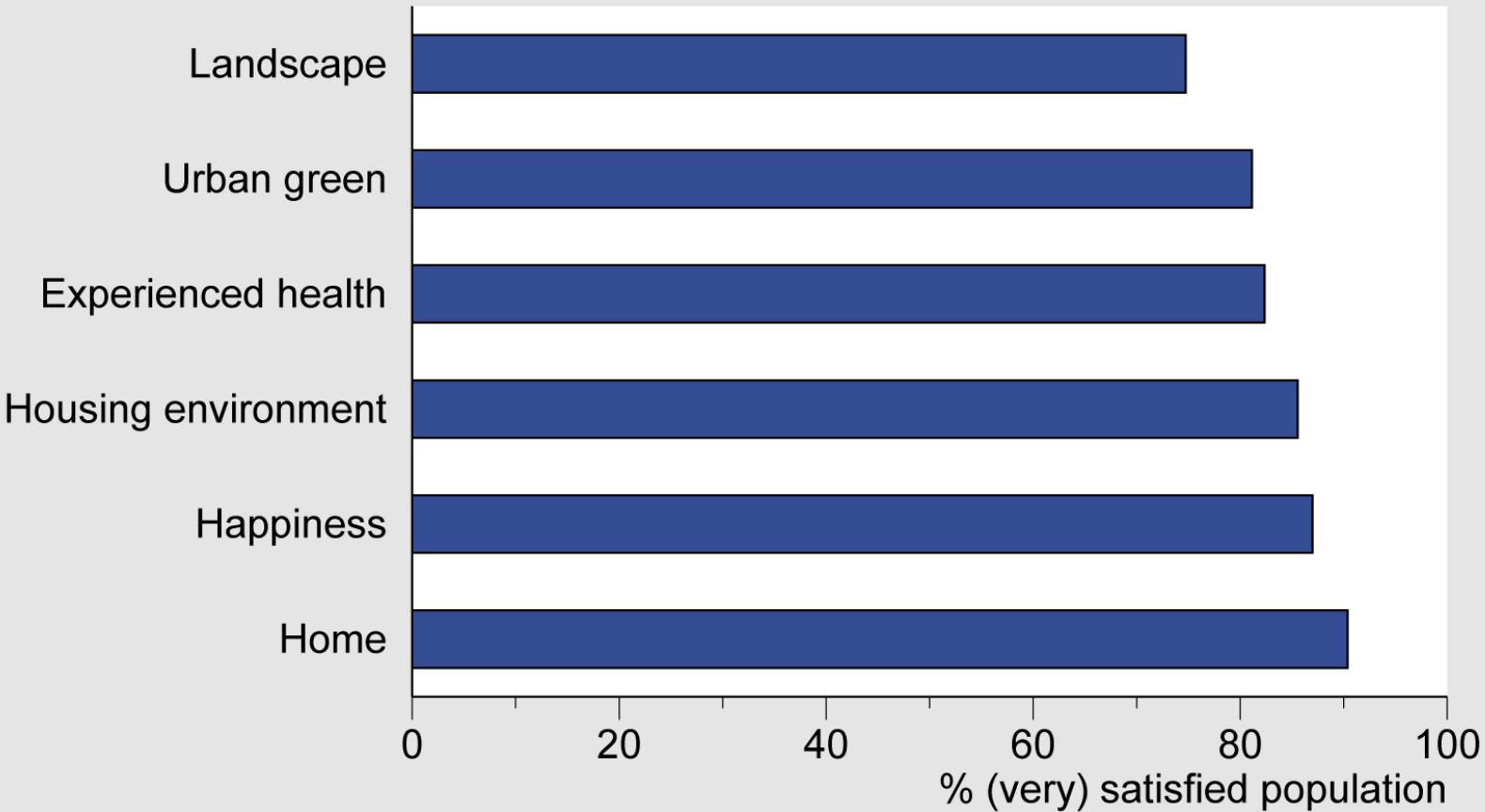
Sloegebied 5.4

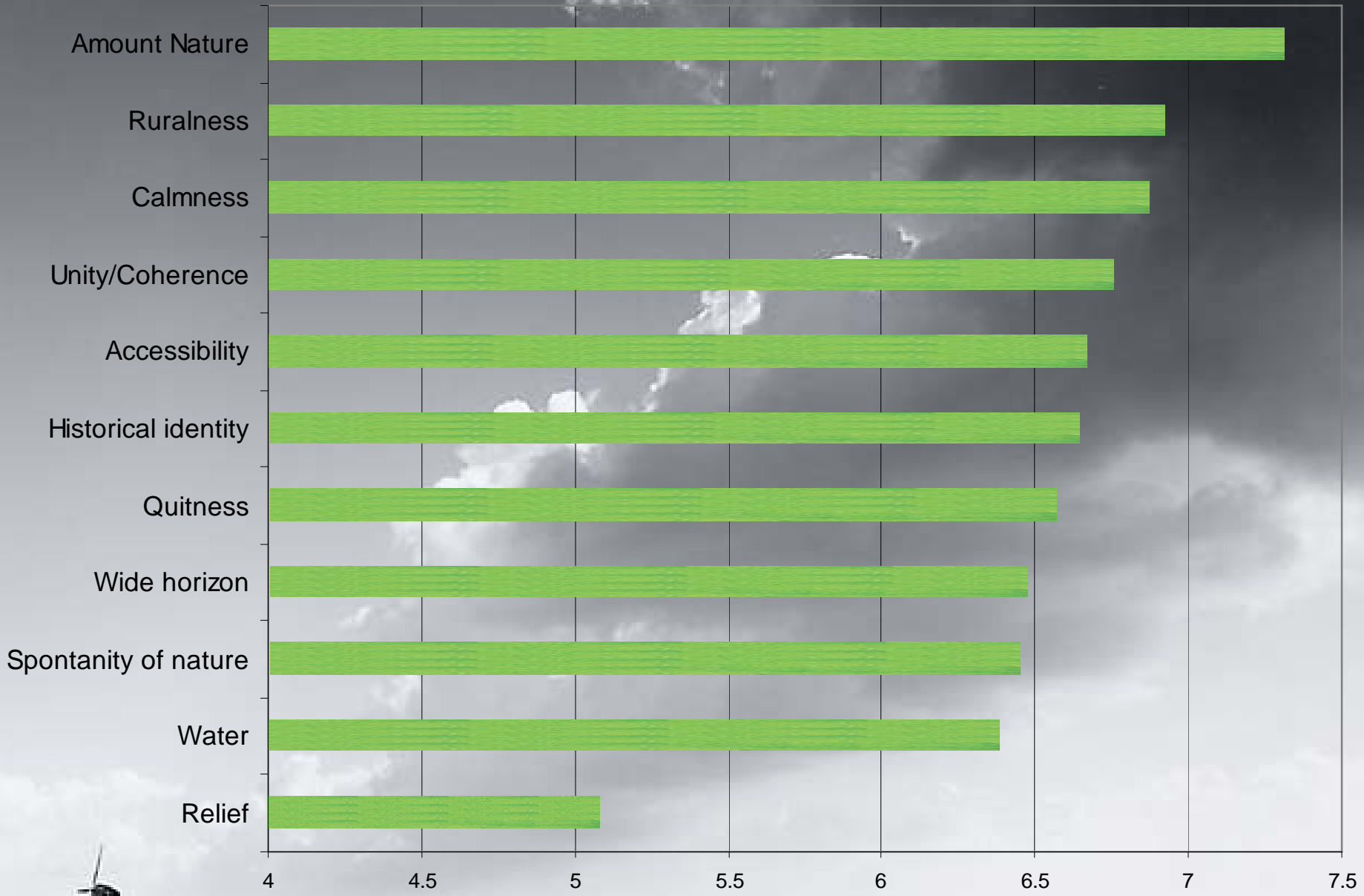




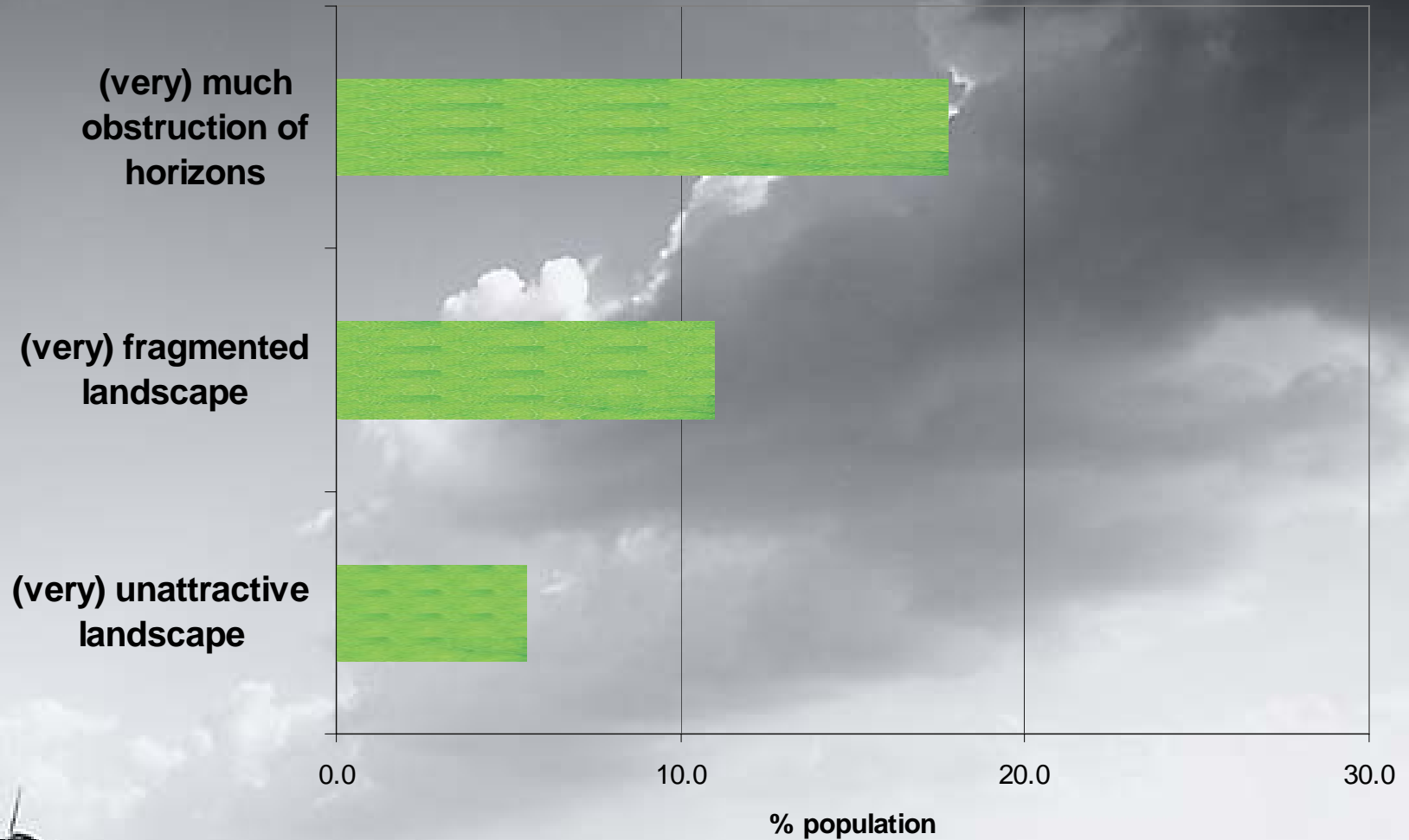
HERE'S AMSTERDAM CALLING

Appreciation of landscape attractiveness compared to other characteristics 2006





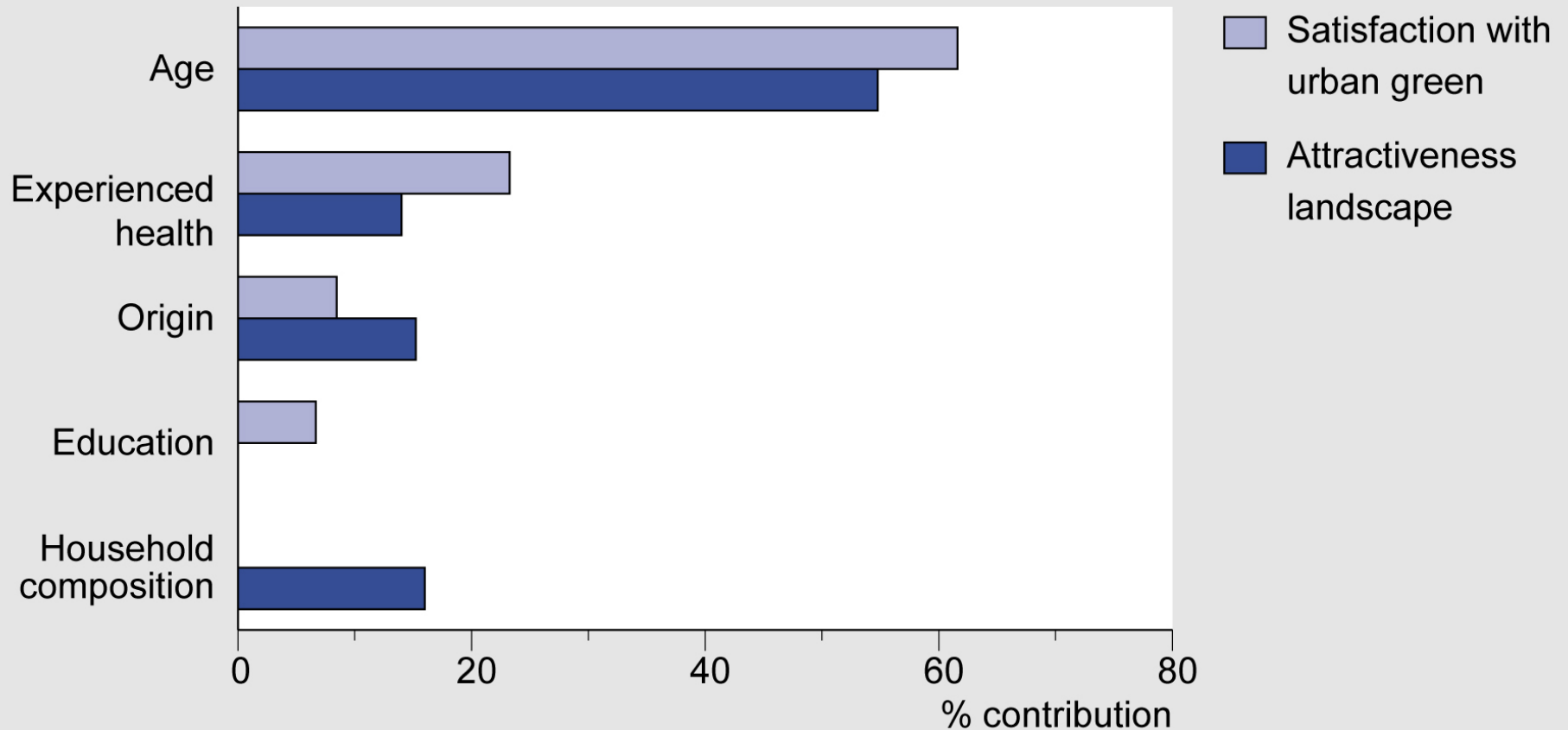
Indicators for landscape cluttering



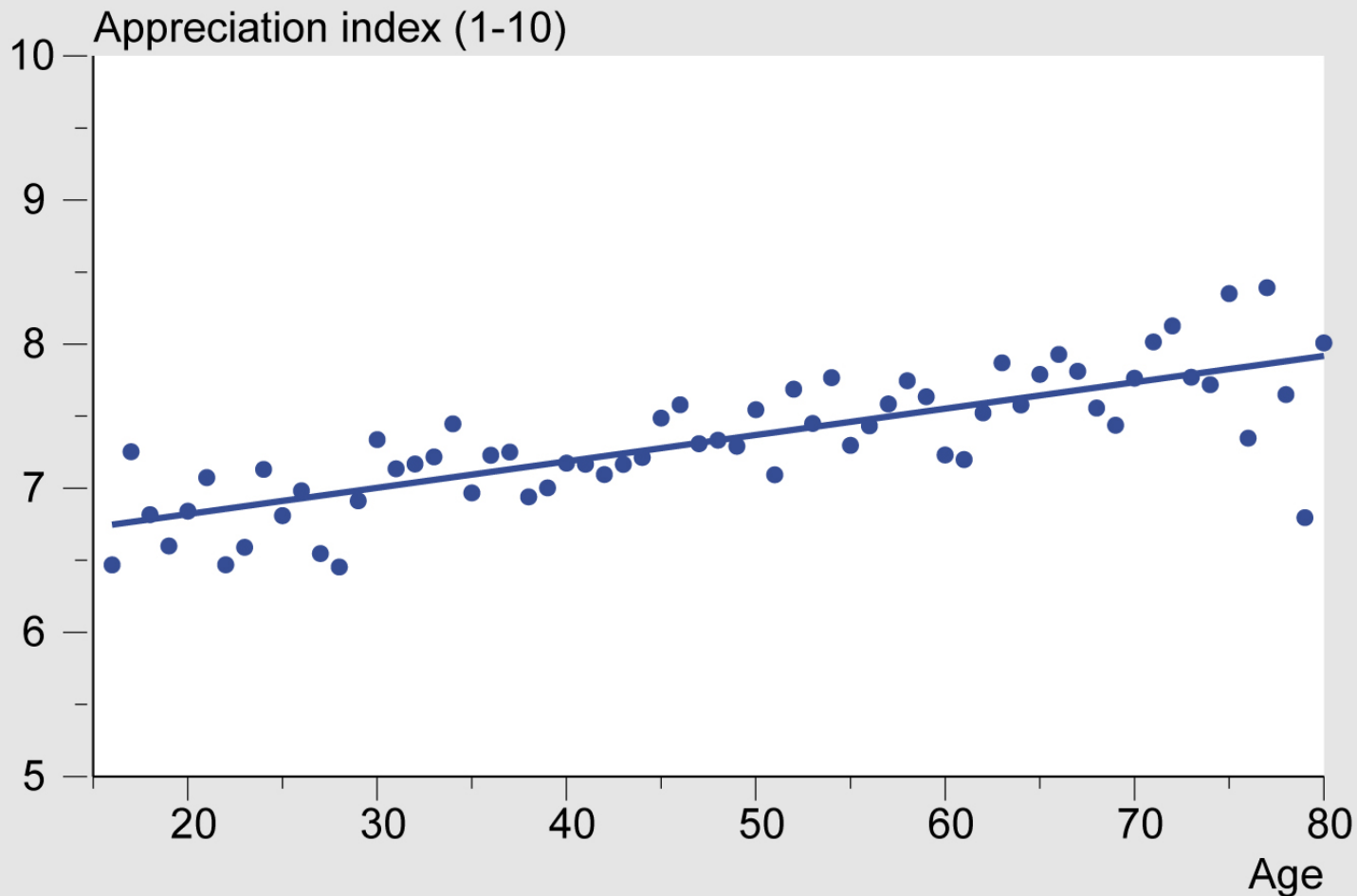
Analysis of social characteristics

- Assumption that recreational use is a good predictor for appreciation of landscapes
- Analysis of personal characteristics such as
 - age
 - income
 - education
 - household
 - origin

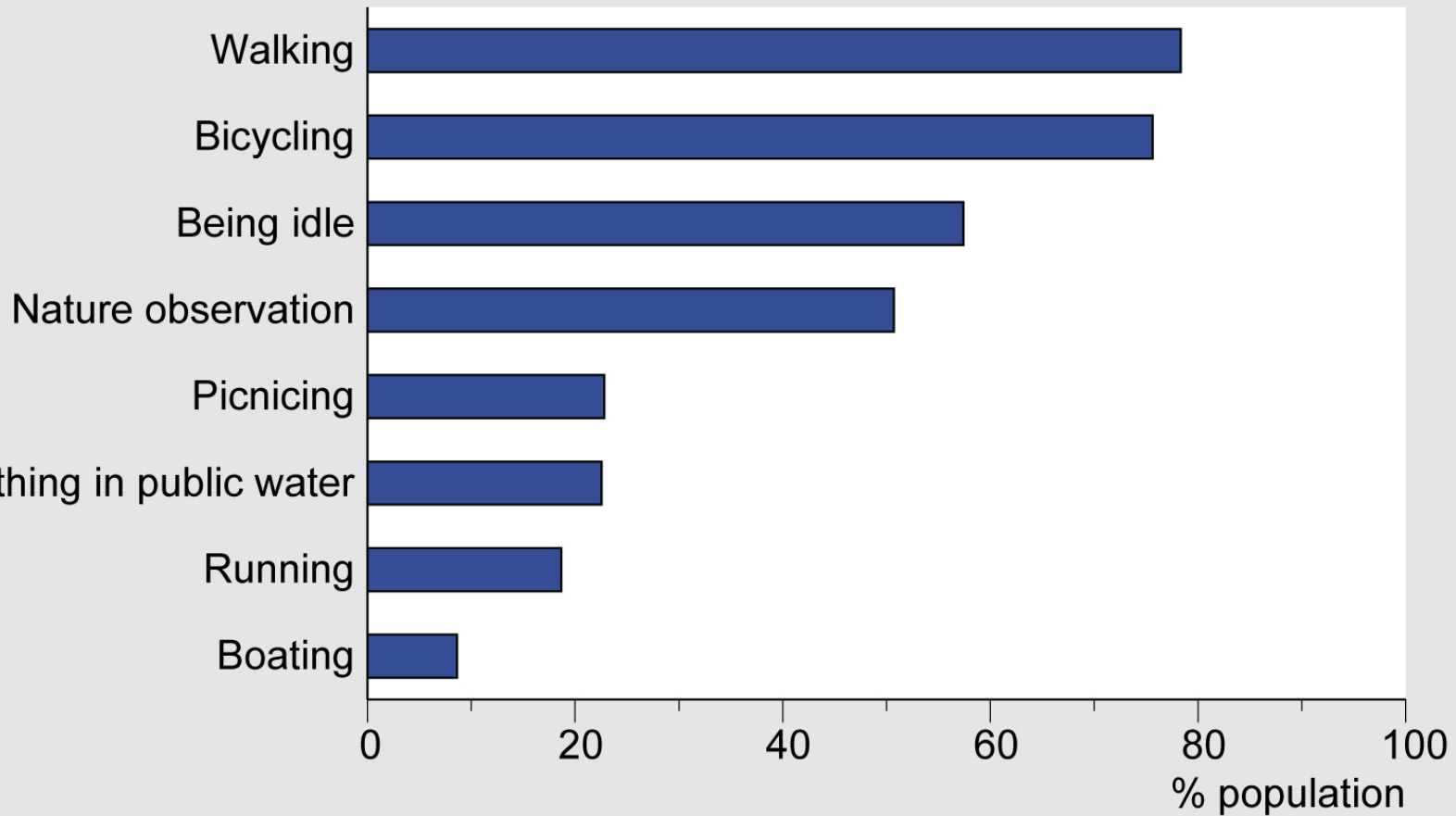
Contribution of personal characteristics to explained variation in attractiveness of landscapes and urban green 2006



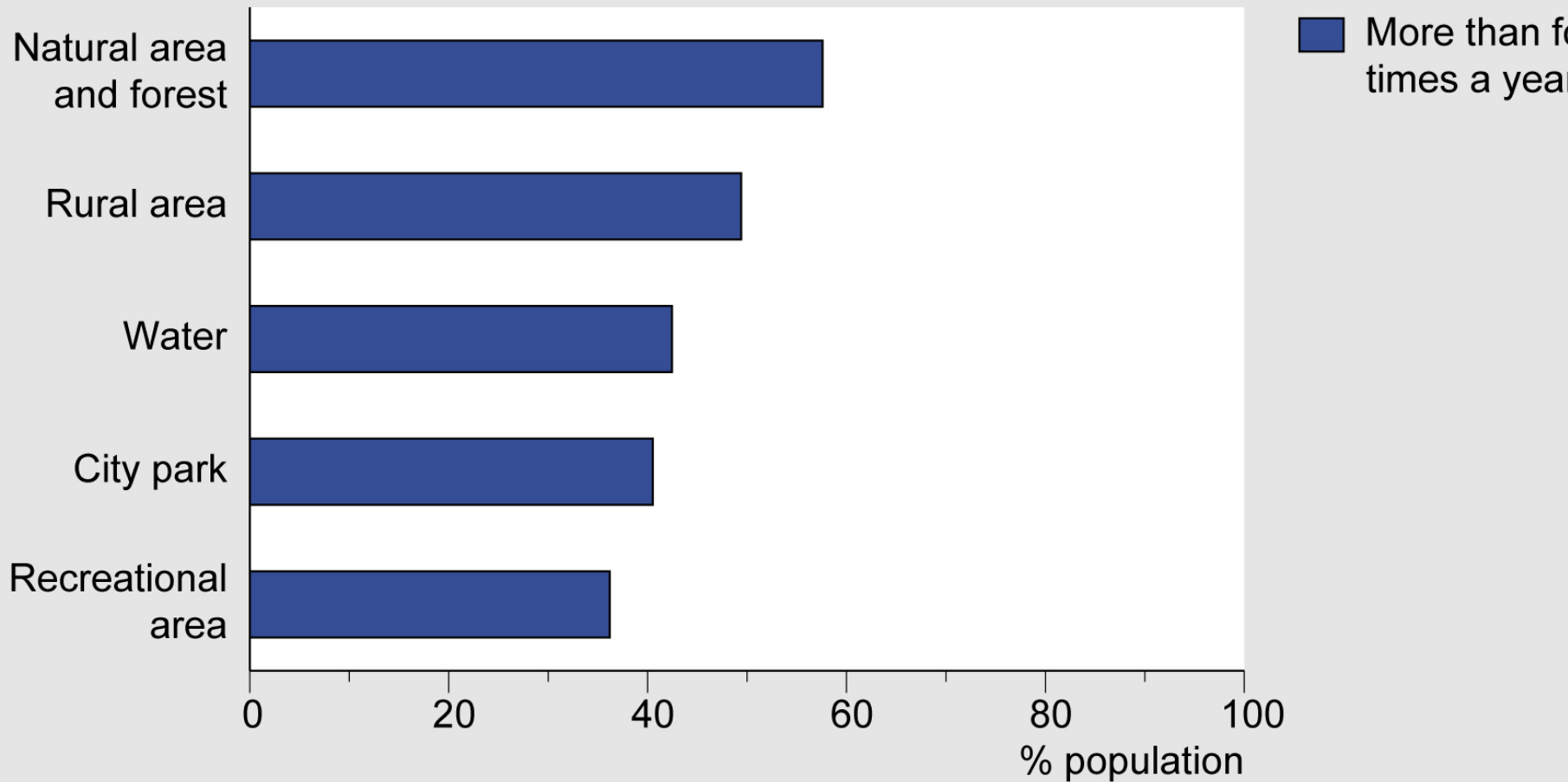
Relation between age and perception attractiveness landscape 2006



Recreational activities outside urban areas 2006

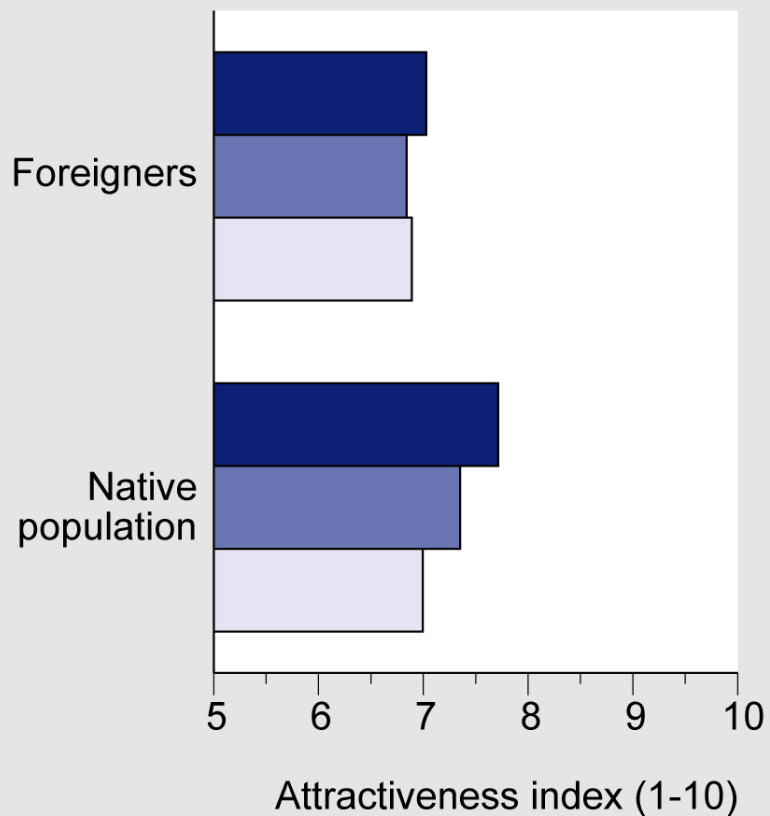


Destinations of recreational activities 2006

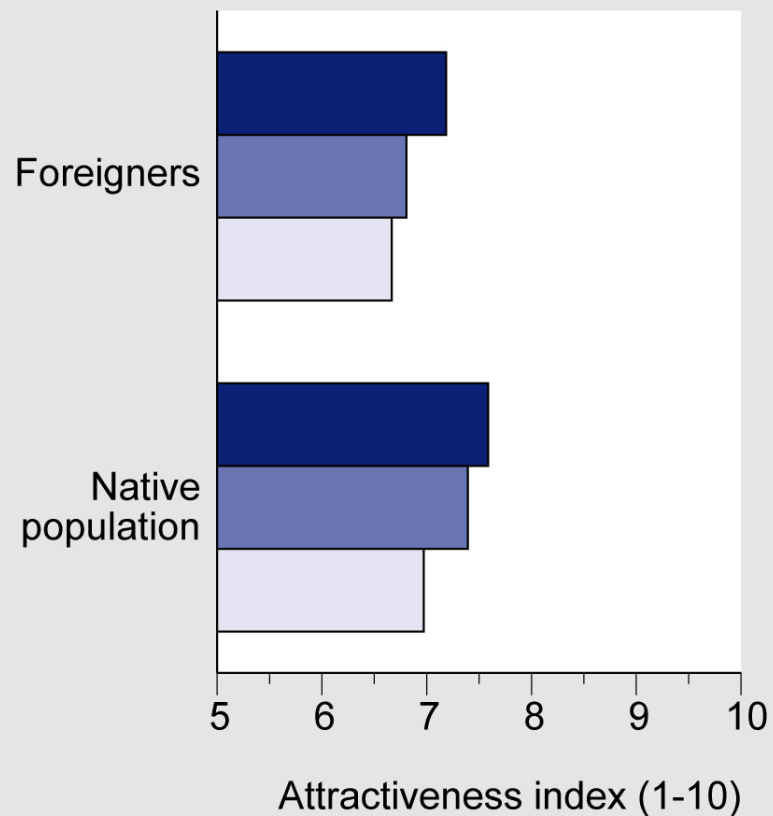


Appreciation attractiveness landscape, origin and recreational activities 2006

Walking



Bicycling



- Very often
- Often
- Little

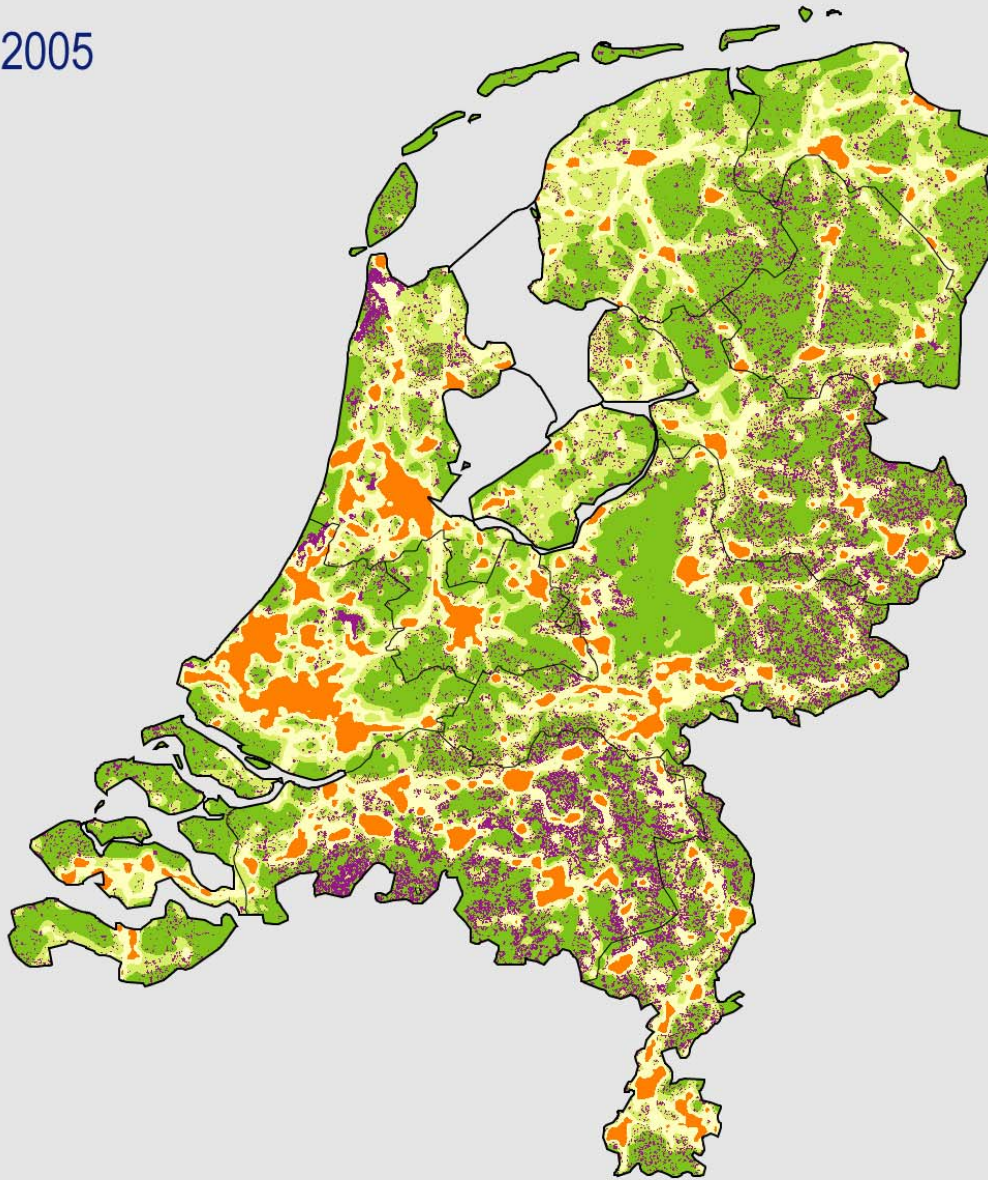
Results analysis social characteristics

- Age and to lesser extent have significant influence on appreciation
- Enquiries need to be representative for these characteristics

Analysis of physical characteristics

- GLAM – GIS-based Landscape Appreciation Model
- Prediction of average appreciation of an area based on physical characteristics
- Tool for:
 - Inter- and extrapolation of census data
 - Stratification of samples
- For each characteristic one data set
- Regression model

2005

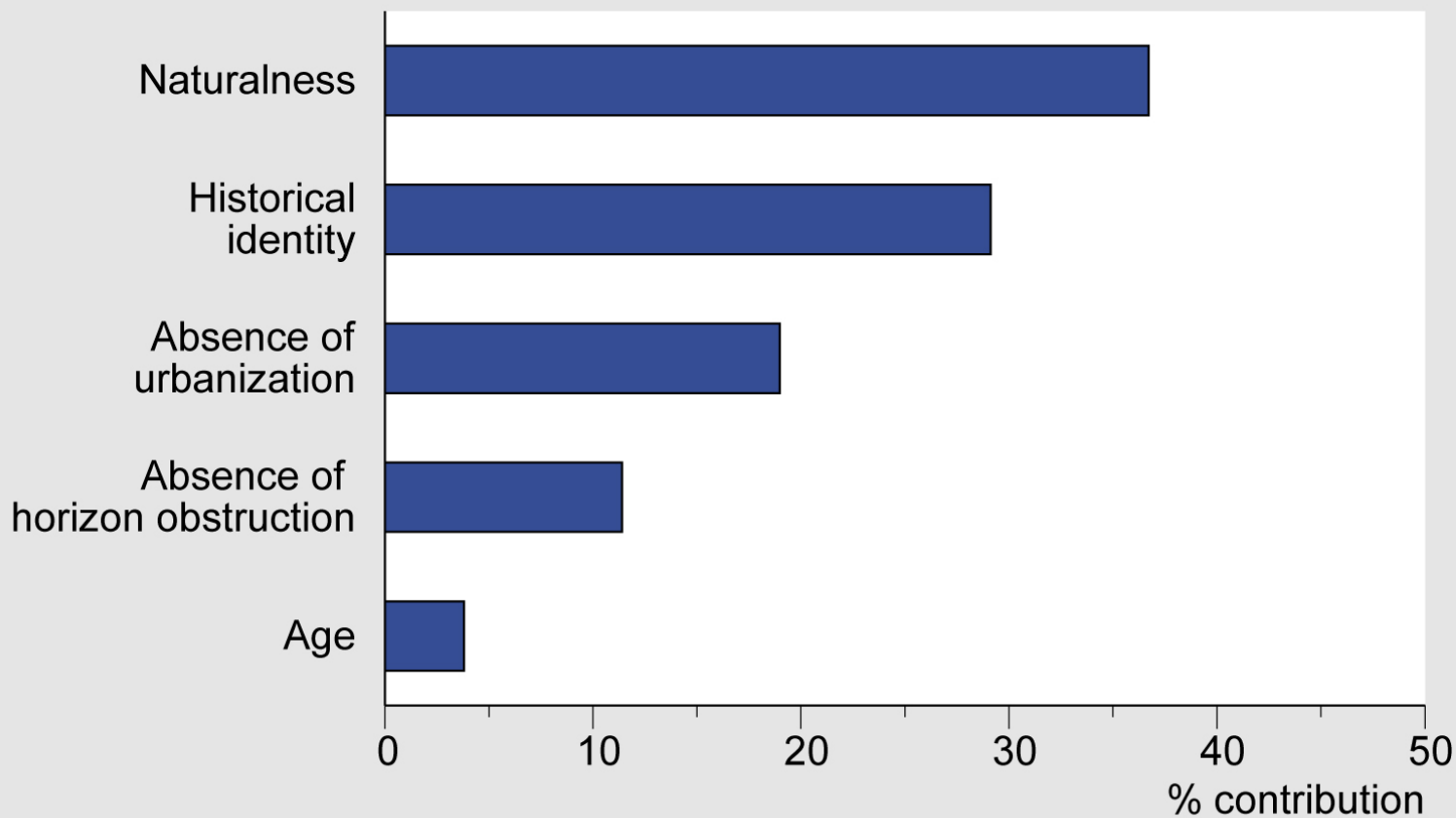


Obstruction of the wide horizon

-  very much
-  much
-  some
-  little
-  possible



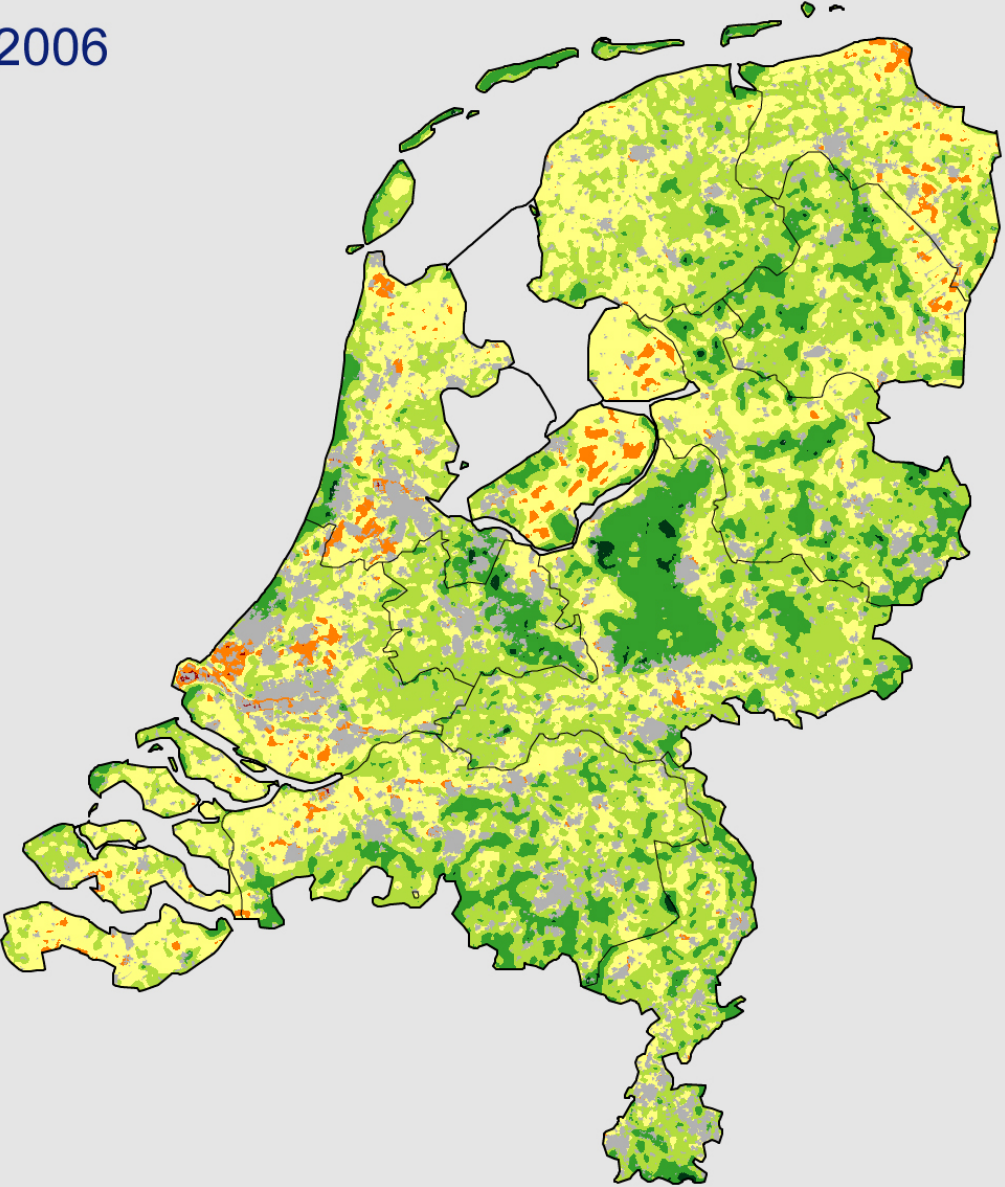
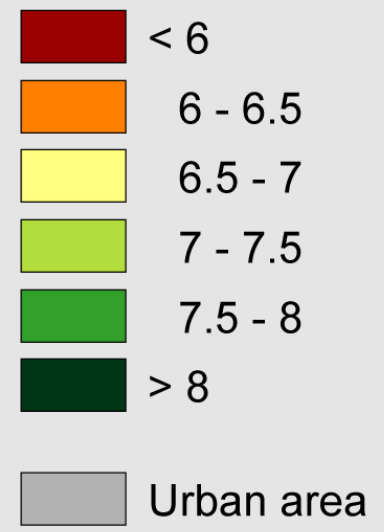
Contribution of physical characteristics to explained variation in attractiveness of landscapes 2006



2006

Prediction of appreciated landscape attractiveness based on physical characteristics

Appreciation index (1-10)



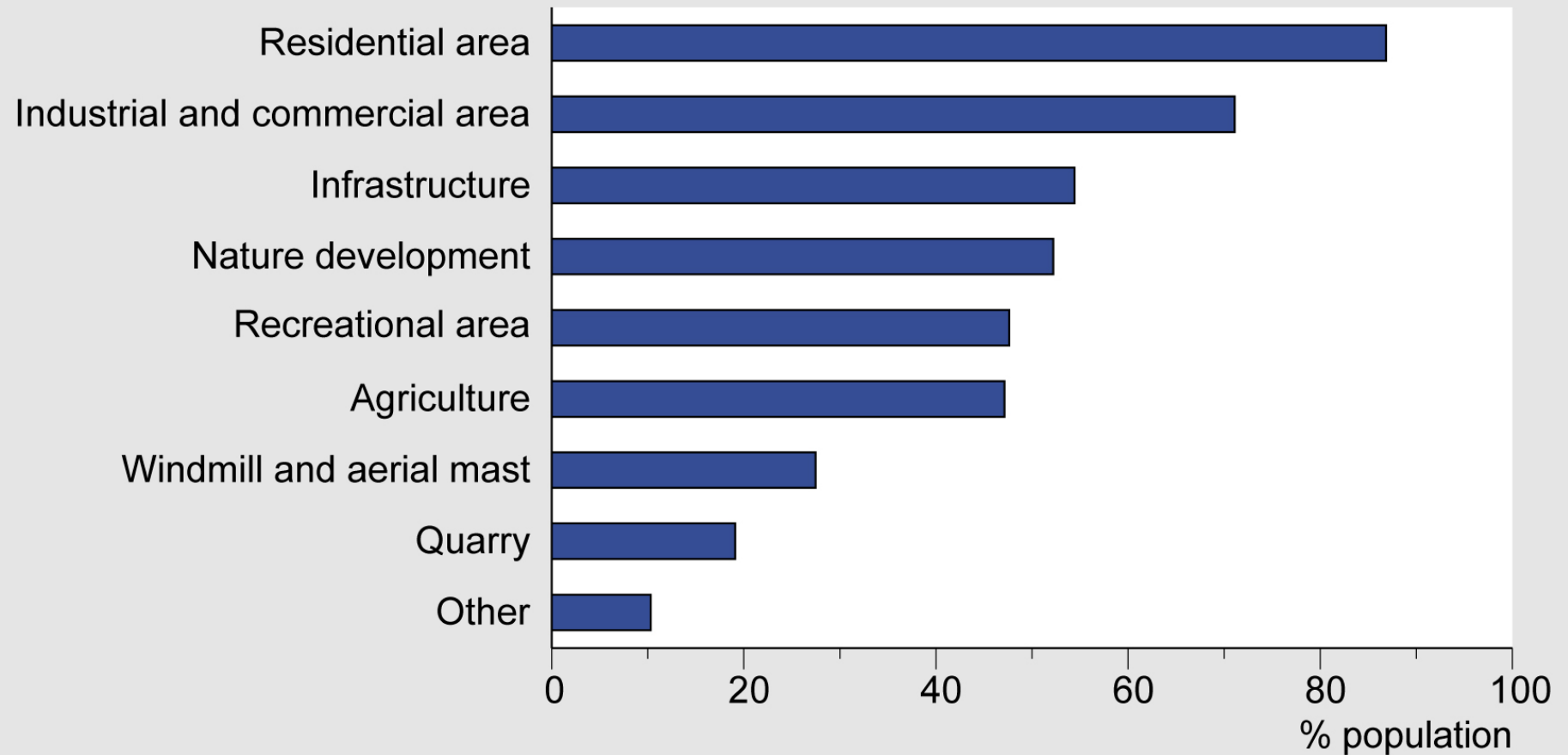
Results of analysis physical characteristics

- 76% of variance explained by SPEL qualities
- 40% of variance explained by GLAM characteristics
- Geo-information gives limited information about perception
- GLAM cannot adequately replace questionnaires

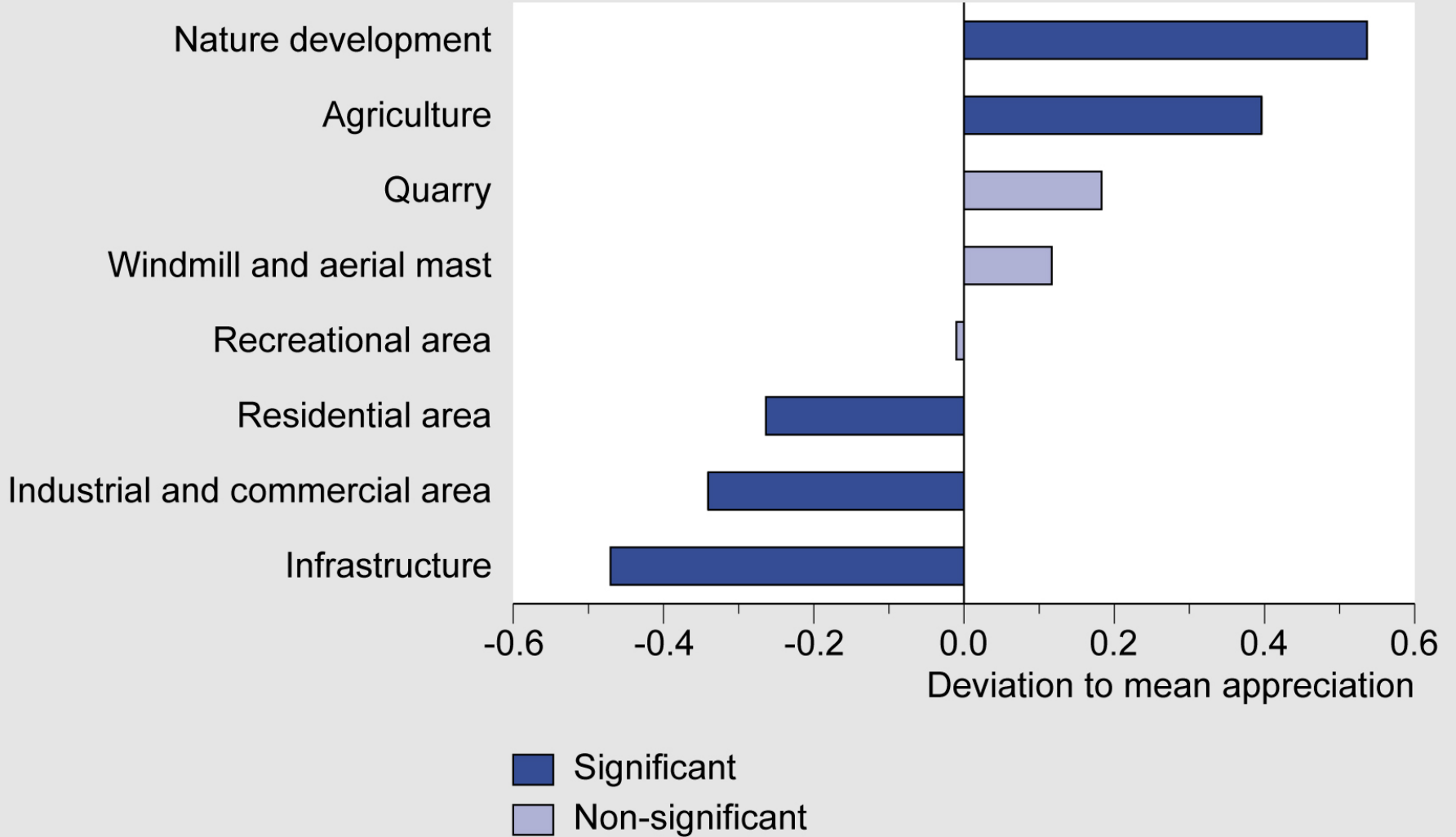
Influence of landscape changes

- Well know: people don't like changes
- No direct questions about the appreciation of changes
- In first enquiry a question about observed landscape change during last 10 years
- Additional enquiry on intrusive landscape elements

Observed landscape changes 1996 - 2006



Appreciation of landscape attractiveness and observed changes 2006





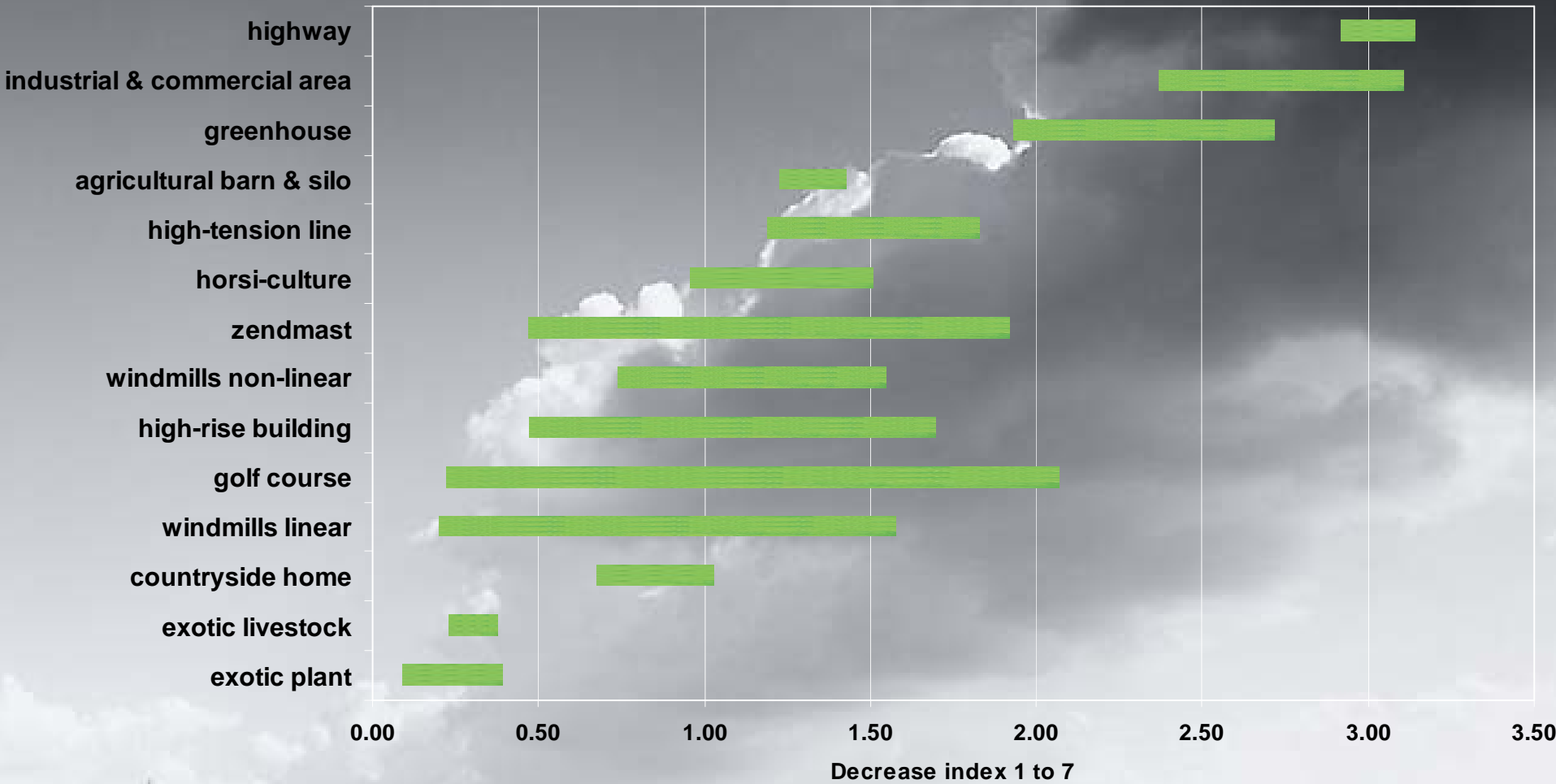








Influence of intrusive elements on appreciation



Results analysis landscape changes

- Intrusive landscape elements have a negative influence on appreciation for most people
- Especially development of infrastructure, industrial & commercial areas and greenhouses

Final conclusions

- Research on perception and appreciation of landscapes gives an other view on landscape qualities
- This knowledge is relevant for policy makers
- Most people appreciate the quality of landscapes
- Intrusive landscape elements have a negative influence on appreciation, especially the development of urbanization infrastructure and modern agro-industrial buildings