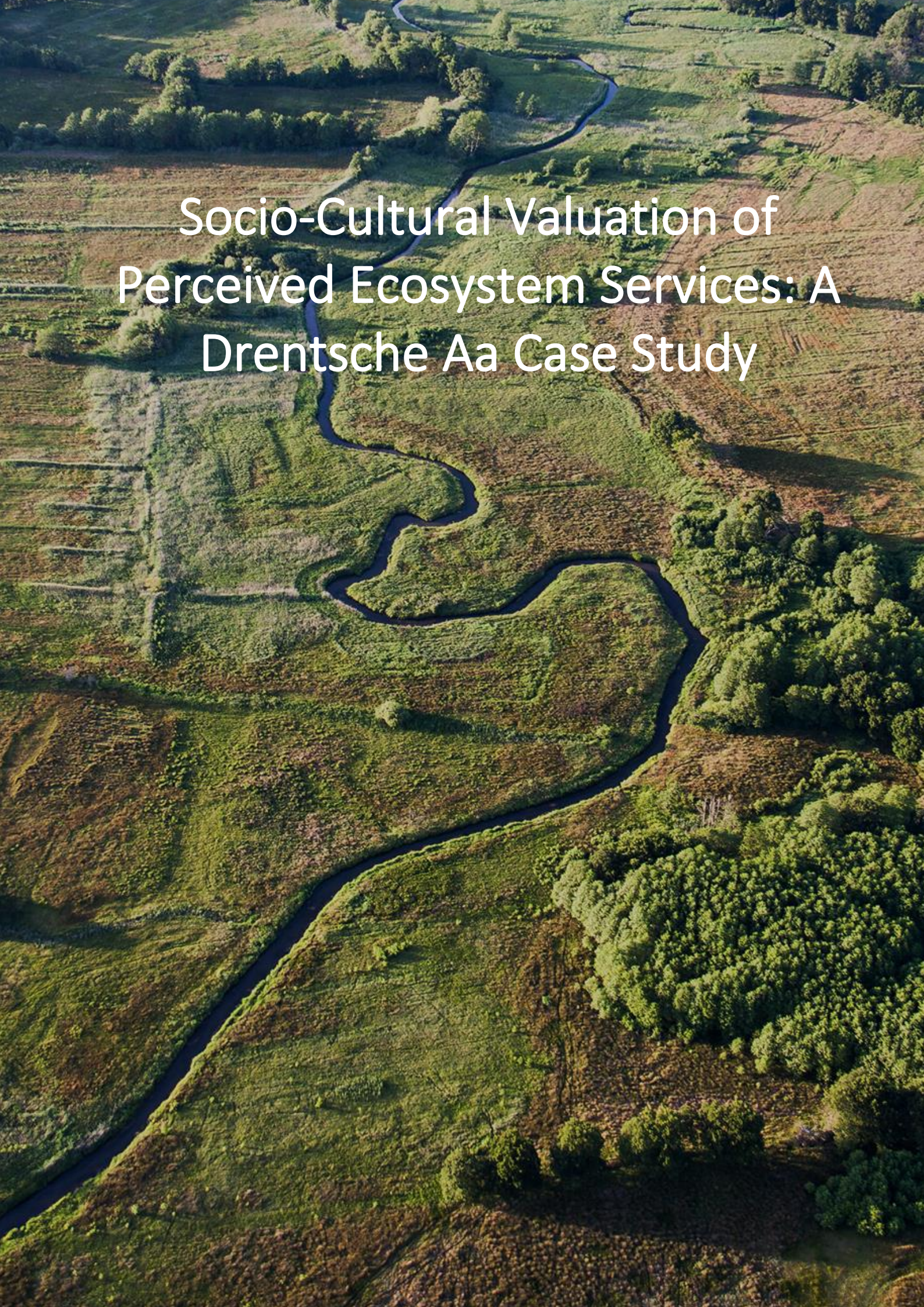


Socio-Cultural Valuation of Perceived Ecosystem Services: A Drentsche Aa Case Study

Colophon

Title	Socio-Cultural Valuation of Perceived Ecosystem Services: A Drentsche Aa Case Study
Author	Marie-Anne Prosman
Contact	m.a.prosman@student.rug.nl
Student Number	S2983885
Bachelor	Human Geography & Planning
University	University of Groningen
Faculty	Faculty of Spatial Sciences
Version	Final Version
Date	June, 2022
Supervisor	Ir. B.M. Boumans
Cover Page	Brasse, n.d.
Word count	6419

Abstract

Functioning ecosystems provide a range of services that promote and sustain human well-being. Nowadays, it is recognised that these so-called ecosystem services (ES) are essential for addressing current societal challenges related to climate, biodiversity, water quality, and the quality of the living environment. In research, there is generally a heavy focus on ecological and monetary aspects in valuing ecosystem services. This paper focuses on socio-cultural valuation. This type of valuation leaves room for the experiences and perceptions of stakeholders and stimulates the use of local knowledge in the management of ecosystems. A participatory mapping approach is used to gain understanding on the influences of landscape features and socio-demographic characteristics of inhabitants on the valuation of perceived ecosystem services in the Drentsche Aa area, the Netherlands. It is found that recreational and aesthetic values are most often mapped by participants. Influences on perceived ES and their benefits are found for gender, land ownership, distance decay and land cover characteristics. The results of this study suggest the expansion of ES thinking in planning practice to include socio-cultural valuation of ES. Because, socio-cultural valuation of perceived ES may vary per study area. It depends on the stakeholder characteristics, land cover characteristics, and the scale of the area and the scale of the stakeholder analysis. Further research using a deliberative approach is needed to gain further understanding of what drives the individuals' values, what community values they are based on, and whether deliberation and discussion (within a focus group) changes the perception of ES and their benefits.

1. Introduction

1.1 Background

Functioning ecosystems provide a range of services that promote and sustain human well-being (Peri et al., 2021; Small et al., 2017). These Ecosystem Services (ES) are generated when ecosystems directly or indirectly contribute towards meeting human needs. This means that ES are particular to a human requirement or activity (Small et al., 2017). ES are thus specific for each combination of landscape - the particular ecosystem - and people - users of the ecosystem (Fagerholm et al., 2019). These people can perceive place-specific benefits emanating from ES in the everyday landscapes in which they work, live, engage in recreational activities, encounter other people, and search for relaxing and restorative experiences. And they can assign value to these perceived ES benefits (Fagerholm et al., 2019; Stephenson, 2008). For the Netherlands, the way inhabitants of the Drentsche Aa area perceive benefits emanating from ES is particularly interesting. The Drentsche Aa area was assigned as one of 20 Dutch National Landscapes. This status is granted to areas characterised by unique cultural, historical and natural elements (nationalelandschappen.nl, 2022). As one of the last intact stream valleys in the country, water still dictates the terrain shapes here. Meanwhile, this dynamic is hardly recognisable anymore in the rest of the country (Munniksma & Van 't Veen, 2015). Furthermore, there are several villages located in the area (figure 1). Inhabitants of these villages make up the research population of this study. This combination of historically-rich (cultural) landscape and the amount of local villages, is what makes the Drentsche Aa area a good case for research into the socio-cultural valuation of perceived ES.

1.2 Study Area

The Drentsche Aa area is located in the middle and north of the province of Drenthe, in the northeast of the Netherlands (figure 1). The area overlaps a bit with the province of Groningen. The landscape consists of groves, heath, juniper thickets and estates, but is characterised by hedgerows, dolmens, and the traditional madelanden, essen and esdorpen. Madelanden can be described as grasslands with a characteristic, irregular, often block-shaped structure. Essen are high fields, which are sometimes elevated using sods or manure. But, as most high fields in the area are located on the Taarlo ridge or the Hondsrug (ridges that originated by land ice during the Saalien), essen are often naturally elevated. They are between 50 and 150 hectares large, and traditionally are very open areas, as individually owned fields were not delimited using hedgerows or other visual enclosures. Essen can be found on the sandy soils of the Netherlands, and over 60 are located in the Drentsche Aa area. Villages located near the high fields in the Drentsche Aa area are called esdorpen (es = high field; dorpen = villages). One village could have up to four essen to its disposal. Contrary to the essen, the villages were often not located on the ridges, but on the transition from high to low grounds (drentscheaa.nl, 2022; natura2000.nl, 2022; Spek & Van Olst, 2015; Spek, 2015, Bregman et al., 2015).

As mentioned previously, the Drentsche Aa is one of the last intact stream valleys in the Netherlands. The melting of the land ice at the end of the Saalien left a network of shallow meltwater channels. During the Weichselien, these shallow channels transformed into deeply incised stream valleys. Nowadays, a large number of brooks and streams run through the low grounds in the area (figure 2). They are called after the villages they pass by. The streams come together to form the Westerdiep, which name changes into Drentsche Aa as it streams into the province of Groningen (Spek et al., 2015; drentscheaa.nl, 2022; natura2000.nl, 2022; Bergman et al., 2015).

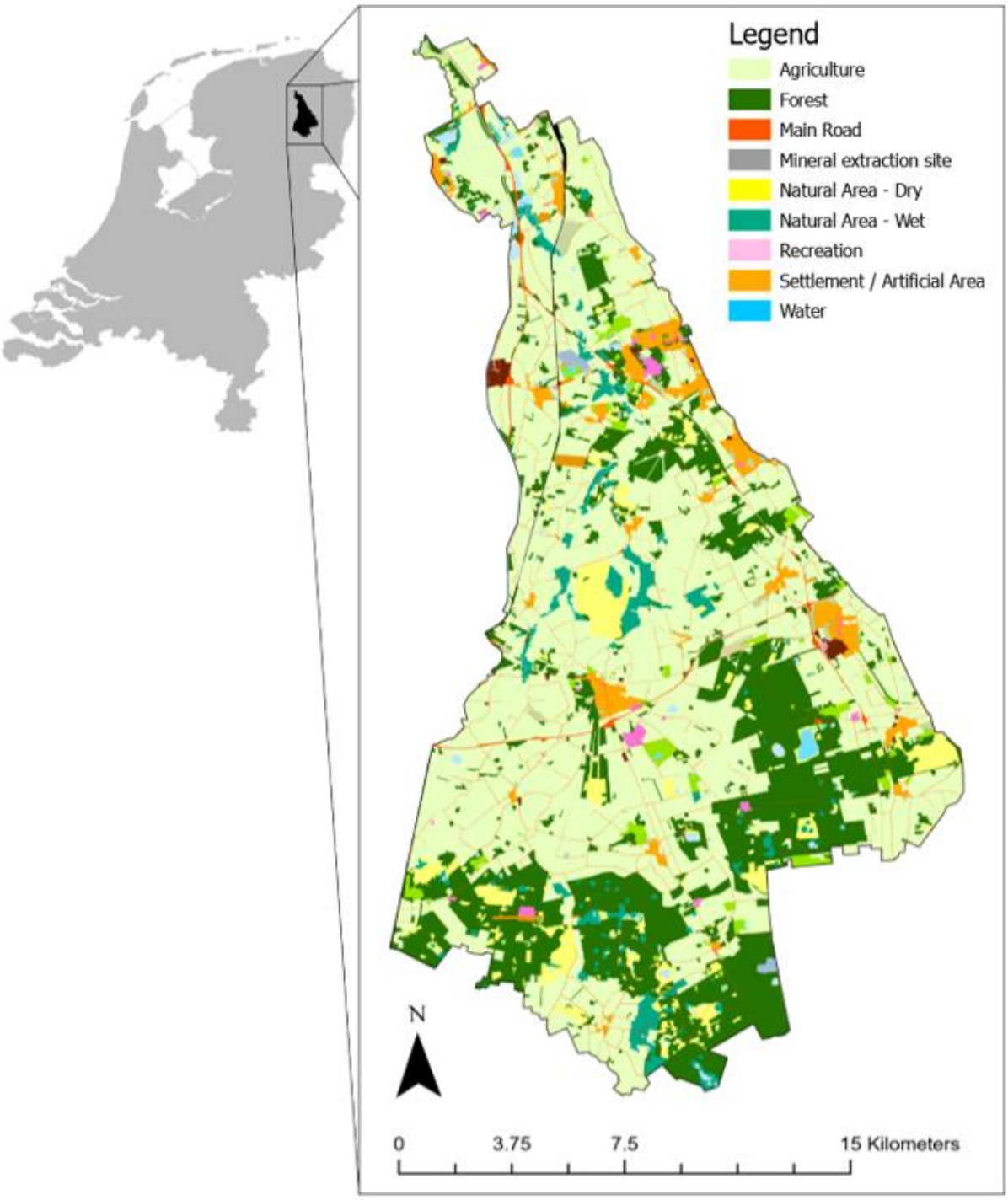


Figure 1 - The Drentsche Aa area, its position in the Netherland, its main land cover and its villages. Made in ArcGIS Pro using data from ESRI Nederland (n.d. a), Bestand Bodemgebruik (2017) and Van den Burg (2019).

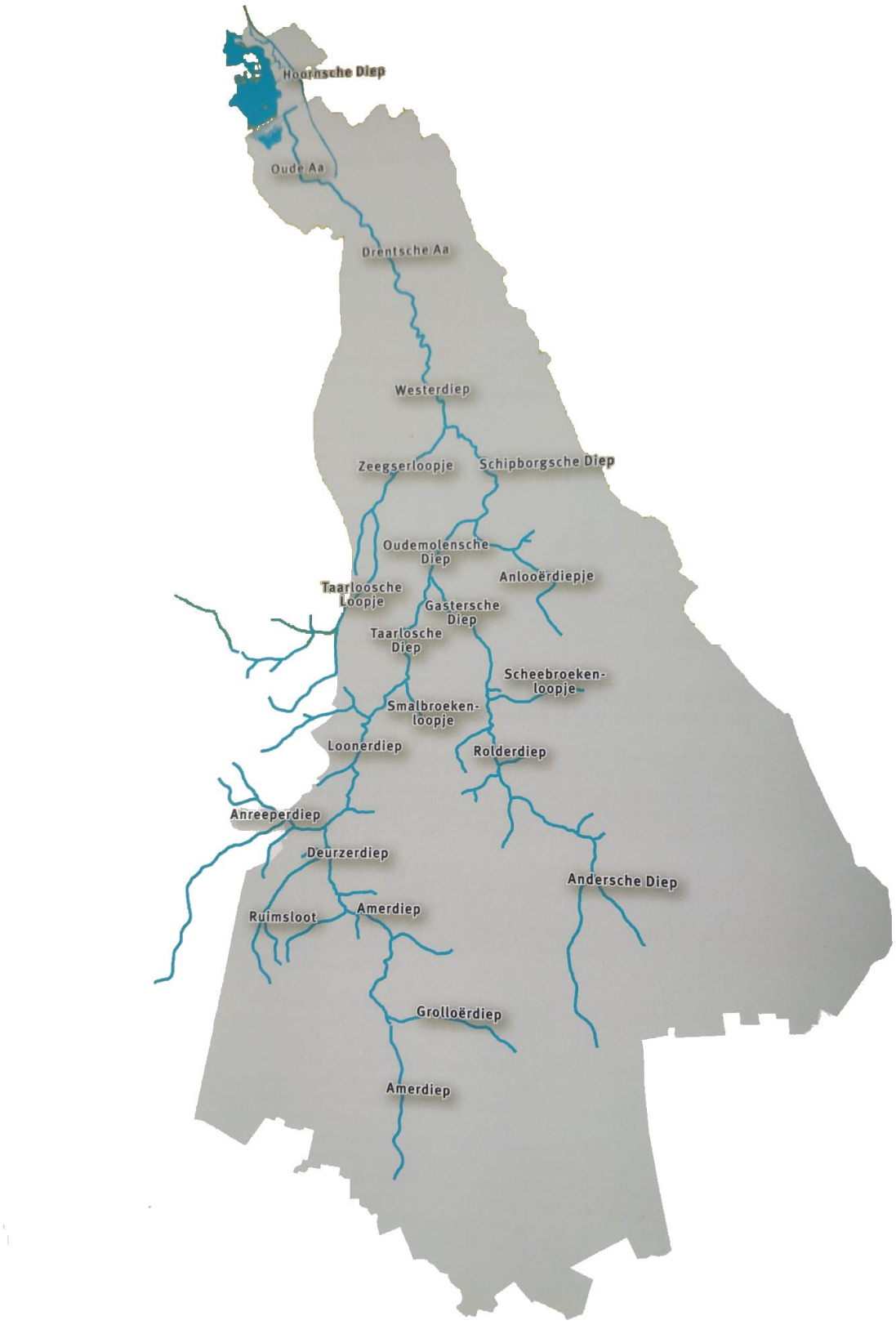


Figure 2 - Brooks and streams in the Drentsche Aa area. Source: Spek et al., 2015 p. 10.

1.3 Societal & Scientific Relevance

According the Millenium Ecosystem Assessment (MEA), the concept of ES emphasises the multiple connections between ecosystems and human well-being (MEA, 2005). The MEA was pivotal in promoting the ES concept, which led to ES thinking being integrated into planning, decision making and evaluation processes (Satz et al., 2013; Small et al., 2017). Nowadays, it is recognised that ES are essential for addressing current societal challenges related to climate, biodiversity, water quality, and the quality of the living environment (Breman et al., 2022). However, experts are not always aware of how ES are perceived by beneficiaries and it remains unclear which and how ES benefits are perceived by different people in different landscapes (Scholte et al., 2015; Fagerholm et al., 2019). This is caused by the general focus in research on ecological and monetary aspects in valuing (Scholte et al., 2015; Paulin et al., 2020). Socio-cultural valuation can shed light upon this issue, as this type of valuation leaves room for the experiences and perceptions of stakeholders. It stimulates the use of local knowledge in the management of ecosystems, too (Scholte et al., 2015; Fagerholm et al., 2019).

1.4 Objectives and Research Questions

Socio-cultural valuation focused on the perceptions of people inhabiting the landscape in which the researched ES are generated, has rarely been done. Fagerholm et al. (2019) is the only study found. This article studies thirteen European landscapes with the aim of analysing perceived ES benefits. None of these landscapes were located in the Netherlands. Therefore, this study aims to contribute to the understanding of which and how ES are perceived in different landscapes by different people. In this case, the Netherlands, and specifically the Drentsche Aa area. The research questions accompanying this aim are:

"*In what way do socio-demographic characteristics of inhabitants and the different landscape features of the area influence the socio-cultural valuation of perceived ecosystem services in the Drentsche Aa area?"*

SQ_1 In what way do socio-demographic characteristics of inhabitants influence the socio-cultural valuation of perceived ecosystem services in the Drentsche Aa area?

SQ_2 In what way do landscape features of the area influence the socio-cultural valuation of perceived ecosystem services in the Drentsche Aa area?

1.5 Reading Guide

This thesis comprises six chapters. Core concepts, the conceptual model and hypotheses are elaborated on in the theoretical framework in chapter two. Chapter three will further define the study area, methodology and ethical considerations. In chapter four, the results are presented, which are discussed in chapter five. The thesis is concluded in chapter six.

2. Theoretical Framework

As mentioned, functioning ecosystems generate a range of ES, when these ecosystems contribute to human needs (Peri et al., 2021; Small et al., 2017). The MEA (2005) revealed how ecosystem degradation jeopardised human well-being. And it provided a basis on which to describe the range of services that ecosystems provide to people. This led to the ES concept being integrated into research decision-making, planning, and evaluation processes (Satz et al., 2013; Small et al., 2017).

How biophysical processes connect with human well-being is often described in a cascade model (figure 3). This model shows the interdependence between ecosystem functioning, ES, benefits and values (Small et al., 2017). Primary production of an ES is dependent on the ecosystem organisation. This organisation supports the organisms that are part of the ecosystem. This primary production is

called ‘ecosystem functioning’ and can be seen as the potential use. When ‘harvested’, one makes actual use of the ecosystem. This actual use is the ES. The benefit derived from this use leads to individuals or society assigning value to this benefit. Indirectly, they assign value to the ES and the ecosystem itself (ibid). In this study, the perceived value of ES is operationalised as the benefit(s) ascribed to the ES by the inhabitant.

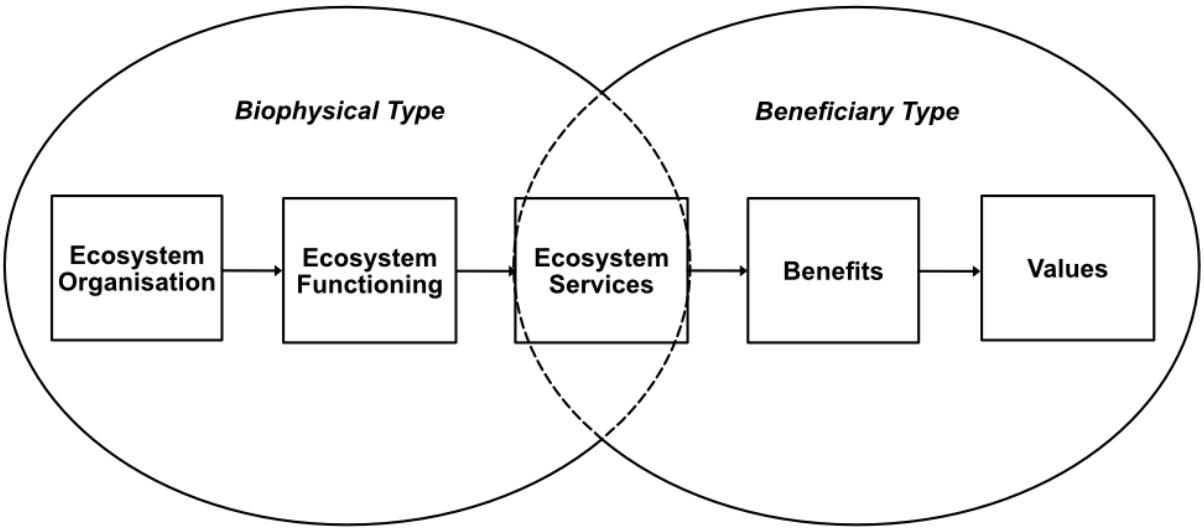


Figure 3 - Cascade Model. Source: Small et al., 2017.

The Common International Classification System (CICES) identifies three types of ES, namely provisioning services, regulation and maintenance services, and cultural services (Haines-Young and Potschin, 2018). Provisioning services are the material contributions that ecosystems provide humans with, such as crop production (MEA, 2005; Paulin et al., 2020). Regulating services are ecological processes that contribute to human well-being in a direct or indirect way, e.g. carbon sequestration by vegetation and soils (ibid). Cultural services are non-material benefits provided by natural elements and landscapes to which people assign different values, such as spiritual, recreational or intrinsic value (ibid).

Furthermore, there are three value-domains associated with ES: the ecological, economic and socio-cultural domains (MEA, 2005; Scholte et al., 2015). Ecological values are ascribed to how ES contributes to the health of the ecosystem. E.g. resilience and (bio)diversity (Scholte et al., 2015; Small et al., 2017). Economic and socio-cultural values reflect the (relative) importance of ES to people. However, economic values are expressed in monetary terms and socio-cultural values are not (ibid). It is important to note that socio-cultural values are not restricted to cultural ES, but can be applied to other ES classes as well (Scholte et al., 2015).

The way humans interact with the natural environment and build relationships with ecosystems is not only a product of the characteristics of those ecosystems, as the cascade model suggests. It also relates to the characteristics of the people themselves. These characteristics can be personal or dependent on social context. What people value as important benefits from ES is largely driven by already held values, but can be influenced by personal characteristics such as age, gender, income, and living environment as well. Furthermore, values are likely to be shared as communal (group) values (Fagerholm et al., 2019; Scholte et al., 2015).

This human-ecosystem interaction takes place in the landscape. The concept of 'landscape' can thus be defined in the context of this interaction. The Dutch word for landscape, 'landschap', is of medieval antiquity. Linguistically, it is a combination of the noun 'land' and the adjective '-schap'. In Germanic languages, land was referred to as a 'cultivated and worked piece of land'. Later land became a designation for much larger areas, such as a region or a nation-state. The adjective '-schap' means 'the condition of', 'the organisation of' or 'that which belongs to' (Spek et al., 2015). Landschap, or landscape, thus means something along the lines of 'everything that belongs to an organised piece of land' (Spek et al., 2015 p.13). The term landscape thus emphasizes the connection between nature and culture, or humans and ecosystems (ibid). Landscape characteristics than are the things by which the 'organised piece of land' can be recognised. Examples are mentioned in the study area description (chapter 1.2), and include both man made aspects (essen, esdorpen, madelanden and hedgerows), and natural formations (ridges and streams).

Human-ecosystem interaction can be dependent on accessibility. According to Tobler's first law of geography, 'everything is related to everything else, but near things are more related than distant things' (Tobler, 1970, p. 236). Related to this, is the thought that the greater the distance, the less people are willing to travel for a certain service or participate in an activity. This idea of distance decay, or the effect of distance on spatial interaction, is not constant over time and space (Eldridge & Jones, 1991; Laatikainen et al., 2017). As both landscape and ES are related to human-ecosystem interaction, the effect of accessibility should be taken into account. For this study, accessibility is operationalised as the distance between the ES and the home of the respondent.

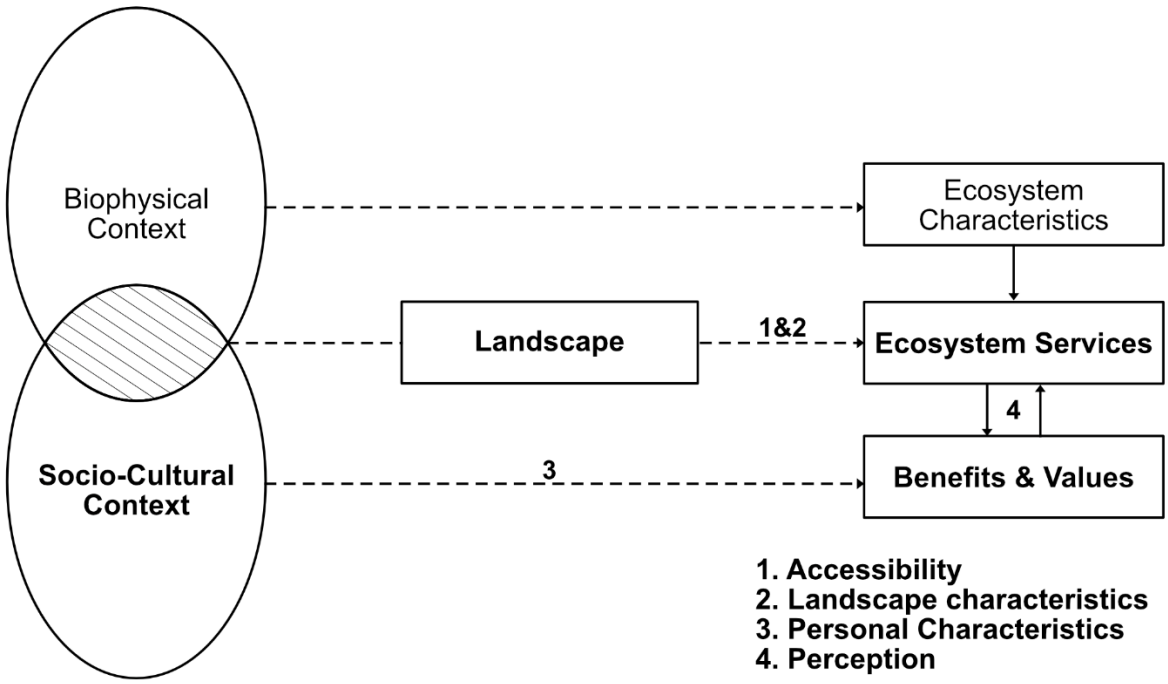


Figure 4 - Conceptual Model. Based on the Cascade Model (Small et al., 2017) and Scholte et al.'s (2015) determinants of socio-cultural values of ES.

The conceptual model (figure 4) illustrates the interconnectivity between ES and the socio-cultural valuation of those ES and their benefits. ES operate within a landscape. And when one makes use of the ES, one reaps the benefits from it (Small et al., 2017). However, the usage of ES as well as the benefits following from this usage, hinge on the perception the respondent has of ES. This perception

in turn is dependent on their personal characteristics (Scholte et al., 2015). As illustrated by the bold text in the model, this study focuses on the socio-cultural valuation of perceived ES and the interplay between these valuations and landscape characteristics, accessibility, and personal characteristics. Essential for this kind of valuation is the inclusion of the values of relevant beneficiaries, since ES are important to many different groups of people. For this paper, 'beneficiaries' is limited to the inhabitants of the Drentsche Aa area.

Based upon this conceptual framework, the following hypotheses have been formulated:

H_1 The socio-demographic factors age, gender, income, profession, and living environment, as well as the self-estimated knowledge of the area, influence the valuation of perceived ES in the Drentsche Aa area.

H_2 Landscape cover and accessibility influence the valuation of perceived ES in the Drentsche Aa area.

3. Methodology

3.1. Study Design

The study was conducted using participatory mapping combined with a survey. Participatory mapping is a powerful tool for grasping the socio-cultural realities of communities, regions, landscapes and ecosystems (Laatikainen et al., 2017; Fagerholm et al., 2019). Respondents were first asked to fill in the figures of their postal codes and their year of birth and gender. On a map, one could pin locations that represent spots they value in the landscape. These are the perceived ES. After each pin, the respondent was asked about what activities they undertake at this location and why they value the mapped point, to capture the benefits derived from the ES. The last part of the questionnaire consists of questions about respondents' personal information, such as household composition, work sector, and land ownership, as well as their self-estimated knowledge of the area. The questionnaire can be viewed in Appendices B (original) and C (English translation).

3.2. Data Collection

The data was collected using the Maptionnaire platform, and covers local residents of the Drentsche Aa area. Respondents were approached in key public locations such as cafés, supermarkets, parking lots, main streets, and on village fairs (Kingsday markets). Respondents were approached on different days and different dayparts. The aim was to reach a sample that is representative for the population with respect to gender and age (e.g. the working population was best reached in the early evening, and pensioners were often reached during the morning). As to reach a spatially representative sample, an URL to the survey was distributed in online communities using social media as well. Because smaller villages in the area have little to no public amenities available. For this purpose, the R/Drenthe subreddit on the Reddit platform and the Drentsche Aa Facebook-group were used.

3.3. Data Processing

The survey and geodata has been analysed using both statistics and geographical information systems, using the typology presented in table 1. A place based database, based on the points the respondents have mapped, has been created. In building this database, the spatial patterns of perceived ES were analysed first using ArcGIS Pro. Figure 5 shows the processes of validating the data, calculating land cover shares per ES and calculating the distance to home. Data from Van den Burg (2019) was used to create the outline for of the Drentsche Aa area. Exploring random distribution and clustering has been done through nearest neighbour (NN) statistics (Ebdon, 1985). CBS land cover data (bestand bodemgebruik, 2017) was used as to calculate the shares of different land cover types within a 250

meter radius of each mapped point. Land cover types were categorised in 'greenery/water', 'settlements/artificial area', and 'agricultural land'. An example of the output is shown in Appendix A. The distances between respondents' homes and mapped ES were calculated using road network data from OpenStreetMap (2022).

Table 1
ES typology and respective operational definitions

ES Category	ES	ES Benefit	Operational Definition for Survey (Dutch)[1]
Provisioning	Food	Farm products	Ik producer of koop hier landbouwproducten.
	Food	Freely harvested wild products	Ik doe hier aan wildplukken of vissen (voor consumptie).
Cultural	Recreation	Outdoor recreation activities	Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).
	Social Interaction	Social interaction	Ik besteed hier tijd met andere mensen.
	Cultural Heritage	Appreciation of local culture, cultural heritage, or history	Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.
	Aesthetic Values	Beautiful landscape or landmark	Ik geniet ervan dit landschap te bekijken.
	Inspiration	Inspirational feeling or value; spiritual or religious place	Ik voel me geïnspireerd door deze plek.
	Intrinsic Value	Appreciation of a specific place as such, independent of any benefit to humans	Deze plek heeft intrinsieke waarde.
Regulating/ Supporting	Biodiversity	Appreciation of plants, animals, wildlife, ecosystems etc.	Ik waardeer de verschillende planten en dieren op deze plek.
	Environmental capacity: erosion control, soil fertility, water and climate regulation etc.	Appreciation of environmental capacity to produce, preserve, clean and renew air, soil and/or water	Ik waardeer deze plek omdat het bijdraagt aan schoon water, schone lucht en/of vruchtbare grond.

Adapted from Fagerholm et al., 2019.

[1] See Appendices B and C for the original version and the English translation of the questionnaire respectively.

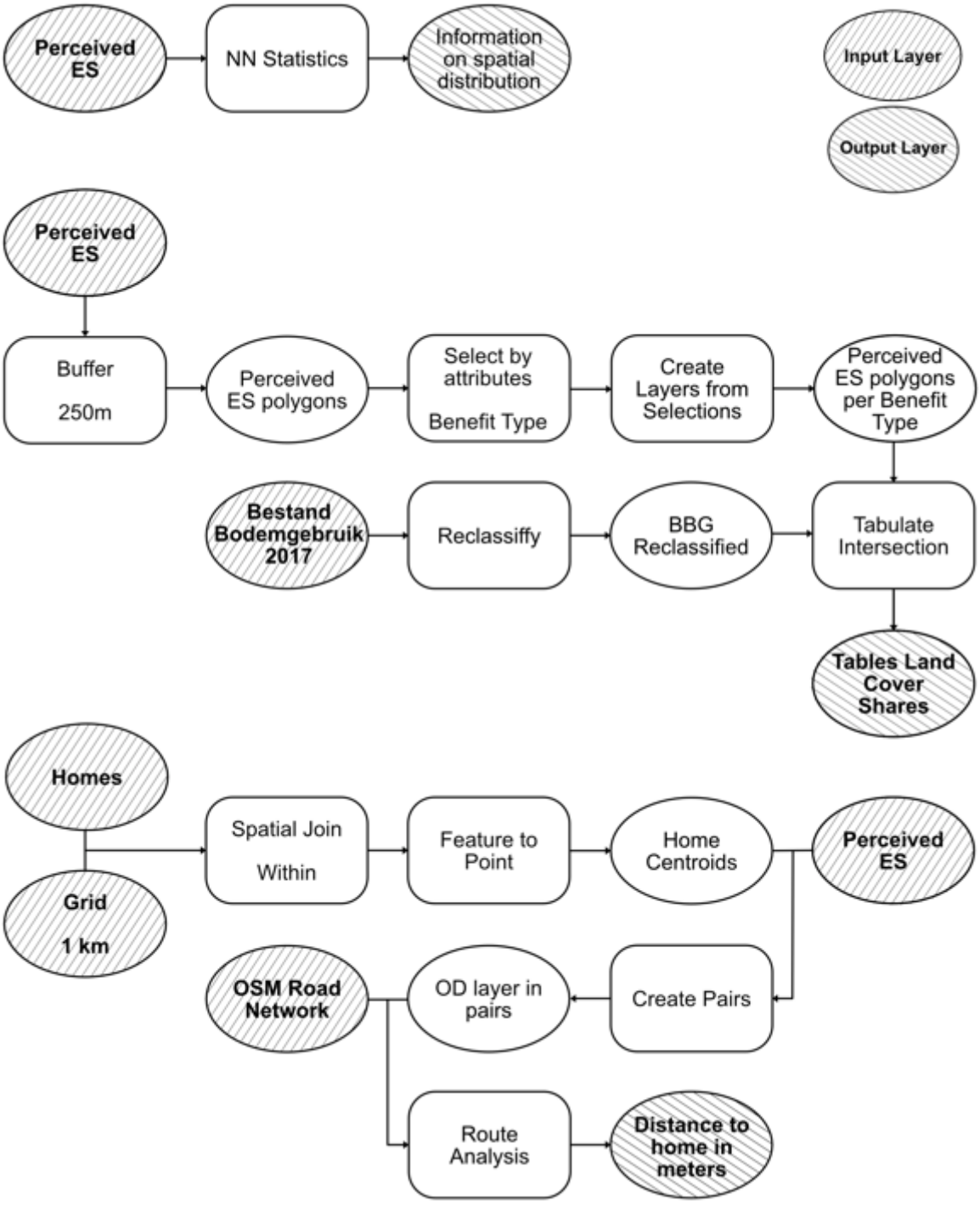


Figure 5 – Scheme for spatial analysis in ArcGIS Pro.

Table 2
Data overview

SQ	Variable	Calculated Variable	Data Type	Source
	Perceived ES[2]		Point	
		Recreation[2,1]	Point / **Binary**	
		Social Interaction[2,1]	Point / **Binary**	
		Harvested Products[2,1]	Point / **Binary**	
		Aesthetic Values[2,1]	Point / **Binary**	
		Cultural Heritage[2,1]	Point / **Binary**	
		Inspiration[2,1]	Point / **Binary**	
		Biodiversity / Environmental Capacity[2,1]	Point / **Binary**	
		Intrinsic Value[2,1]	Point / **Binary**	
1	RespondentID[1]		Nominal	
1	Gender[1]		Binary	
1	Birth Year[1]		Ratio	
1		Age in categories[1]	Ordinal	
1	Educational Level[1]		Ordinal	
1		Educational Level, grouped[1]	Ordinal	
	Income (net year)[1]		Ratio	
1		Income above modal[1]	Binary	
1		Income below modal[1]	Binary	
1	Land Ownership[1]		Binary	
1	Years of Residence[1]		Ratio	
1		Years of Residence, grouped[1]	Ordinal	
1	Self-estimated Knowledge[1]		Ordinal	
2	Land Cover[2]		Polygon	Bestand Bodemgebruik, 2017
2		Greenery / Water[2,1]	Ratio	
2		Agriculture[2,1]	Ratio	
2		Artificial Areas / Settlement[2,1]	Ratio	
2	Grid Layer[2]		Polygon	
2	Road Network[2]		Network	OpenStreetMap, 2022
2	Homes[2]		Point	
2		Distance to home in meters[2,1]	Ratio	

[1]*Analysed using SPSS 26*
[2]*Analysed using ArcGIS Pro*

Table 2 provides an overview of the collected and calculated variables. As indicated by the bold text, the point data representing the perceived ES make up the cases of the database. The text in italics, represents the dependent variables. These are the different benefit types. For each benefit type, two binary logistic regressions have been performed. The binary logistic regression was chosen, because to each mapped point respondents could assign multiple benefit types. This leads to binary variables. The first regression relates to the first sub question (SQ1). It includes socio-demographic variables as well as the respondents' self-estimated knowledge of the Drentsche Aa area. The second regression relates to the second sub question (SQ2). It includes land cover shares and the distances to the homes of the respondents. These independent variables are underlined in the table.

The following null hypothesis applies to every regression:

H_0 *The odds ratio is equal to 1.*

In which: odds = p /(1-p)

Thus, the sum of odds is equal to 1.

3.4. Ethical Considerations

Transparency about the intentions and objectives of this research, as well as the process of data collection, data storage and data analysis is of utmost importance. Therefore, the survey was prefaced by an informed consent form. Respondents were informed about the research and their rights, and formally asked to 'sign' an agreement – by continuing with the survey – about the data collection, storage and analysis. A more fundamental ethical question is that of how to publish the obtained data. Publishing the mapped ES might lead to unwanted visitors in protected areas of the Drentsche Aa area. Maps are therefore intentionally limited to the outline of the Drentsche Aa area, with as little indication of the exact locations of mapped ES as possible.

4. Results

4.1. Validation of the sample

4.1.1. Respondent Profile

Table 3 shows a summary of the respondent profile (n=59) and the under- or overrepresentation for every variable. For full descriptive statistics on respondents, see Appendix D. Especially underrepresented are people aged under 25. This can be ascribed to the fact that residents aged under 18 were not allowed to participate in this research. Another underrepresented group is people living in the area for 26-35 years (Appendix D, Table D.6). Overrepresented are people with a high educational level, as there are over twice as much higher educated people in the sample than in the population of the province of Drenthe (Arbeidsmarkt | Dit is Drenthe | Feiten en cijfers, 2022). Higher educated people might be more inclined to participate in a research project for a thesis. Since they have likely done a research project for their own graduation as well. As only the underrepresentation of residency length between 25 and 35 years cannot be logically explained, the respondent representation is deemed of sufficient quality for this research. However, possible results suggesting an influence of educational level on the socio-cultural valuation of ES need to be interpreted with care.

Table 3

Sample representation – Respondent Profile

Variable	Value	Sample Percentage	Aimed Percentage	Under- / Overrepresented
Gender	Male	55.9%	50%	Overrepresented
	Female	44.1%	50%	Underrepresented
Age	**<25**	**6.1%**	**23.6 – 26.3%[1]**	**Underrepresented**
	25-64	66.1%	48.9 – 49.3%[1]	Overrepresented
	65+	27.8%	24.8 – 27.1%[1]	Overrepresented
Education Level	**HBO + University**	**65.2%**	**31.9%[2]**	**Overrepresented**
	Other	34.8%	68.1%[2]	Underrepresented
Income	Below modal	46.9%	50%	Similar
	Above modal	53.1%	50%	Similar
Land ownership	Yes	32.6%		Underrepresented
	No	67.4%		Overrepresented
Residency in years	**26 – 35**	**9.1%**		**Underrepresented**
	Other	90.9%		Similar to each other

1. Jongeren en ouderen per gemeente (2022).

2. Arbeidsmarkt | Dit is Drenthe | Feiten en cijfers (2022).

4.1.2. Spatial Representation

The spatial distribution of respondents leaves much to be desired. Figure 6 can be used to compare the respondent distribution to the population distribution of the area. PC4 (the figures of the postal codes; ESRI Nederland, n.d. b) areas were used to visualise the population densities and distribution. The most densely populated postal areas are represented in red, the least densely populated areas in yellow. The middle and northern parts of the Drentsche Aa area are represented quite well, as the respondent distributions of these areas are similar to the population distribution. However, the southern population was not reached (white areas). This might have to do with the relatively small amount of respondents (n=59) and the fact that the southern parts of the area are less densely populated.

The 59 participants mapped 115 ES. Figure 7 shows the spatial distribution of these mapped points. As with the respondent distribution, the southern part of the Drentsche Aa seems to be underrepresented. Thus, the southern part of the Drentsche Aa area is underrepresented when it comes to both respondent home locations and the ES they have mapped. Therefore, generalisations for the whole Drentsche Aa area cannot be made, and the results of this study should be interpreted with regard to the centre and northern part of the area.

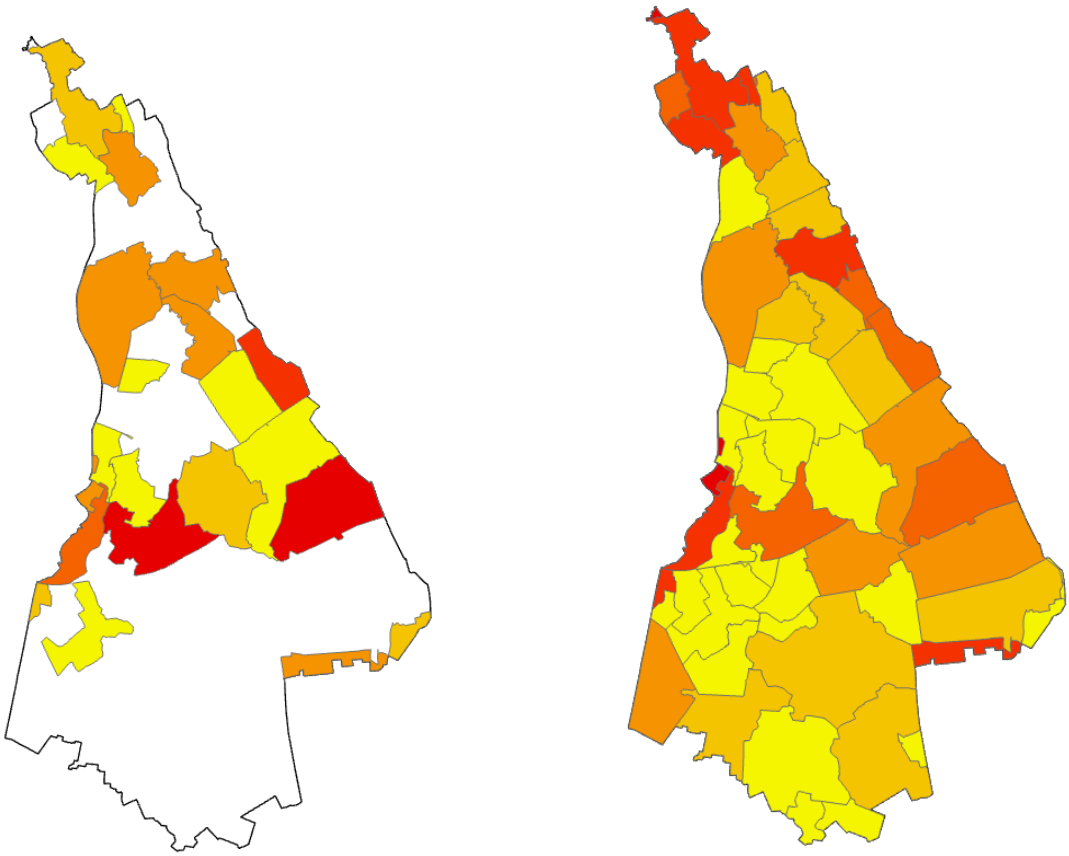


Figure 6 – Postal code heatmaps. Left: respondent distribution. Right: population distribution. Made in ArcGIS Pro using data from ESRI Nederland (n.d. b) and Van den Burg (2019).

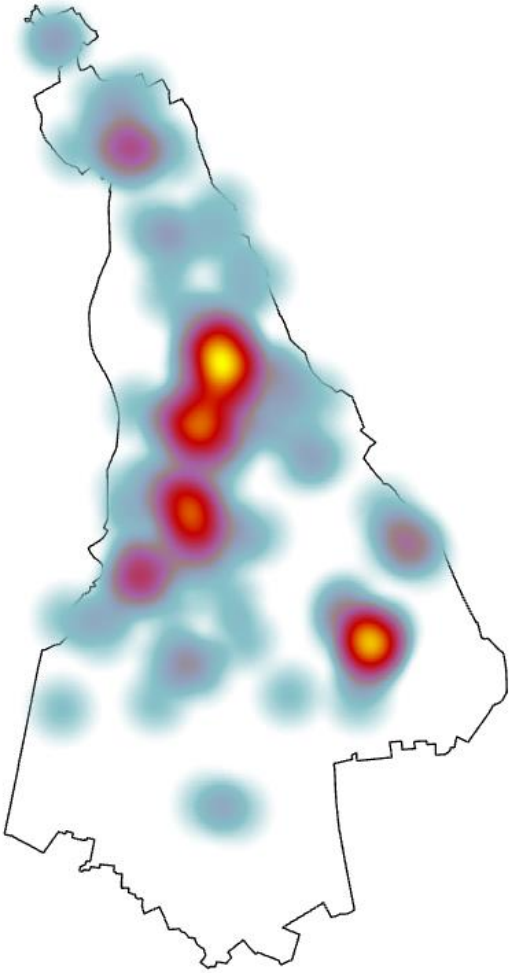


Figure 7 – Heatmap of mapped points with ES benefits. Made in ArcGIS Pro using data from Van den Burg, 2019.

4.2. Identified ES and their spatial patterns

The survey respondents mapped 115 places indicating ES benefits. Table 4 shows an overview of the different types of ES and the percentage of times they have been mapped by respondents. As respondents could indicate multiple types for each mapped ES, the cumulative percentages do not add up to 100%. The most common reason to map an ES was recreation, followed by the aesthetic value of the area. The least common reason to map an ES was the Harvest Products category, which consists of agriculture, harvesting wild products and buying harvested products.

Table 4

Ecosystem Service Types and their share of the total mapped ES

	Recreation	Social Interaction	Harvested Products	Aesthetic Value	Cultural Heritage	Inspirational Value	Biodiversity	Environmental Capacity	Intrinsic Value
Percentage	87,83	20,87	6,96	82,61	31,30	26,09	26,96	17,39	21,74

Furthermore, nearest neighbour statistics (Ebdon, 1985) show that the data is clustered in space. This is the case for mapped ES overall, and ES with recreational, aesthetical, inspirational and biodiversity benefits (Appendix E). ES with benefits linked to social interaction, intrinsic values, cultural heritage

and harvested products are normally distributed. Roughly six clusters can be identified on the map (figures 7 and 8):

- Gasselterveld / Hemelriekje
- Balloërveld
- Kampsheide
- Gasterse Duinen
- Zeegser Duinen / Beekdal Schipborgse Diep
- Drentsche Aa river

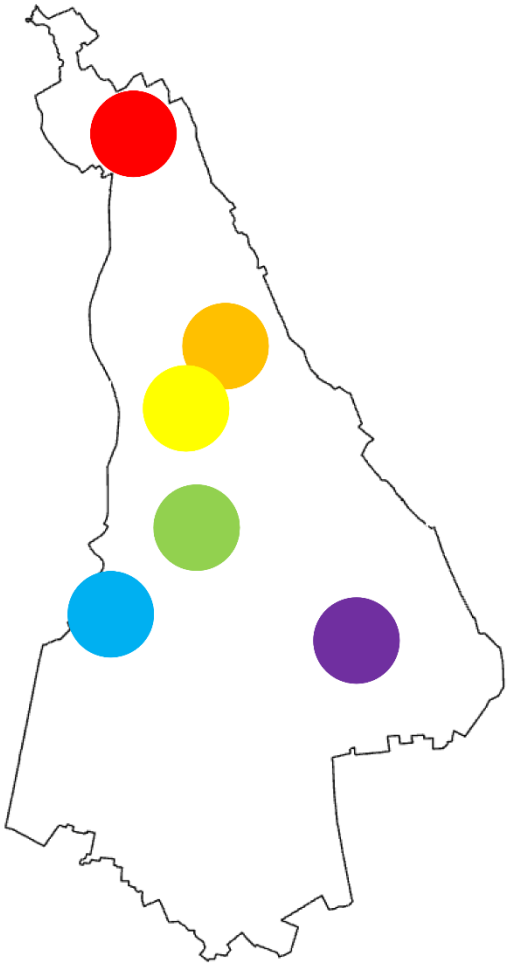


Figure 8 – Six clusters of ES (made using Affinity Designer and ArcGIS Pro)
Red: Drentsche Aa river
Orange: Zeegser Duinen / Beekdal Schipborgse Diep
Yellow: Gasterse Duinen
Green: Balloërveld
Blue: Kampsheide

4.3. The influence of socio-demographic characteristics on the valuation of perceived ES

In this section, results relating to the first sub question are presented. As mentioned previously, a separate binary logistic regression was performed for each ES benefit type. For recreational and inspirational benefits, or benefits linked to cultural heritage, intrinsic value or harvested products, no influences of socio-demographic characteristics was found. An error occurred for the harvested products category, as there were too many missing values. However, the perception of ES is likely to be influenced by the socio-demographic characteristics of inhabitants when it comes to ES with aesthetic benefits, benefits linked to social interaction, or benefits within the ecological value domain (Appendix F).

Tables 5 and 6 illustrate the model (table 5) and variables in the equation (table 6; method: Forward) of a binary logistic regression. This specific output was used to analyse the influence of socio-demographic variables on ES with perceived aesthetical value (Appendix F.4). With α = 0,023, the model of step 2 is significantly better in predicting the outcome of the dependent variable, than the model of step 1. The variables in the equation of step 2, apart from the constant, are having a university degree as compared to having secondary education, and being aged 65+ as compared to being aged <35. With α = 0,031, the null hypothesis of 'the odds ratio is equal to 1' can be rejected for the variable 'being aged 65+'. In fact, the odds ratio, or Exp(B), is 0,064 (table 6). Therefore, it can be concluded with a 95% confidence interval, that it is less likely (or 0,064 times as likely) that people aged 65+ value ES due to their aesthetics, than people in the reference category of people aged 35 years or younger.

Table 5

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3,840	1	,050
	Block	3,840	1	,050
	Model	3,840	1	,050
Step 2	Step	3,734	1	,053
	Block	7,574	2	,023
	Model	7,574	2	**,023**

Table 6

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Age 65+	-1,937	,993	3,807	1	,051	,144
	Constant	2,918	,726	16,154	1	,000	18,500
Step 2[b]	**Age 65+**	-2,751	1,278	4,638	1	**,031**	**,064**
	University	-2,233	1,279	3,045	1	,081	,107
	Constant	4,247	1,273	11,126	1	,001	69,910

a. Variable(s) entered on step 1: Age 65+.

b. Variable(s) entered on step 2: University.

For ES with social interaction benefits (Appendix F.3), the binary logistic regression results suggest that gender can be classified as a determinant for the valuation of perceived ES (α = 0,009). Women are less likely (or 0,052 times as likely) to map ES that they value for their social interaction opportunities than their male counterparts (Exp(B) = 0,052). Furthermore, the results suggest that it is less likely (or 0.081 times as likely) that ES valued for their social interaction opportunities are mapped by people with an HBO degree as compared to the reference category of people with secondary education as their highest obtained educational level (α = 0,029; Exp(B) = 0,081). However, as people with a degree in higher education are overrepresented in the sample, this result should be interpreted with care. Therefore, educational level will not be classified as a determinant for the valuation of perceived ES.

When it comes to the ecological value domain, which consists of biodiversity and environmental capacity benefits, land ownership is found to be a determinant. It is approximately 4,9 times as likely that people who own land in the Drentsche Aa area map ES that they ascribe ecological values to than it is for people who do not own land in the area (Appendix F.8; α = 0,012; Exp(B) = 4,899).

4.4. The influence of landscape characteristics on the valuation of perceived ES

In this section, results relating to the second sub question are presented. A separate binary logistic regression was performed for each ES benefit type, for this section as well. All regressions used for this section can be viewed in Appendix G. For the categories intrinsic value, inspiration and harvested products, influences of landscape characteristics were found.

Tables 7 and 8 illustrate the model (table 7) and variables in the equation (table 7; method: Forward) of a binary logistic regression. This specific output was used to analyse the influence of landscape characteristics on ES with perceived intrinsic value (Appendix G.7). With α = 0,027, the model is significant. With α = 0,049, the null hypothesis of 'the odds ratio is equal to 1' can be rejected for the variable 'distance_M_network', which represents the distance in meters from the mapped ES to the respondents home via the road network. The odds ratio is 0,999 (Exp(B) = 0,999). This means it becomes 0,999 times as likely that an ES is mapped due to its intrinsic value when the distance to home from this ES increases with one meter. In other words, although the effect is small, it is more likely that ES are perceived to have intrinsic value when these ES are located closer to home. Distance to home does not have influence on other types of valuations.

Table 7

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,904	1	,027
	Block	4,904	1	,027
	Model	4,904	1	**,027**

Table 8

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Distance_M_Network**	,000	,000	3,888	1	**,049**	**,999**
	Constant	-,140	,521	,073	1	,787	,869

a. Variable(s) entered on step 1: Distance_M_Network.

Appendix G.6 shows the regression for ES with inspirational benefits. Inhabitants value inspirational ES within 250 meters of agricultural land 1,017 times more than ES within 250 meters of greenery or water (α = 0,049; Exp(B) = 1,017). The results for ES with benefits related to the harvesting of products (Appendices G.3 and G.4) suggest an influence of landscape characteristics as well. Interestingly, it is 1,044 times as likely that ES are valued this benefit type when settlements or artificial areas are located within 250 meters of the mapped point as compared to when greenery or water is located within 250 meters of the mapped point α = 0,029; Exp(B) = 1,044).

5. Discussion

5.1. Comparison to Fagerholm et al. (2019)

Fagerholm et al. (2019), assessed perceived ES benefits as mapped by residents across 13 multifunctional rural or peri-urban landscapes in Europe. According to their research, outdoor recreation, aesthetic values and social interactions are key ES benefits on the local scales. Similarly, this study has found recreation and aesthetic values to be the most mapped ES benefits too. However, ES were only recognised for their social interaction benefits in 20,87% of the cases. This makes it the 7th most recognised benefit type, out of nine possible types (table 2). Fagerholm et al. (2019), found

that settlement areas were overrepresented in the sample, and concluded that these areas are hotspots for many ES benefits. Hotspots in the sample used for this study were natural or green areas such as dune landscapes, heather, river and lakes (figure 8). Social interaction thus might be more linked to settlements than to natural areas. Although, a link between these factors was not found in this study.

Fagerholm et al. (2019) found that distance to home was one of the most important predictors for individual mapped ES benefits. Benefits linked to regulating / supporting and provisioning ES decreased when the distance via road network increased. Benefits linked to cultural ES increased with increasing distance. In this study, as distance increased, intrinsic values were mapped less often. The lack of correlation between distance to home and provisioning ES found in this study, might be explained by the sample. Agricultural ES were not often mapped, leading to a smaller chance of finding a significant effect of distance to home on provisioning ES. As intrinsic values can be shared under cultural ES, the results of this study counter those of Fagerholm et al. (2019). Factors explaining this difference could be the scale of the Drentsche Aa area, or the accessibility level. It is important to note that the effect of distance on spatial interaction is not constant for time and space, as mentioned in the theoretical framework (Eldridge & Jones, 1991; Laatikainen et al., 2017). This study suggests that the effect is also not constant for different values, as the same mapped points represented a multitude of ES, and a distance decay effect is only found for intrinsic values.

With regard to respondent characteristics, Fagerholm et al. (2019), report significant effects for land ownership, self-estimated knowledge, length of residency and field of work in agriculture. This study found significant effects for age, gender, educational level and – the only common factor – land ownership. In Fagerholm et al. (2019), these factors are assessed using a chi-square test. Although owning land in the area significantly increased the likeliness of mapping most types of benefits, the effects found were mostly negligible or weak. A moderate association was found between land ownership and farm products. This case study did not find land ownership to have significant effects on most types of benefits, except for benefits in the ecological value domain. The effect found is quite substantial, as it is approximately 4,9 times more likely to map these types of benefits if one owns land in the area. This difference between findings might be due to the different respondent profiles. In this study, people with their field of work in agriculture were not reached, which likely leads to less mapped agricultural benefits. Moreover farms in the Netherlands are often self-owned. Therefore, a lack of people working in the agricultural sector in the sample likely leads to the result of no effect of land ownership on harvested products. As field of work in agriculture was found to be related to long residency by Fagerholm et al. (2019), it is of no surprise that effects from length of residence are not found in this study too.

For the associations found by Fagerholm et al. (2019) between self-estimated knowledge and mapping most types of ES benefits, the associations found are negligible or weak. It is therefore not surprising that this study does not find an effect of self-estimated knowledge on any type of perceived benefit. Furthermore, it seems that no general law regarding ES valuation can be formulated, as different study areas lead to different results.

5.2. Discussion of the results in the light of other literature

Both this study and Fagerholm et al. (2019) found recreational and aesthetic values to be the most mapped ES benefits. Fagerholm et al. (2019) theorise that mapping recreational values is linked to a higher gross domestic product. Another explanation, although not found by this study, could be the amount of trees, hedges, wood walls, grassland and shrubs in the area. These are found to be linked to perceived recreational *potential* by Paulin et al. (2020). Another explanation for the amount of

mapped recreational ES is the spatial scale of this study. Hein et al. (2006) found that stakeholders at different scales have different interests in ES. Recreation is especially important on municipal and provincial scale, which corresponds with the scale of the Drentsche Aa area. On the national and international scale, nature conservation is perceived as important. This underlines the need for further expansion of ES research from the field of ecology and monetary aspects in valuing ES to socio-cultural valuation. Socio-cultural valuation leaves room for the experiences and perceptions of stakeholders at different scales. Thus, although this study found typical cultural values to be the most mapped ones, the perceived ecological and provisional services are important too.

Regarding demographic effects on mapped ES, people aged 65 years and up value less ES because of their aesthetics than people aged younger than 35 years old (reference category). However, Pugach et al. (2017) found that human taste is rather unstable over relatively short timespans, particularly for children and older adults. It is therefore likely that different results will be found if this study is repeated.

No literature can be found to explain the effects of educational level (HBO) on aesthetical valuation of ES. This fact, combined with the overrepresentation of people with a higher educational level, leads to the conclusion that these results should be disregarded. No literature could be found to explain the effect of gender on aesthetical valuation of ES as well. Future qualitative research might shed light on this issue.

Future qualitative research might shed light on the issue of the effect of agricultural land cover on mapped inspirational values as well. Predoli et al. (2007) conclude that a living, sustainable landscape provides inspiration for getting actively involved in it. This study did not reach people working in agriculture. Therefore, the results suggest that it might be possible that that the mere observation of the interaction between humans and ecosystems, as portrayed by agricultural land, can be inspirational as well, without the need for active involvement in the landscape. Contradictory, ES that are valued for their harvested products are more often mapped in artificial areas / settlements.

5.3. Consideration of the method, limitations, and reflection on the research process

In the survey, respondents were first asked to map their favourite place, and then to tick one or multiple boxes indicating their activities at the appointed place and the valuation of the mapped ES. Although this method could shed light on the possible combinations of perceived ES per mapped location, the survey design led to the necessity to evaluate each category of ES in a separate binary logistic regression. If respondents were asked to choose a category (type of activity or type of valuation) beforehand, and then map a place where this type of ES is perceived, all mapped ES types could be used as input in a multiple logistic regression, giving a more holistic view on the effects of different characteristics on the different ES types.

The participatory mapping approach provided possibilities for spatial person-based research, as suggested by Laatikainen et al. (2017) and Fagerholm et al. (2019). This method sheds lights on the different values linked to ES. However, it does not lead to insight in where these values originate from. As Fagerholm et al. (2019) and Scholte et al. (2015) suggest, values are likely to be shared as communal (group) values. To capture the multiple dimensions of socio-cultural values and the community effects a deliberative approach is needed, using focus groups or individual interviews in which interviewees are given time to reflect between questions. Such an approach add depth to the answers of participants as well.

In the process of this research the concept of ‘landscape features’ has been reduced to three categories: ‘greenery / water’, ‘artificial surfaces / settlements’ and ‘agriculture’. This generalisation lead to better categories with regard to the statistical analysis, as smaller categories would have led to

missing values. Furthermore, the generalisation increases the repeatability of this study in other areas. However, the categories do not do justice to the rich cultural landscape that is the Drentsche Aa area. The influence of key features such as dolmens and essen has not been captured. To capture these effects, a bigger sample as well as a more thorough landscape dataset is needed.

Covid heavily influenced the research process. Sickness lead to less opportunities to gather data, leading to a smaller sample. Furthermore, the data analysis phase and the writing of the thesis were delayed. In the future, and especially in times of a pandemic, the planning has to have a kind of flexibility and time to be able to respond to the unexpected.

6. Conclusion

Perceived ES by inhabitants of the northern and centre parts of the Drentsche Aa area are often located in green or natural landscapes. Socio-cultural valuation of these perceived ES are influenced in different ways. Socio-demographic characteristics such as age, gender and land ownership, can influence values related to aesthetics, social interaction and ecology. Land cover features including agricultural land cover, settlement / artificial land cover, and the distance from the ES to the home of the inhabitant, can influence intrinsic and inspirational values as well as values related to the harvesting of products. The most experienced values can be ascribed to the cultural value domain. This is likely due to the stakeholder scale of the research, as Hein et al. (2006) found recreation to be viewed as especially important on a municipal and provincial scale. Thus, socio-cultural valuation of perceived ES is dependent on stakeholder characteristics, land cover characteristics, and the spatial scale at which stakeholders are involved in the research. Due to this complex dynamic, the practice of ES thinking in planning should be expanded to include socio-cultural valuation, next to ecological and monetary valuation. Doing so stimulated the use of local knowledge in the management of ecosystems as well (Scholte et al, 2015; Fagerholm et al., 2019).

In order to gain further insight in these dynamics and help translate this research into future practice, qualitive research is needed. A deliberative approach, using focus groups and / or individual interviews in which interviewees are given time to reflect between questions could help to unravel what drives the individuals' values and what community values they are based on. Deliberation and discussion (within a focus group) could potentially change the perception of ES and their benefits too. Furthermore, this approach could help shed light on the questions raised on this paper surrounding the influence of gender, and the proposed idea that inspirational value can originate from the mere observation of interaction between humans and ecosystems.

7. References

CBS.nl, 2017. *Bestand Bodemgebruik*, geodataset. [online] Available at: <https://www.cbs.nl/nl-nl/dossier/nederland-regionaal/geografische-data/natuur-en-milieu/bestand-bodemgebruik> [Accessed 15 March 2022].

CBS.nl, 2022. *Jongeren en ouderen per gemeente*. [online] Available at: <https://www.cbs.nl/nl-nl/visualisaties/dashboard-bevolking/regionaal/jongeren-en-ouderen> [Accessed 25 May 2022].

Brasse, A., n.d., *Drentsche Aa*, image, [online] Drenthemagazine.nl. Available at: < https://www.drenthemagazine.nl/drentsche-aa/drentsche-aa-3/> [Accessed 25 May 2022].

Bregman, E., Maas, G., Makaske, B. & Meijles, E., 2015. De opbouw van het landschap. In: Spek, T., Elerie, H., Bakker, J.P. & Noordhoff, I. *Landschapsbiografie van de Drentsche Aa.* Assen: Koninklijke Van Gorcum, p. 18-53.

Breman, B., Nieuwenhuizen, W., Dirkx, G., Pouwels, R., de Knegt, B., de Wit, … & Maas, G., 2022. *Natuurverkenning 2050 – Scenario Natuurinclusief*. Wettelijke Onderzoekstaken Natuur & Milieu. [online] Wageningen: Planbureau voor de leefomgeving & Wageningen University and Research. Available at: <https://library.wur.nl/WebQuery/wurpubs/fulltext/558179> [Accessed 28 February 2022].

Centraal Planbureau, 2021. *Kerngegevenstabel MEV 2022*. p.2.

Drentheincijfers.nl. 2022. *Arbeidsmarkt | Dit is Drenthe | Feiten en cijfers*. [online] Available at: <https://www.drentheincijfers.nl/onderwijsenarbeidsmarkt/arbeidsmarkt.php> [Accessed 25 May 2022].

Drentsche Aa. 2022. *Gebiedskenmerken*. [online] Available at: <https://www.drentscheaa.nl/drentsche-aa/> [Accessed 3 March 2022].

Ebdon, D., 1985. Statistics in Geography. Dasil Blackwell, Oxford.

Eldridge, J. D., & Jones III, J. P., 1991. Warped space: A geography of distance decay. *The Professional Geographer*, *43*(4), 500-511.

ESRI Nederland, n.d. a, *Base map: Canvas*, geodata. [online] Available at: <https://services.arcgisonline.nl/arcgis/rest/services/Basiskaarten/Canvas/MapServer> [Accessed 3 March 2022].

ESRI Nederland, n.d. b, *Postcodevlakken PC4*, geodata. [online] Available at: <maps.arcgis.com/home/item.html?id=4bfb07de89954f5c8404b3fa2845c010> [Accessed 3 March 2022].

Fagerholm, N., Torralba, M., Moreno, G., Girardello, M., Herzog, F., Aviron, S., ... & Plieninger, T., 2019. Cross-site analysis of perceived ecosystem service benefits in multifunctional landscapes. *Global Environmental Change*, *56*, 134-147.

Haines-Young, R. & Potschin, M.B., 2018. Common International Classification of Ecosystem Services (CICES) V5.1 and guidance on the application of the revised structure. Available from www.cices.eu

Hein, L., Van Koppen, K., De Groot, R.S. and Van Ierland, E.C., 2006. Spatial scales, stakeholders and the valuation of ecosystem services. *Ecological economics*, *57*(2), pp.209-228.

Laatikainen, T. E., Piiroinen, R., Lehtinen, E., & Kyttä, M., 2017. PPGIS approach for defining multimodal travel thresholds: Accessibility of popular recreation environments by the water. *Applied Geography*, *79*, 93-102.

MEA, 2005. *Ecosystems and human well-being: Synthesis*. World Resources Institute, Washington D.C.

Munniksma, R. & Van 't Veen, C., 2015. Preface. In: Spek, T., Elerie, H., Bakker, J.P. & Noordhoff, I. *Landschapsbiografie van de Drentsche Aa.* Assen: Koninklijke Van Gorcum, p. 5.

Nationalelandschappen.nl. 2022. *Nationale Landschappen | Landschappen*. [online] Available at: <https://nationalelandschappen.nl/> [Accessed 3 March 2022].

Natura2000.nl, 2022. *Drentsche Aa-gebied | natura 2000*. [online] Natura2000.nl. Available at: <https://www.natura2000.nl/gebieden/drenthe/drentsche-aa-gebied> [Accessed 3 March 2022].

OpenStreetMap, 2022, *Planet OSM*, geodataset. [online] Available at: <https://www.openstreetmap.org/export#map> [Accessed 2 May 2022].

Paulin, M. J., Rutgers, M., de Nijs, T., Hendriks, A. J., Koopman, K. R., Van Buul, T., ... & Breure, A. M., 2020. Integration of local knowledge and data for spatially quantifying ecosystem services in the Hoeksche Waard, the Netherlands. *Ecological Modelling*, *438*, 109331.

Peri, P. L., Nahuelhual, L., & Martínez Pastur, G., 2021. Ecosystem Services as a Tool for Decision-Making in Patagonia. In *Ecosystem Services in Patagonia* (pp. 1-17). Springer, Cham.

Pedroli, G.B.M., Van Elsen, T. and Van Mansvelt, J.D., 2007. Values of rural landscapes in Europe: inspiration or by-product?. NJAS-Wageningen Journal of Life Sciences, 54(4), pp.431-447.

Pugach, C., Leder, H., & Graham, D. J., 2017. How stable are human aesthetic preferences across the lifespan? *Frontiers in human neuroscience*, *11*, 289.

Satz, D., Gould, R. K., Chan, K., Guerry, A., Norton, B., Satterfield, T., ... & Klain, S., 2013. The challenges of incorporating cultural ecosystem services into environmental assessment. *Ambio*, *42*(6), 675-684.

Scholte, S. S., Van Teeffelen, A. J., & Verburg, P. H. (2015). Integrating socio-cultural perspectives into ecosystem service valuation: A review of concepts and methods. *Ecological economics*, *114*, 67-78.

Small, N., Munday, M., & Durance, I., 2017. The challenge of valuing ecosystem services that have no material benefits. *Global environmental change*, *44*, 57-67.

Spek, T., 2015. Cultuurhistorische schatkamers – Essen. In: Spek, T., Elerie, H., Bakker, J.P. & Noordhoff, I. *Landschapsbiografie van de Drentsche Aa.* Assen: Koninklijke Van Gorcum, p. 216-243.

Spek, T. & Van Olst, 2015. Zwervende erven komen tot rust – Esdorpen en boerderijen. In: Spek, T., Elerie, H., Bakker, J.P. & Noordhoff, I. *Landschapsbiografie van de Drentsche Aa.* Assen: Koninklijke Van Gorcum, p. 185-203.

Spek, T., Elerie, H., Bakker, J.P. & Noordhoff I., 2015, *Landschapsbiografie van de Drentsche Aa.* Koninklijke Van Gorcum, Assen.

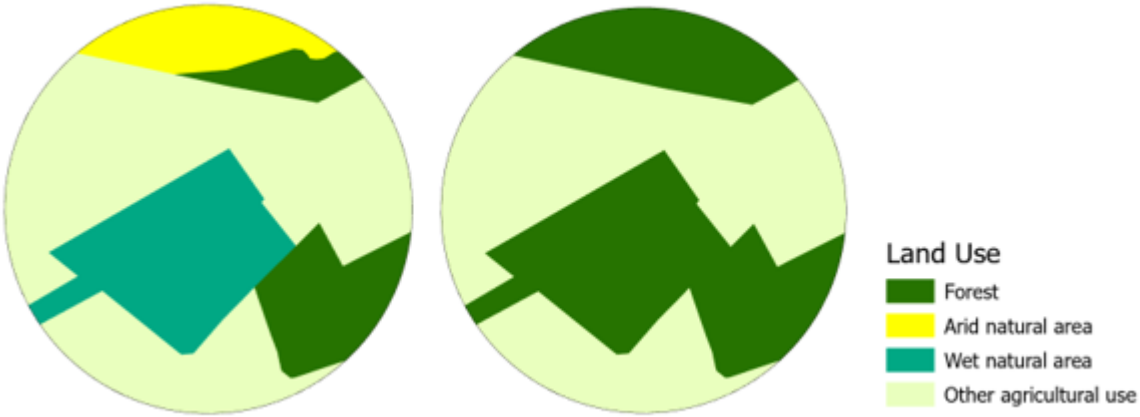
Stephenson, J., 2008. The Cultural Values Model: An integrated approach to values in landscapes. *Landscape and urban planning*, *84*(2), 127-139.

Tobler, W. R., 1970. A computer movie simulating urban growth in the Detroit region. *Economic geography*, *46*(sup1), 234-240.

Van den Burg, M., 2019. *NationaalParkDRAa*, Provincie Drenthe, geodata. [online] Available at: <https://www.maps.arcgis.com/home/webmap/viewer.html> [Accessed 3 March 2022].

8. Appendices

Appendix A – Example of land cover analysis output



ObjectID	Land Cover	Percentage	Reclassified	Recalculated Percentage
23	Forest	14,58	Greenery / Water	43,82
23	Arid natural area	8,53		
23	Wet natural area	20,71		
23	Other agricultural use	56,18	Agriculture	56,18

The circles represent a mapped ES with a radius of 250 meter. The left circle shows the spatial representation of the land cover pre reclassification. The right circle represent the land cover after reclassification. The attribute table beneath shows the land cover shares of the mapped ES. This information is used in the statistical analysis.

Appendix B– Original participatory mapping survey (made using Maptionnaire platform)

Mijn Landschapsvoorkeuren: Drentsche Aa

Welkom bij de "Mijn Landschapsvoorkeuren: Drentsche Aa" interactieve vragenlijst!

In deze vragenlijst kunt u als bewoner van het Nationaal Park Drentsche Aa delen wat voor soort landschap in het Drentsche Aa gebied van waarde is voor u. Op de kaart kunt u aangeven om welke punten het gaat. *Over uzelf en de door u aangegeven punten worden in 4 delen vragen gesteld.*

Door mee te doen aan dit onderzoek helpt u mij met afstuderen aan de Faculteit Ruimtelijke Wetenschappen van de Rijksuniversiteit Groningen. De resultaten van de vragenlijst zullen worden gebruikt voor mijn bachelor thesis genaamd "Socio-Cultural Valuation of Perceived Ecosystem Services: A Drentsche Aa Case Study".

Uw antwoorden zullen vertrouwelijk behandeld worden en zijn alleen inzichtelijk voor mij, de onderzoeker. De antwoorden zullen bewaard worden tot en met augustus 2022. Privacygevoelige informatie zoals uw naam, IP-adres of e-mailadres worden *niet* verzameld. Wel zult u worden gevraagd naar de globale locatie van uw huis. Hier hoeft u *niet exact* te antwoorden. *Alle verzamelde data zal niet te herleiden zijn naar u.* ***Door verder te gaan met deze vragenlijst, stemt u hiermee in.***

Voor vragen of opmerkingen kunt u contact opnemen met mij, Marie-Anne Prosman. m.a.prosman@student.rug.nl

Het duurt ongeveer 5 minuten om de vragenlijst in te vullen. Veel plezier!

Deel 1. Basis Informatie

1. In welk jaar bent u geboren?

2. Wat is uw geslacht?

- Vrouw
- Man
- Anders

3. Wat zijn de cijfers van uw postcode?

4. Waar woont u?

Plaats de tool hieronder in het vak op de kaart waarin u woont.

Als u wilt, kunt u de kaart aanpassen naar stratenkaart of satelliet door op het icoontje rechts bovenin te klinken, naar onderen te scrollen en onder 'basiskaarten' een ander type kaart aan te klikken.
Daarnaast kunt u in- en uitzoomen door uw muis op de kaart gericht te houden (zonder te klikken), en te scrollen. U kunt de kaart ook verplaatsen door uw muis ingedrukt te houden en de kaart te slepen.

Uw huis

Deze vraag kan worden overgeslagen.

Deze informatie wordt gebruikt om de bereikbaarheid van de door u aangegeven favoriete plekken te berekenen. Een benadering van de locatie van uw huis is hiervoor voldoende. De vakken zijn één vierkante kilometer groot. De exacte locatie is hierdoor niet te herleiden.

Deel 2: Favoriete Plekken

1. Wat zijn uw favoriete plekken?

Hier kunt u aangeven welke plekken in het Drentsche Aa landschap (rood omlijnt) u speciaal vindt. U kunt de knop meerdere keren gebruiken en mag zoveel punten aangeven als u wilt.

Als u wilt, kunt u de kaart aanpassen naar stratenkaart of satelliet door op het icoontje rechts bovenin te klinken, naar onderen te scrollen en onder 'basiskaarten' een ander type kaart aan te klikken.
Daarnaast kunt u in- en uitzoomen door uw muis op de kaart gericht te houden (zonder te klikken), en te scrollen. U kunt de kaart ook verplaatsen door uw muis ingedrukt te houden en de kaart te slepen.

Favoriete Plek

2. Omschrijf de fysieke eigenschappen van deze plek in één woord (of een paar woorden). Bijvoorbeeld: bos; hunebed; grasland; etc.

3. Wat doet u graag op deze plek?

- ☐ Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).
- ☐ Ik doe hier aan wildplukken of vissen (voor consumptie).
- ☐ Ik besteed hier tijd met andere mensen.
- ☐ Ik produceer hier landbouwproducten.
- ☐ Ik koop hier landbouwproducten.
- ☐ Ik doe hier geen activiteiten.
- ☐ Anders.

3a. Indien u 'anders' heeft geantwoord, kunt u hier kort omschrijven wat u bedoelt.

4. Wat waardeert u aan deze plek?

- ☐ Ik waardeer deze plek omdat ik hier de activiteiten kan doen die ik heb ingevuld onder vraag 3.
- ☐ Ik geniet ervan dit landschap te bekijken.
- ☐ Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.
- ☐ Ik voel me geïnspireerd door deze plek.
- ☐ Ik waardeer de verschillende planten en dieren op deze plek.
- ☐ Ik waardeer deze plek omdat het bijdraagt aan schoon water, schone lucht en/of vruchtbare grond.
- ☐ Deze plek heeft intrinsieke waarde.
- ☐ Anders.

4a. Indien u 'anders' heeft geantwoord, kunt u hier kort omschrijven wat u bedoelt.

5. Hoe belangrijk is deze plaats voor u?

- Heel erg belangrijk
- Erg belangrijk
- Belangrijk
- Een beetje belangrijk
- Niet belangrijk

Deel 3
Beschrijf wat er in u opkomt als u denkt aan de Drentsche Aa. Denk hierbij bijvoorbeeld aan het Drentsche Aa landschap in zijn geheel, en waarden die daarom niet zomaar aan punten op de kaart te geven zijn.

Deel 4: Persoonlijke Informatie
1. Hoeveel jaar woont u al in het Drentsche Aa gebied?

2. Hoe goed kent u het Drentsche Aa gebied?
- Heel goed
- Goed
- Een beetje
- Slecht
- Heel slecht

3. Bezit u land in dit gebied?
- Ja
- Nee

3a. Als u land bezit in dit gebied, wat is het voornaamste gebruik?

4. Uit hoeveel personen bestaat uw huishouden?

4a. Hoeveel van deze personen zijn kinderen (<18)?

5. Wat is uw hoogst behaalde opleidingsniveau?

6. In welke sector werkt u?

6a. Indien u 'anders' geantwoord heeft, kunt u hier invullen wat u bedoelt.

7. Wat is uw netto jaarinkomen?

Appendix C – English translation of the participatory mapping survey (made using Maptionnaire platform)

My Landscape Preferences: Drentsche Aa
Welcome tp the 'My Landscape Preferences: Drentsche Aa' interactive questionnaire!

As a resident of the Drentsche Aa National Park, you can use this questionnaire to share what kind of landscape in the Drentsche Aa area is of value to you. You can indicate these landscapes on the map. *Questions about yourself and the indicated landscapes will be asked in four parts.*

By participating in this research you help me to graduate from the Faculty of Spatial Sciences of the University of Groningen. The results of the questionnaire will be used for my bachelor thesis titled 'Socio-Cultural Valuation of Perceived Ecosystem Services: A Drentsche Aa Case Study'.

Your answers will be treated confidentiality and are only available to me, the researcher. The answers will be kept until August 2022.
Privacy-sensitive information such as your name, IP address or e-mail address is not collected. You will be asked for the global location of your home. You don't have to answer exactly here. *All collected data will not be traceable to you.* ***By continuing this questionnaire, you agree to these conditions.***

For questions or comments, please contact me, Marie-Anne Prosman.
m.a.prosman@student.rug.nl

It will take approximately 5 minutes to complete the questionnaire. Happy mapping!

Part 1. Basic Information
1. In what year were you born?

2. What gender do you identify with?
- Female
- Male
- Other

3. What are the four digits of your postcode?

4. Where do you live?
Place the tool below in the cell on the map in which your home is located.

If you wish, you can adapt the map to street map or satellite by clicking on the icon in the top right corner. Scrolling down and clicking on a different map type under 'base maps'.
In addition, you can zoom in and out by pointing your mouse at the map (without clicking), and scrolling. You can also move the map by holding down your mouse and dragging the map.

Your Home

This question can be skipped.

This information is used to calculate the accessibility of the favourite places you have indicated. An approximation of the location of your home is sufficient for this. The cells are one square kilometre in size. As a result, the exact location cannot be traced.

Part 2: Favourite Places

1. What are your favourite places?

Here you can indicate which places in the Drentsche Aa landscape (outlined in red) you find special. You can use the button multiple times and can indicate as many points as you want.

If you wish, you can change the map to street map or satellite by clicking on the icon in the top right corner, scrolling down and clicking on a different map type under 'base maps'.
In addition, you can zoom in and out by pointing your mouse at the map (without clicking), and scrolling. You can also move the map by holding down your mouse and dragging the map.

Favourite Place

2. Describe the properties of this place in one word. For example: forest; dolmen; grassland; and so forth.

3. What do you like to do in this place?

- ☐ I walk, cycle, swim or do sports here; of I fish (for recreation).
- ☐ I do wild picking of fish (for consumption).
- ☐ I spend time here with other people.
- ☐ I produce agricultural products here.
- ☐ I buy agricultural products here.
- ☐ I don't do any activities here.
- ☐ Other

3a. If you answered 'other', please briefly describe what you mean.

4. What do you appreciate about this place?

- ☐ I appreciate this place because here I can do the activities I filled in under question 3.

- [ ] I enjoy viewing this landscape.
- [ ] I appreciate the local culture, local history of the cultural heritage that this place represents.
- [ ] I feel inspired because of this place.
- [ ] I appreciate the different plants and animals in this place.
- [ ] I appreciate this place because it offers clean water, clean air/or fertile soil.
- [ ] This place has intrinsic value.
- [ ] Other.

4a. If you answered 'other', please briefly describe what you mean.

5. How important is this place to you?

- ○ Really very important
- ○ Very important
- ○ Important (medium)
- ○ A little important
- ○ Not important

Part 3

Describe what comes to mind when you think of the Drentsche Aa. Think, for example, of the Drentsche Aa landscape in its entirety, and values that can therefore not simply be assigned to points on the map.

Deel 4: Personal Information

1. For how many years have you lived in Drentsche Aa area?

2. How well do you know the Drentsche Aa area?

- ○ Very well
- ○ Well
- ○ Medium
- ○ Poorly
- ○ Very poorly

3. Do you own land in this area?

- ○ Yes
- ○ No

3a. If you own land in this area, what is its primary function?

4. How many people does your household consist of?

4a. How many of these persons are children (<18)?

5. What is your highest achieved educational level?

6. In which sector do you work?

6a. If you answered 'other', please briefly describe what you mean.

7. What is your net yearly income?

Appendix D – Respondent Characteristics

Table D.1. Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	33	55,9	55,9	55,9
	Female	26	44,1	44,1	100,0
	Total	59	100,0	100,0	

Table D.2.1 Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<35	14	23,7	23,7	23,7
	35-49	10	16,9	16,9	40,7
	50-64	21	35,6	35,6	76,3
	65+	14	23,7	23,7	100,0
	Total	59	100,0	100,0	

Table D.2.2 Age

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	25-	7	6,1	6,1	6,1
	26-64	76	66,1	66,1	72,2
	65+	32	27,8	27,8	100,0
	Total	59	100,0	100,0	

Table D.3. Highest obtained educational level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary Education	7	11,9	18,6	18,6
	MBO	8	13,6	18,6	37,2
	HBO	22	37,3	51,2	88,4
	University	6	10,2	14,0	100,0
	Total	43	72,9	100,0	
Missing	System	16	27,1		
Total		59	100,0		

Table D.4. Income level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lower than modal (30.000)	15	25,4	46,9	46,9
	Higher than modal (30.000)	17	28,8	53,1	100,0
	Total	32	54,2	100,0	
Missing	System	27	45,8		
Total		59	100,0		

Table D.5. Land ownership

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	29	49,2	67,4	67,4
	Yes	14	23,7	32,6	100,0
	Total	43	72,9	100,0	
Missing	System	16	27,1		
Total		59	100,0		

Table D.6. Years of Residence

	Frequency	Percent	Valid Percent	Cumulative Percent
<=5	8	13,6	24,2	24,2
6-15	6	10,2	18,2	42,4
16-25	7	11,9	21,2	63,6
26-35	3	5,1	9,1	72,7
>35	9	15,3	27,3	100,0
Total	33	55,9	100,0	
System	26	44,1		
Total	59	100,0		

Table D.7. Self-estimated knowledge of the Drentsche Aa area

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Poorly	0	0,0	0,0	0,0
	Poorly	3	5,1	7,0	7,0
	Medium	7	11,9	16,3	23,3
	Well	23	39,0	53,5	76,8
	Very well	10	16,9	23,3	100,0
	Total	43	72,9	100,0	
Missing	System	16	27,1		
Total		59	100,0		

Appendix E – Nearest Neighbour Statistics

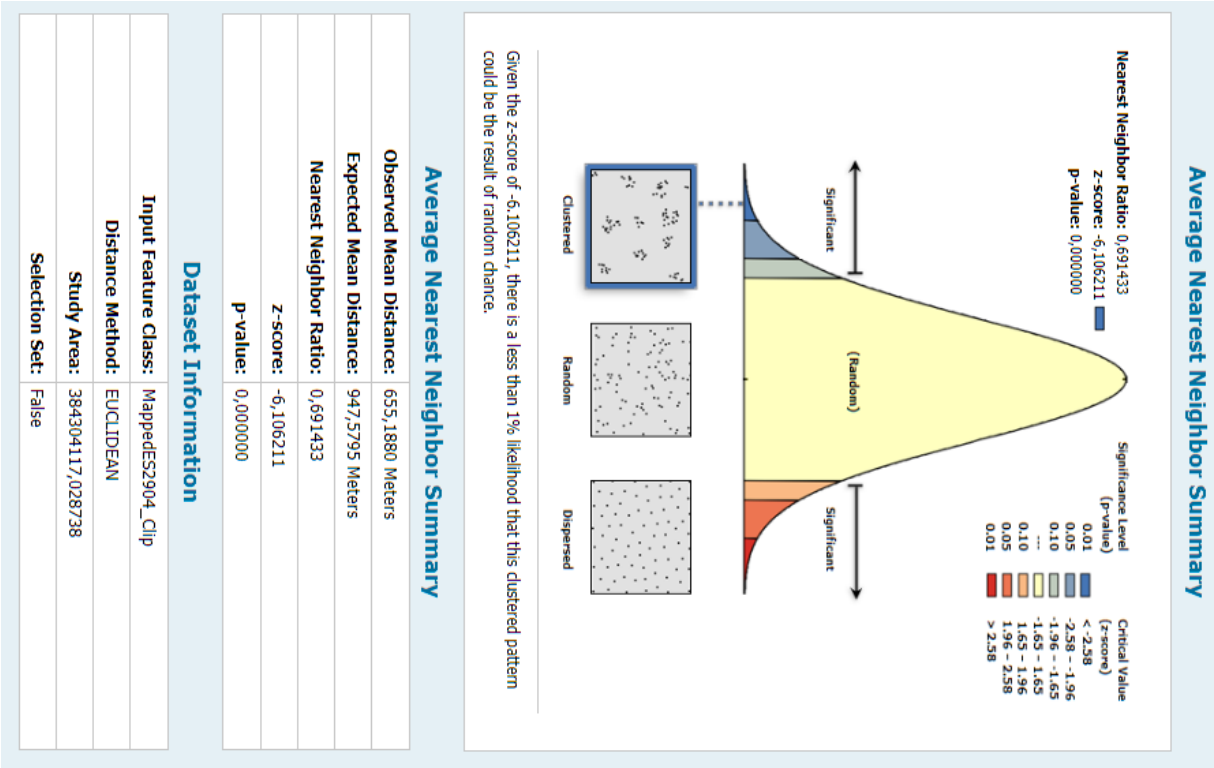


Figure D.1. Nearest Neighbour Statistics Mapped ES overall.

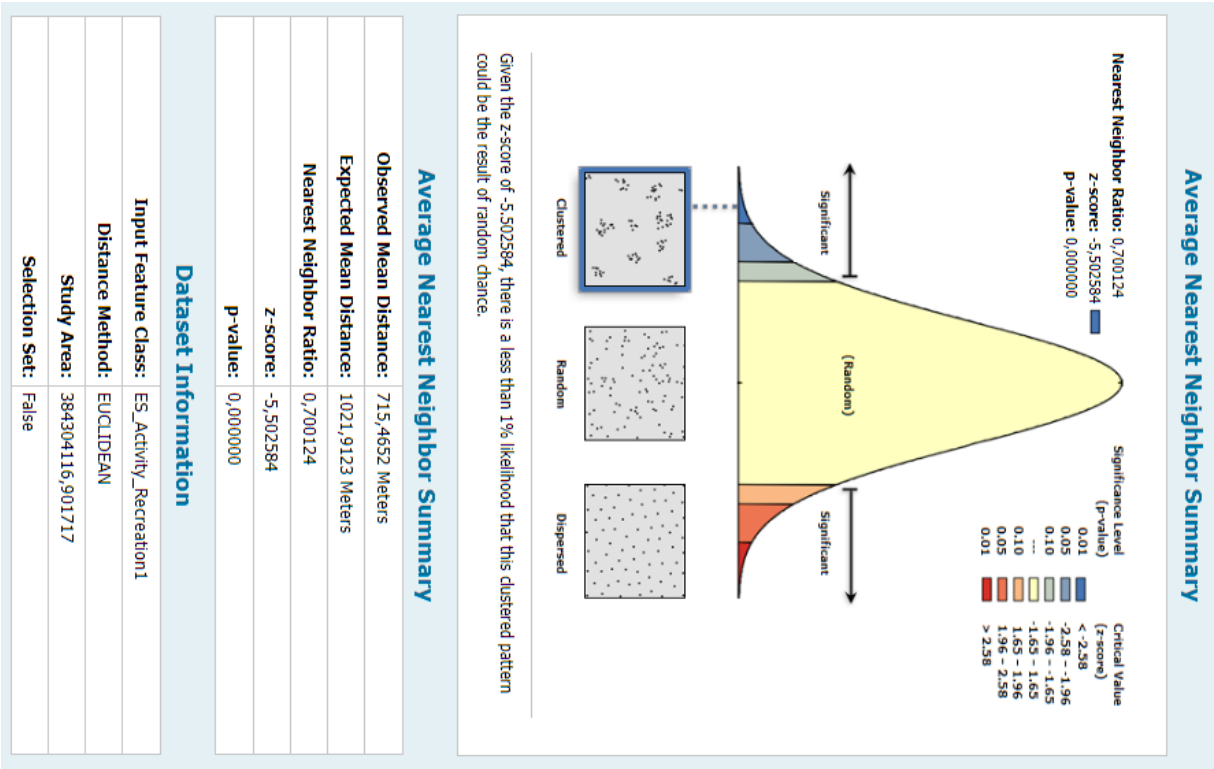
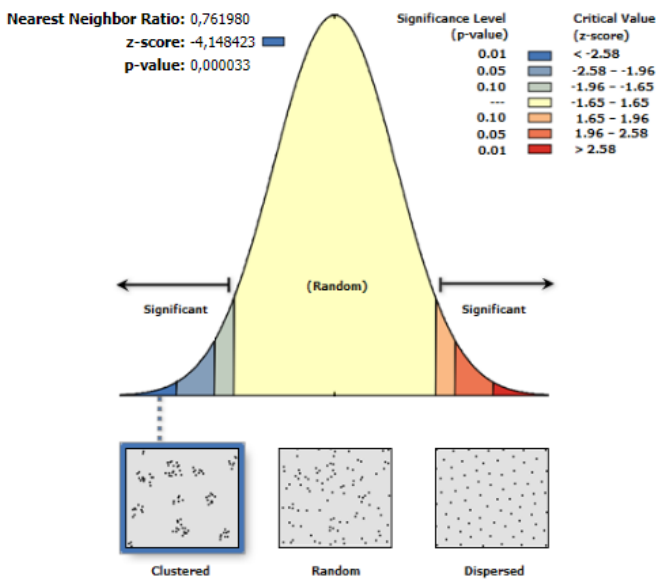


Figure D.2. Nearest Neighbour Statistics Recreational Mapped ES.

Average Nearest Neighbor Summary



Given the z-score of -4.148423, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Average Nearest Neighbor Summary

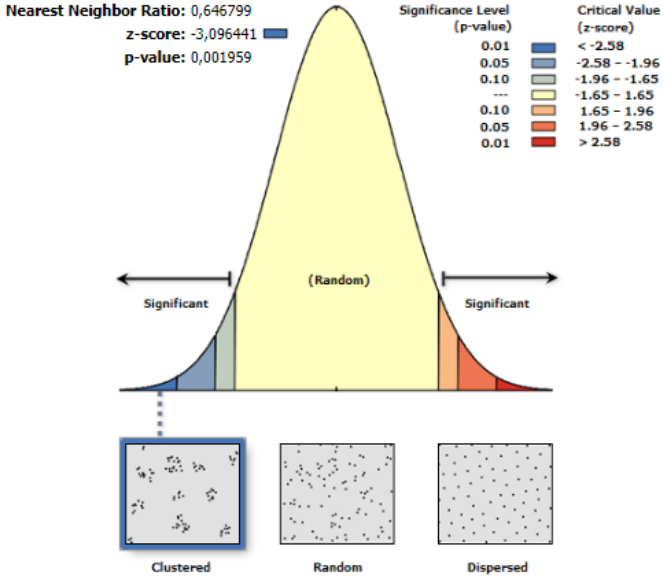
Observed Mean Distance:	732,3594 Meters
Expected Mean Distance:	961,1266 Meters
Nearest Neighbor Ratio:	0,761980
z-score:	-4,148423
p-value:	0,000033

Dataset Information

Input Feature Class:	ES_Valuation_EastheticValues1
Distance Method:	EUCLIDEAN
Study Area:	306689756,676594
Selection Set:	False

Figure D.3. Nearest Neighbour Statistics Aesthetical mapped ES.

Average Nearest Neighbor Summary



Given the z-score of -3.096441, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Average Nearest Neighbor Summary

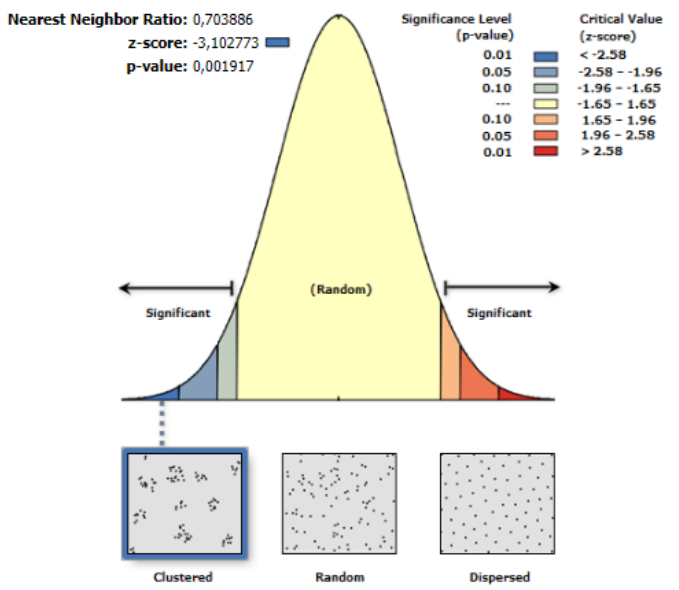
Observed Mean Distance:	982,9096 Meters
Expected Mean Distance:	1519,6530 Meters
Nearest Neighbor Ratio:	0,646799
z-score:	-3,096441
p-value:	0,001959

Dataset Information

Input Feature Class:	ES_Inspiration1
Distance Method:	EUCLIDEAN
Study Area:	193985005,796343
Selection Set:	False

Figure D.4. Nearest Neighbour Statistics Inspirational mapped ES.

Average Nearest Neighbor Summary



Given the z-score of -3.102773, there is a less than 1% likelihood that this clustered pattern could be the result of random chance.

Average Nearest Neighbor Summary

Observed Mean Distance:	936,0233 Meters
Expected Mean Distance:	1329,7933 Meters
Nearest Neighbor Ratio:	0,703886
z-score:	-3,102773
p-value:	0,001917

Dataset Information

Input Feature Class:	ES_Biodiversity1
Distance Method:	EUCLIDEAN
Study Area:	212202010,751551
Selection Set:	False

Figure D.5. Nearest Neighbour Statistics Mapped ES Biodiversity.

Appendix F – Binary Logistic Regressions Sub question 1 (respondent characteristics as determinants for ES)

F.1. Categorical Variable Codings for all regressions in this Appendix.
For age, educational level and self-estimated knowledge, dummy variables were created for each category. The reference categories for these variables are <35 years old, secondary education and medium knowledge respectively.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Categorical Variables Codings

			Parameter coding			
		Frequency	(1)	(2)	(3)	(4)
< 5, 6-15, 16-25, 26-35, 35+	<=5	21	,000	,000	,000	,000
	6-15	6	1,000	,000	,000	,000
	16-25	9	,000	1,000	,000	,000
	26-35	3	,000	,000	1,000	,000
	>35	11	,000	,000	,000	1,000
Higher or lower than modal income	Lower than modal (30.000)	28	,000			
	Higher than modal (30.000)	22	1,000			
Land ownership	No	33	,000			
	Yes	17	1,000			
2. Wat is uw geslacht?	Female	24	1,000			
	Male	26	,000			

F.2. Binary Logistic Regression for the Recreation benefit type (Method = Enter)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	50	43,1
	Missing Cases	66	56,9
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).		Percentage
	Observed		No	Yes	Correct
Step 0	Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).	No	0	2	,0
		Yes	0	48	100,0
	Overall Percentage				96,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	3,178	,722	19,392	1	,000	24,000

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	2. Wat is uw geslacht?(1)	2,257	1	,133
		Age 35-49	,624	1	,430
		Age 50-64	,624	1	,430
		Age 65+	,588	1	,443
		MBO	,284	1	,594
		HBO	,087	1	,768
		University	,310	1	,578

	Higher or lower than modal income(1)	2,652	1	,103
	Land ownership(1)	4,044	1	,044
	< 5, 6-15, 16-25, 26-35, 35+	4,624	4	,328
	< 5, 6-15, 16-25, 26-35, 35+ (1)	2,849	1	,091
	< 5, 6-15, 16-25, 26-35, 35+ (2)	,457	1	,499
	< 5, 6-15, 16-25, 26-35, 35+ (3)	,133	1	,715
	< 5, 6-15, 16-25, 26-35, 35+ (4)	,952	1	,329
	very well	1,792	1	,181
	well	,238	1	,626
Overall Statistics		20,204	15	,164

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	14,022	15	,524
	Block	14,022	15	,524
	Model	14,022	15	,524

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	2,773[a]	,245	,857

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Classification Table[a]

			Predicted		
			Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).		Percentage
	Observed		No	Yes	Correct
Step 1	Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).	No	1	1	50,0
		Yes	0	48	100,0

	Overall Percentage	98,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	2. Wat is uw geslacht?(1)	,535	28435,146	,000	1	1,000	1,708
	Age 35-49	-36,979	50735,093	,000	1	,999	,000
	Age 50-64	-19,983	46158,120	,000	1	1,000	,000
	Age 65+	-25,512	91849,624	,000	1	1,000	,000
	MBO	-5,611	109704,640	,000	1	1,000	,004
	HBO	15,209	101764,898	,000	1	1,000	4027682,828
	University	12,557	143729,969	,000	1	1,000	284203,793
	Higher or lower than modal income(1)	-14,378	90242,817	,000	1	1,000	,000
	Land ownership(1)	-22,751	48744,606	,000	1	1,000	,000
	< 5, 6-15, 16-25, 26-35, 35+			,000	4	1,000	
	< 5, 6-15, 16-25, 26-35, 35+ (1)	-3,720	51476,827	,000	1	1,000	,024
	< 5, 6-15, 16-25, 26-35, 35+ (2)	19,918	49556,044	,000	1	1,000	446844850,864
	< 5, 6-15, 16-25, 26-35, 35+ (3)	39,164	58521,028	,000	1	,999	102067215874657232,000
	< 5, 6-15, 16-25, 26-35, 35+ (4)	17,352	74566,640	,000	1	1,000	34363181,564
	very well	-1,610	37082,123	,000	1	1,000	,200
	well	19,738	33257,568	,000	1	1,000	373153401,371
	Constant	25,625	107336,784	,000	1	1,000	134577936958,226

a. Variable(s) entered on step 1: 2. Wat is uw geslacht?, Age 35-49, Age 50-64, Age 65+, MBO, HBO, University, Higher or lower than modal income, Land ownership, < 5, 6-15, 16-25, 26-35, 35+ , very well, well.

F.3. Binary Logistic Regression for the Social Interaction benefit type (Method = Forward)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	50	43,1
	Missing Cases	66	56,9
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik besteed hier tijd met andere mensen.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik besteed hier tijd met andere mensen.	No	37	0	100,0
		Yes	13	0	,0
	Overall Percentage				74,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1,046	,322	10,525	1	,001	,351

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	2. Wat is uw geslacht?(1)	11,435	1	,001
		Age 35-49	11,532	1	,001
		Age 50-64	6,172	1	,013
		Age 65+	,448	1	,503
		MBO	2,041	1	,153
		HBO	7,640	1	,006
		University	7,044	1	,008
		Higher or lower than modal income(1)	5,838	1	,016
		Land ownership(1)	5,418	1	,020
		< 5, 6-15, 16-25, 26-35, 35+	9,245	4	,055

	< 5, 6-15, 16-25, 26-35, 35+ (1)	2,396	1	,122
	< 5, 6-15, 16-25, 26-35, 35+ (2)	1,941	1	,164
	< 5, 6-15, 16-25, 26-35, 35+ (3)	,089	1	,765
	< 5, 6-15, 16-25, 26-35, 35+ (4)	4,955	1	,026
	very well	,005	1	,944
	well	,934	1	,334
Overall Statistics		23,705	15	,070

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	10,676	1	,001
	Block	10,676	1	,001
	Model	10,676	1	,001
Step 2	Step	7,320	1	,007
	Block	17,996	2	,000
	Model	17,996	2	,000
Step 3	Step	4,076	1	,043
	Block	22,072	3	,000
	Model	22,072	3	,000
Step 4[a]	Step	-1,914	1	,167
	Block	20,159	2	,000
	Model	20,159	2	,000

a. A negative Chi-squares value indicates that the Chi-squares value has decreased from the previous step.

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	46,630[a]	,192	,282
2	39,309[b]	,302	,443
3	35,233[b]	,357	,523
4	37,147[b]	,332	,486

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

b. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Ik besteed hier tijd met andere mensen.		Percentage
	Observed		No	Yes	Correct
Step 1	Ik besteed hier tijd met andere mensen.	No	32	5	86,5
		Yes	5	8	61,5
	Overall Percentage				80,0
Step 2	Ik besteed hier tijd met andere mensen.	No	34	3	91,9
		Yes	5	8	61,5
	Overall Percentage				84,0
Step 3	Ik besteed hier tijd met andere mensen.	No	35	2	94,6
		Yes	5	8	61,5
	Overall Percentage				86,0
Step 4	Ik besteed hier tijd met andere mensen.	No	30	7	81,1
		Yes	2	11	84,6
	Overall Percentage				82,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Age 35-49	2,326	,746	9,729	1	,002	10,240
	Constant	-1,856	,481	14,901	1	,000	,156
Step 2[b]	2. Wat is uw geslacht?(1)	-2,527	1,129	5,007	1	,025	,080
	Age 35-49	1,749	,814	4,618	1	,032	5,750
	Constant	-,907	,555	2,674	1	,102	,404
Step 3[c]	2. Wat is uw geslacht?(1)	-2,640	1,157	5,204	1	,023	,071
	Age 35-49	1,207	,875	1,905	1	,167	3,345
	HBO	-2,111	1,190	3,147	1	,076	,121
	Constant	-,159	,661	,058	1	,810	,853
Step 4[c]	2. Wat is uw geslacht?(1)	-2,960	1,132	6,838	1	,009	,052
	HBO	-2,512	1,150	4,771	1	,029	,081
	Constant	,471	,481	,959	1	,327	1,601

a. Variable(s) entered on step 1: Age 35-49.

b. Variable(s) entered on step 2: 2. Wat is uw geslacht?.
c. Variable(s) entered on step 3: HBO.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Age 35-49	-28,774	10,918	1	,001
Step 2	2. Wat is uw geslacht?	-23,941	8,572	1	,003
	Age 35-49	-22,122	4,934	1	,026
Step 3	2. Wat is uw geslacht?	-21,883	8,533	1	,003
	Age 35-49	-18,582	1,931	1	,165
	HBO	-19,810	4,386	1	,036
Step 4	2. Wat is uw geslacht?	-24,939	12,732	1	,000
	HBO	-22,363	7,580	1	,006

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	2. Wat is uw geslacht?(1)	7,113	1	,008
		Age 50-64	3,132	1	,077
		Age 65+	,292	1	,589
		MBO	4,034	1	,045
		HBO	3,669	1	,055
		University	,340	1	,560
		Higher or lower than modal income(1)	2,535	1	,111
		Land ownership(1)	3,533	1	,060
		< 5, 6-15, 16-25, 26-35, 35+	11,549	4	,021
		< 5, 6-15, 16-25, 26-35, 35+ (1)	2,303	1	,129
		< 5, 6-15, 16-25, 26-35, 35+ (2)	9,735	1	,002
		< 5, 6-15, 16-25, 26-35, 35+ (3)	,260	1	,610
		< 5, 6-15, 16-25, 26-35, 35+ (4)	2,446	1	,118
		very well	,218	1	,640
		well	,039	1	,844

	Overall Statistics		18,063	14	,204
Step 2	Variables	Age 50-64	2,677	1	,102
		Age 65+	,172	1	,678
		MBO	2,289	1	,130
		HBO	3,866	1	,049
		University	,331	1	,565
		Higher or lower than modal income(1)	3,570	1	,059
		Land ownership(1)	1,158	1	,282
		< 5, 6-15, 16-25, 26-35, 35+	8,448	4	,076
		< 5, 6-15, 16-25, 26-35, 35+ (1)	,850	1	,357
		< 5, 6-15, 16-25, 26-35, 35+ (2)	7,562	1	,006
		< 5, 6-15, 16-25, 26-35, 35+ (3)	,042	1	,838
		< 5, 6-15, 16-25, 26-35, 35+ (4)	3,238	1	,072
		very well	,126	1	,723
		well	,615	1	,433
	Overall Statistics		13,484	13	,411
Step 3	Variables	Age 50-64	1,139	1	,286
		Age 65+	,456	1	,500
		MBO	,369	1	,544
		University	,119	1	,730
		Higher or lower than modal income(1)	1,134	1	,287
		Land ownership(1)	,825	1	,364
		< 5, 6-15, 16-25, 26-35, 35+	5,911	4	,206
		< 5, 6-15, 16-25, 26-35, 35+ (1)	,410	1	,522
		< 5, 6-15, 16-25, 26-35, 35+ (2)	4,694	1	,030
		< 5, 6-15, 16-25, 26-35, 35+ (3)	,831	1	,362
		< 5, 6-15, 16-25, 26-35, 35+ (4)	3,102	1	,078
		very well	,512	1	,474
		well	,856	1	,355
	Overall Statistics		13,361	12	,343
Step 4[a]	Variables	Age 35-49	1,966	1	,161

	Age 50-64	1,512	1	,219
	Age 65+	,013	1	,909
	MBO	,026	1	,872
	University	,585	1	,444
	Higher or lower than modal income(1)	2,390	1	,122
	Land ownership(1)	1,365	1	,243
	< 5, 6-15, 16-25, 26-35, 35+	6,389	4	,172
	< 5, 6-15, 16-25, 26-35, 35+ (1)	,276	1	,599
	< 5, 6-15, 16-25, 26-35, 35+ (2)	1,224	1	,269
	< 5, 6-15, 16-25, 26-35, 35+ (3)	2,139	1	,144
	< 5, 6-15, 16-25, 26-35, 35+ (4)	4,365	1	,037
	very well	,197	1	,657
	well	,183	1	,668
Overall Statistics		14,437	13	,344

a. Variable(s) removed on step 4: Age 35-49.

F.4. Binary Logistic Regression for the Aesthetic Value benefit type (Method = Forward)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	50	43,1
	Missing Cases	66	56,9
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik geniet ervan dit landschap te bekijken.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik geniet ervan dit landschap te bekijken.	No	0	5	,0
		Yes	0	45	100,0
	Overall Percentage				90,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	2,197	,471	21,725	1	,000	9,000

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	2. Wat is uw geslacht?(1)	,321	1	,571
		Age 35-49	,104	1	,747
		Age 50-64	,104	1	,747
		Age 65+	4,675	1	,031
		MBO	,758	1	,384
		HBO	,000	1	1,000
		University	2,002	1	,157
		Higher or lower than modal income(1)	1,299	1	,254
		Land ownership(1)	,485	1	,486

	< 5, 6-15, 16-25, 26-35, 35+	2,068	4	,723
	< 5, 6-15, 16-25, 26-35, 35+ (1)	,337	1	,562
	< 5, 6-15, 16-25, 26-35, 35+ (2)	1,220	1	,269
	< 5, 6-15, 16-25, 26-35, 35+ (3)	,355	1	,552
	< 5, 6-15, 16-25, 26-35, 35+ (4)	,013	1	,909
	very well	,066	1	,797
	well	,485	1	,486
Overall Statistics		24,534	15	,057

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3,840	1	,050
	Block	3,840	1	,050
	Model	3,840	1	,050
Step 2	Step	3,734	1	,053
	Block	7,574	2	,023
	Model	7,574	2	,023

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	28,668[a]	,074	,155
2	24,935[a]	,141	,294

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Ik geniet ervan dit landschap te bekijken.		Percentage
	Observed		No	Yes	Correct
Step 1	Ik geniet ervan dit landschap te bekijken.	No	0	5	,0
		Yes	0	45	100,0
	Overall Percentage				90,0

Step 2	Ik geniet ervan dit landschap te bekijken.	No	2	3	40,0
		Yes	0	45	100,0
	Overall Percentage				94,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Age 65+	-1,937	,993	3,807	1	,051	,144
	Constant	2,918	,726	16,154	1	,000	18,500
Step 2[b]	Age 65+	-2,751	1,278	4,638	1	,031	,064
	University	-2,233	1,279	3,045	1	,081	,107
	Constant	4,247	1,273	11,126	1	,001	69,910

a. Variable(s) entered on step 1: Age 65+.

b. Variable(s) entered on step 2: University.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Age 65+	-16,498	4,327	1	,038
Step 2	Age 65+	-15,929	6,923	1	,009
	University	-14,580	4,225	1	,040

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	2. Wat is uw geslacht?(1)	,192	1	,662
		Age 35-49	,264	1	,608
		Age 50-64	,264	1	,608
		MBO	,383	1	,536
		HBO	,018	1	,894
		University	3,962	1	,047
		Higher or lower than modal income(1)	2,122	1	,145
		Land ownership(1)	,035	1	,851
		< 5, 6-15, 16-25, 26-35, 35+	3,158	4	,532
		< 5, 6-15, 16-25, 26-35, 35+ (1)	,565	1	,452

		< 5, 6-15, 16-25, 26-35, 35+ (2)	1,865	1	,172
		< 5, 6-15, 16-25, 26-35, 35+ (3)	,517	1	,472
		< 5, 6-15, 16-25, 26-35, 35+ (4)	,000	1	,993
		very well	,295	1	,587
		well	,331	1	,565
	Overall Statistics		14,215	14	,434
Step 2	Variables	2. Wat is uw geslacht?(1)	,155	1	,694
		Age 35-49	,301	1	,583
		Age 50-64	1,341	1	,247
		MBO	,099	1	,753
		HBO	1,833	1	,176
		Higher or lower than modal income(1)	,761	1	,383
		Land ownership(1)	1,044	1	,307
		< 5, 6-15, 16-25, 26-35, 35+	2,646	4	,619
		< 5, 6-15, 16-25, 26-35, 35+ (1)	1,497	1	,221
		< 5, 6-15, 16-25, 26-35, 35+ (2)	1,104	1	,293
		< 5, 6-15, 16-25, 26-35, 35+ (3)	,281	1	,596
		< 5, 6-15, 16-25, 26-35, 35+ (4)	,187	1	,666
		very well	,712	1	,399
		well	,004	1	,951
	Overall Statistics		19,549	13	,107

F.5. Binary Logistic Regression for the Cultural Heritage benefit type (Method = Enter)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	50	43,1
	Missing Cases	66	56,9
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.	No	33	0	100,0
		Yes	17	0	,0
	Overall Percentage				66,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-,663	,299	4,936	1	,026	,515

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	2. Wat is uw geslacht?(1)	1,666	1	,197
		Age 35-49	,082	1	,775
		Age 50-64	,156	1	,693
		Age 65+	,035	1	,851
		MBO	,778	1	,378
		HBO	1,203	1	,273

	University	2,684	1	,101
	Higher or lower than modal income(1)	,098	1	,754
	Land ownership(1)	1,258	1	,262
	< 5, 6-15, 16-25, 26-35, 35+	4,244	4	,374
	< 5, 6-15, 16-25, 26-35, 35+ (1)	,913	1	,339
	< 5, 6-15, 16-25, 26-35, 35+ (2)	2,273	1	,132
	< 5, 6-15, 16-25, 26-35, 35+ (3)	1,644	1	,200
	< 5, 6-15, 16-25, 26-35, 35+ (4)	,035	1	,851
	very well	3,447	1	,063
	well	,019	1	,890
Overall Statistics		18,410	15	,242

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	25,780	15	,040
	Block	25,780	15	,040
	Model	25,780	15	,040

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	38,323[a]	,403	,558

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Classification Table[a]

		Predicted		
		Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.		Percentage
	Observed	No	Yes	Correct
Step 1	No	32	1	97,0

	Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.	Yes	8	9	52,9
	Overall Percentage				82,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	2. Wat is uw geslacht?(1)	-,151	1,636	,009	1	,927	,860
	Age 35-49	-1,674	2,338	,513	1	,474	,187
	Age 50-64	20,559	10100,234	,000	1	,998	848451231,643
	Age 65+	,373	2,708	,019	1	,890	1,452
	MBO	-35,418	14838,820	,000	1	,998	,000
	HBO	19,112	10987,234	,000	1	,999	199653303,065
	University	22,398	10987,234	,000	1	,998	5339707036,476
	Higher or lower than modal income(1)	,031	2,200	,000	1	,989	1,031
	Land ownership(1)	-1,334	2,870	,216	1	,642	,263
	< 5, 6-15, 16-25, 26-35, 35+			,360	4	,986	
	< 5, 6-15, 16-25, 26-35, 35+ (1)	1,196	1,993	,360	1	,549	3,306
	< 5, 6-15, 16-25, 26-35, 35+ (2)	58,555	18463,741	,000	1	,997	269357442758381240000000000,000
	< 5, 6-15, 16-25, 26-35, 35+ (3)	-18,025	19093,046	,000	1	,999	,000
	< 5, 6-15, 16-25, 26-35, 35+ (4)	-17,115	10100,234	,000	1	,999	,000
	very well	37,151	14838,820	,000	1	,998	13629766614305628,000
	well	37,945	14838,820	,000	1	,998	30164649356061044,000

Constant	-59,206	18463,741	,000	1	,997	,000

a. Variable(s) entered on step 1: 2. Wat is uw geslacht?, Age 35-49, Age 50-64, Age 65+, MBO, HBO, University, Higher or lower than modal income, Land ownership, < 5, 6-15, 16-25, 26-35, 35+ , very well, well.

F.6. Binary Logistic Regression for the Inspiration benefit type (Method = Enter)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	50	43,1
	Missing Cases	66	56,9
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik voel me geïnspireerd door deze plek.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik voel me geïnspireerd door deze plek.	No	39	0	100,0
		Yes	11	0	,0
	Overall Percentage				78,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1,266	,341	13,744	1	,000	,282

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	2. Wat is uw geslacht?(1)	,037	1	,848
		Age 35-49	2,096	1	,148
		Age 50-64	,012	1	,913
		Age 65+	,120	1	,729
		MBO	3,115	1	,078
		HBO	,952	1	,329
		University	,123	1	,725
		Higher or lower than modal income(1)	,012	1	,912
		Land ownership(1)	1,572	1	,210

	< 5, 6-15, 16-25, 26-35, 35+	4,759	4	,313
	< 5, 6-15, 16-25, 26-35, 35+ (1)	1,923	1	,166
	< 5, 6-15, 16-25, 26-35, 35+ (2)	3,222	1	,073
	< 5, 6-15, 16-25, 26-35, 35+ (3)	,239	1	,625
	< 5, 6-15, 16-25, 26-35, 35+ (4)	,120	1	,729
	very well	4,351	1	,037
	well	2,653	1	,103
Overall Statistics		21,518	15	,121

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	23,416	15	,076
	Block	23,416	15	,076
	Model	23,416	15	,076

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	29,275[a]	,374	,574

a. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Classification Table[a]

			Predicted		
			Ik voel me geïnspireerd door deze plek.		Percentage
	Observed		No	Yes	Correct
Step 1	Ik voel me geïnspireerd door deze plek.	No	37	2	94,9
		Yes	4	7	63,6
	Overall Percentage				88,0

a. The cut value is ,500

Variables in the Equation

	B	S.E.	Wald	df	Sig.	Exp(B)

Step 1[a]	2. Wat is uw geslacht?(1)	2,065	2,129	,940	1	,332	7,885
	Age 35-49	-6,180	2,481	6,205	1	,013	,002
	Age 50-64	-1,875	2,178	,741	1	,389	,153
	Age 65+	-5,975	2,874	4,321	1	,038	,003
	MBO	-1,744	3,072	,322	1	,570	,175
	HBO	-,527	3,733	,020	1	,888	,591
	University	2,230	3,772	,349	1	,554	9,297
	Higher or lower than modal income(1)	1,345	2,184	,380	1	,538	3,840
	Land ownership(1)	-4,019	2,622	2,349	1	,125	,018
	< 5, 6-15, 16-25, 26-35, 35+			3,195	4	,526	
	< 5, 6-15, 16-25, 26-35, 35+ (1)	-20,711	14732,257	,000	1	,999	,000
	< 5, 6-15, 16-25, 26-35, 35+ (2)	2,844	3,423	,690	1	,406	17,190
	< 5, 6-15, 16-25, 26-35, 35+ (3)	4,444	2,683	2,744	1	,098	85,118
	< 5, 6-15, 16-25, 26-35, 35+ (4)	-1,279	3,649	,123	1	,726	,278
	very well	1,657	3,110	,284	1	,594	5,241
	well	2,602	2,858	,829	1	,363	13,495
	Constant	-1,348	4,063	,110	1	,740	,260

a. Variable(s) entered on step 1: 2. Wat is uw geslacht?, Age 35-49, Age 50-64, Age 65+, MBO, HBO, University, Higher or lower than modal income, Land ownership, < 5, 6-15, 16-25, 26-35, 35+ , very well, well.

F.7. Binary Logistic Regression for the Intrinsic Value benefit type (Method = Forward)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	50	43,1
	Missing Cases	66	56,9
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Deze plek heeft intrinsieke waarde.		Percentage
	Observed		No	Yes	Correct
Step 0	Deze plek heeft intrinsieke waarde.	No	40	0	100,0
		Yes	10	0	,0
	Overall Percentage				80,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1,386	,354	15,374	1	,000	,250

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	2. Wat is uw geslacht?(1)	,321	1	,571
		Age 35-49	1,663	1	,197
		Age 50-64	,104	1	,747
		Age 65+	1,049	1	,306
		MBO	,758	1	,384
		HBO	2,083	1	,149
		University	5,882	1	,015
		Higher or lower than modal income(1)	,081	1	,776
		Land ownership(1)	,201	1	,654

	< 5, 6-15, 16-25, 26-35, 35+	5,199	4	,267
	< 5, 6-15, 16-25, 26-35, 35+ (1)	,047	1	,828
	< 5, 6-15, 16-25, 26-35, 35+ (2)	4,099	1	,043
	< 5, 6-15, 16-25, 26-35, 35+ (3)	,355	1	,552
	< 5, 6-15, 16-25, 26-35, 35+ (4)	,029	1	,864
	very well	5,357	1	,021
	well	7,219	1	,007
Overall Statistics		21,456	15	,123

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	6,899	1	,009
	Block	6,899	1	,009
	Model	6,899	1	,009
Step 2	Step	5,839	1	,016
	Block	12,738	2	,002
	Model	12,738	2	,002

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	43,141[a]	,129	,204
2	37,302[b]	,225	,356

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

b. Estimation terminated at iteration number 20 because maximum iterations has been reached. Final solution cannot be found.

Classification Table[a]

		Predicted		
		Deze plek heeft intrinsieke waarde.		Percentage
	Observed	No	Yes	Correct

Step 1	Deze plek heeft intrinsieke waarde.	No	40	0	100,0
		Yes	10	0	,0
	Overall Percentage				80,0
Step 2	Deze plek heeft intrinsieke waarde.	No	40	0	100,0
		Yes	10	0	,0
	Overall Percentage				80,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	well	-1,946	,781	6,212	1	,013	,143
	Constant	-,357	,493	,524	1	,469	,700
Step 2[b]	University	-19,859	9812,811	,000	1	,998	,000
	well	-1,540	,815	3,575	1	,059	,214
	Constant	-,134	,518	,067	1	,796	,875

a. Variable(s) entered on step 1: well.

b. Variable(s) entered on step 2: University.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	well	-25,292	7,443	1	,006
Step 2	University	-22,314	7,326	1	,007
	well	-20,649	3,996	1	,046

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	2. Wat is uw geslacht?(1)	2,779	1	,096
		Age 35-49	,294	1	,588
		Age 50-64	,130	1	,718
		Age 65+	,843	1	,359
		MBO	,294	1	,588
		HBO	1,574	1	,210
		University	4,018	1	,045
		Higher or lower than modal income(1)	,003	1	,953
		Land ownership(1)	,985	1	,321

		< 5, 6-15, 16-25, 26-35, 35+	2,279	4	,685
		< 5, 6-15, 16-25, 26-35, 35+ (1)	,509	1	,475
		< 5, 6-15, 16-25, 26-35, 35+ (2)	,760	1	,383
		< 5, 6-15, 16-25, 26-35, 35+ (3)	,431	1	,511
		< 5, 6-15, 16-25, 26-35, 35+ (4)	,067	1	,796
		very well	,486	1	,486
	Overall Statistics		15,572	14	,340
Step 2	Variables	2. Wat is uw geslacht?(1)	2,986	1	,084
		Age 35-49	,393	1	,530
		Age 50-64	,057	1	,811
		Age 65+	1,588	1	,208
		MBO	,017	1	,896
		HBO	,091	1	,763
		Higher or lower than modal income(1)	,005	1	,944
		Land ownership(1)	,117	1	,733
		< 5, 6-15, 16-25, 26-35, 35+	,668	4	,955
		< 5, 6-15, 16-25, 26-35, 35+ (1)	,090	1	,764
		< 5, 6-15, 16-25, 26-35, 35+ (2)	,149	1	,699
		< 5, 6-15, 16-25, 26-35, 35+ (3)	,101	1	,751
		< 5, 6-15, 16-25, 26-35, 35+ (4)	,001	1	,970
		very well	1,607	1	,205
	Overall Statistics		14,863	13	,316

F.8. Binary Logistic Regression for the Ecological Value Domain benefit type (Method = Forward)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	50	43,1
	Missing Cases	66	56,9
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Bio_Env		Percentage
	Observed		0	1	Correct
Step 0	Bio_Env	0	30	0	100,0
		1	20	0	,0
	Overall Percentage				60,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-,405	,289	1,973	1	,160	,667

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	2. Wat is uw geslacht?(1)	1,923	1	,166
		Age 35-49	4,435	1	,035
		Age 50-64	,017	1	,895
		Age 65+	,952	1	,329
		MBO	,284	1	,594
		HBO	1,389	1	,239
		University	2,206	1	,137
		Higher or lower than modal income(1)	5,966	1	,015
		Land ownership(1)	6,551	1	,010

	< 5, 6-15, 16-25, 26-35, 35+	5,928	4	,205
	< 5, 6-15, 16-25, 26-35, 35+ (1)	2,020	1	,155
	< 5, 6-15, 16-25, 26-35, 35+ (2)	1,107	1	,293
	< 5, 6-15, 16-25, 26-35, 35+ (3)	,946	1	,331
	< 5, 6-15, 16-25, 26-35, 35+ (4)	,078	1	,780
	very well	,397	1	,529
	well	,015	1	,903
Overall Statistics		23,502	15	,074

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	6,554	1	,010
	Block	6,554	1	,010
	Model	6,554	1	,010

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	60,747[a]	,123	,166

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Bio_Env		Percentage
	Observed		0	1	Correct
Step 1	Bio_Env	0	24	6	80,0
		1	9	11	55,0
	Overall Percentage				70,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Land ownership(1)	1,587	,641	6,137	1	,013	4,889

	Constant	-,981	,391	6,297	1	,012	,375

a. Variable(s) entered on step 1: Land ownership.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Land ownership	-33,652	6,557	1	,010

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	2. Wat is uw geslacht?(1)	,399	1	,527
		Age 35-49	2,833	1	,092
		Age 50-64	,710	1	,399
		Age 65+	,000	1	1,000
		MBO	,344	1	,558
		HBO	,572	1	,450
		University	,618	1	,432
		Higher or lower than modal income(1)	2,874	1	,090
		< 5, 6-15, 16-25, 26-35, 35+	3,695	4	,449
		< 5, 6-15, 16-25, 26-35, 35+ (1)	,242	1	,622
		< 5, 6-15, 16-25, 26-35, 35+ (2)	1,316	1	,251
		< 5, 6-15, 16-25, 26-35, 35+ (3)	1,110	1	,292
		< 5, 6-15, 16-25, 26-35, 35+ (4)	1,603	1	,205
		very well	,831	1	,362
		well	,332	1	,565
	Overall Statistics		19,394	14	,150

Appendix G – Binary Logistic Regressions Sub question 2 (landscape characteristics as determinants for ES)

G.1. Binary Logistic Regression for the Recreation benefit type (Method = Enter; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).		Percentage
	Observed		No	Yes	Correct
Step 0	Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).	No	0	7	,0
		Yes	0	57	100,0
	Overall Percentage				89,1

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	2,097	,401	27,419	1	,000	8,143

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	,369	1	,544

	Per_Agri	,141	1	,708
	Per_Sett_Art	1,912	1	,167
Overall Statistics		2,204	3	,531

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	1,746	3	,627
	Block	1,746	3	,627
	Model	1,746	3	,627

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	42,441[a]	,027	,054

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).		Percentage
	Observed		No	Yes	Correct
Step 1	Ik wandel, fiets, zwem of sport hier; of ik vis (voor recreatie).	No	0	7	,0
		Yes	0	57	100,0
	Overall Percentage				89,1

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distance_M_Network	,000	,000	,120	1	,729	1,000
	Per_Agri	-,006	,012	,227	1	,633	,994
	Per_Sett_Art	-,022	,018	1,385	1	,239	,979
	Constant	2,338	,910	6,605	1	,010	10,357

a. Variable(s) entered on step 1: Distance_M_Network, Per_Agri, Per_Sett_Art.

G.2. Binary Logistic Regression for the Social Interaction benefit type (Method = Enter; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik besteed hier tijd met andere mensen.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik besteed hier tijd met andere mensen.	No	60	0	100,0
		Yes	4	0	,0
	Overall Percentage				93,8

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-2,708	,516	27,501	1	,000	,067

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	,759	1	,384
		Per_Agri	,056	1	,813
		Per_Sett_Art	,706	1	,401
	Overall Statistics		1,314	3	,726

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	3,629	3	,304
	Block	3,629	3	,304
	Model	3,629	3	,304

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	26,296[a]	,055	,148

a. Estimation terminated at iteration number 10 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Ik besteed hier tijd met andere mensen.		Percentage
	Observed		No	Yes	Correct
Step 1	Ik besteed hier tijd met andere mensen.	No	60	0	100,0
		Yes	4	0	,0
	Overall Percentage				93,8

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distance_M_Network	,000	,000	,903	1	,342	1,000
	Per_Agri	,005	,016	,118	1	,731	1,005
	Per_Sett_Art	-,473	,521	,826	1	,364	,623
	Constant	-3,138	1,131	7,698	1	,006	,043

a. Variable(s) entered on step 1: Distance_M_Network, Per_Agri, Per_Sett_Art.

G.3. Binary Logistic Regression for the Harvested Products benefit type (Method = Forward; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Activity_Harvest_New		Percentage
	Observed		No	Yes	Correct
Step 0	Activity_Harvest_New	No	61	0	100,0
		Yes	3	0	,0
	Overall Percentage				95,3

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-3,012	,591	25,945	1	,000	,049

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	,268	1	,605
		Per_Agri	1,568	1	,211
		Per_Sett_Art	8,755	1	,003
	Overall Statistics		11,407	3	,010

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,201	1	,040
	Block	4,201	1	,040
	Model	4,201	1	,040

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	20,018[a]	,064	,202

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Activity_Harvest_New		Percentage
	Observed		No	Yes	Correct
Step 1	Activity_Harvest_New	No	61	0	100,0
		Yes	2	1	33,3
	Overall Percentage				96,9

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Per_Sett_Art**	,043	,020	4,786	1	**,029**	**1,044**
	Constant	-3,683	,804	20,971	1	,000	,025

a. Variable(s) entered on step 1: Per_Sett_Art.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Per_Sett_Art	-12,348	4,678	1	,031

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	Distance_M_Network	1,378	1	,241

Per_Agri	3,701	1	,054
Overall Statistics	4,864	2	,088

G.4. Binary Logistic Regression for the Harvested Products benefit type (Method = Forward; Reference Category for Land Cover = Agriculture)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Activity_Harvest_New		Percentage
	Observed		No	Yes	Correct
Step 0	Activity_Harvest_New	No	61	0	100,0
		Yes	3	0	,0
	Overall Percentage				95,3

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-3,012	,591	25,945	1	,000	,049

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	,268	1	,605
		Per_Sett_Art	8,755	1	,003
		Per_Green	4,121	1	,042
	Overall Statistics		11,045	3	,011

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,201	1	,040
	Block	4,201	1	,040
	Model	4,201	1	,040

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	20,018[a]	,064	,202

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Activity_Harvest_New		Percentage
	Observed		No	Yes	Correct
Step 1	Activity_Harvest_New	No	61	0	100,0
		Yes	2	1	33,3
	Overall Percentage				96,9

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Per_Sett_Art**	,043	,020	4,786	1	**,029**	**1,044**
	Constant	-3,683	,804	20,971	1	,000	,025

a. Variable(s) entered on step 1: Per_Sett_Art.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Per_Sett_Art	-12,348	4,678	1	,031

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	Distance_M_Network	1,378	1	,241
		Per_Green	2,951	1	,086

	Overall Statistics	4,103	2	,129

G.5. Binary Logistic Regression for the Cultural Heritage benefit type (Method = Enter; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.	No	46	0	100,0
		Yes	18	0	,0
	Overall Percentage				71,9

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-,938	,278	11,390	1	,001	,391

Variables not in the Equation

		Score	df	Sig.

Step 0	Variables	Distance_M_Network	,023	1	,879
		Per_Agri	1,906	1	,167
		Per_Sett_Art	,003	1	,955
	Overall Statistics		1,928	3	,587

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	1,911	3	,591
	Block	1,911	3	,591
	Model	1,911	3	,591

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	74,137[a]	,029	,042

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.		Percentage
	Observed		No	Yes	Correct
Step 1	Ik waardeer de lokale cultuur, lokale geschiedenis of het cultureel erfgoed die deze plek representeert.	No	46	0	100,0
		Yes	18	0	,0
	Overall Percentage				71,9

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distance_M_Network	,000	,000	,023	1	,879	1,000
	Per_Agri	,011	,008	1,860	1	,173	1,011
	Per_Sett_Art	-,001	,018	,006	1	,941	,999
	Constant	-1,288	,599	4,627	1	,031	,276

a. Variable(s) entered on step 1: Distance_M_Network, Per_Agri, Per_Sett_Art.

G.6. Binary Logistic Regression for the Inspiration benefit type (Method = Forward; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik voel me geïnspireerd door deze plek.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik voel me geïnspireerd door deze plek.	No	48	0	100,0
		Yes	16	0	,0
	Overall Percentage				75,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1,099	,289	14,483	1	,000	,333

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	1,819	1	,177
		Per_Agri	4,101	1	,043
		Per_Sett_Art	2,370	1	,124
	Overall Statistics		8,948	3	,030

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,052	1	,044
	Block	4,052	1	,044
	Model	4,052	1	,044

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	67,927[a]	,061	,091

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Ik voel me geïnspireerd door deze plek.		Percentage
	Observed		No	Yes	Correct
Step 1	Ik voel me geïnspireerd door deze plek.	No	48	0	100,0
		Yes	16	0	,0
	Overall Percentage				75,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Per_Agri**	,017	,009	3,880	1	**,049**	**1,017**
	Constant	-1,773	,485	13,373	1	,000	,170

a. Variable(s) entered on step 1: Per_Agri.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Per_Agri	-36,027	4,126	1	,042

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	Distance_M_Network	1,732	1	,188
		Per_Sett_Art	3,055	1	,081
	Overall Statistics		5,318	2	,070

G.7. Binary Logistic Regression for the Intrinsic Value benefit type (Method = Forward; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Deze plek heeft intrinsieke waarde.		Percentage
	Observed		No	Yes	Correct
Step 0	Deze plek heeft intrinsieke waarde.	No	48	0	100,0
		Yes	16	0	,0
	Overall Percentage				75,0

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-1,099	,289	14,483	1	,000	,333

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	4,065	1	,044
		Per_Agri	1,948	1	,163
		Per_Sett_Art	1,836	1	,175

	Overall Statistics	8,782	3	,032

Block 1: Method = Forward Stepwise (Conditional)

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,904	1	,027
	Block	4,904	1	,027
	Model	4,904	1	,027

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	67,075[a]	,074	,109

a. Estimation terminated at iteration number 5 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Deze plek heeft intrinsieke waarde.		Percentage
	Observed		No	Yes	Correct
Step 1	Deze plek heeft intrinsieke waarde.	No	48	0	100,0
		Yes	16	0	,0
	Overall Percentage				75,0

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	**Distance_M_Network**	,000	,000	3,888	1	**,049**	**,999**
	Constant	-,140	,521	,073	1	,787	,869

a. Variable(s) entered on step 1: Distance_M_Network.

Model if Term Removed[a]

Variable		Model Log Likelihood	Change in -2 Log Likelihood	df	Sig. of the Change
Step 1	Distance_M_Network	-36,074	5,074	1	,024

a. Based on conditional parameter estimates

Variables not in the Equation

			Score	df	Sig.
Step 1	Variables	Per_Agri	1,495	1	,221
		Per_Sett_Art	3,451	1	,063
	Overall Statistics		4,397	2	,111

G.8. Binary Logistic Regression for the Ecological Valuation domain benefit types (Method = Enter; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
0	0
1	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Bio_Env		Percentage
	Observed		0	1	Correct
Step 0	Bio_Env	0	39	0	100,0
		1	25	0	,0
	Overall Percentage				60,9

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	-,445	,256	3,013	1	,083	,641

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	1,401	1	,237
		Per_Agri	,321	1	,571
		Per_Sett_Art	1,179	1	,278
	Overall Statistics		2,561	3	,464

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	2,905	3	,407
	Block	2,905	3	,407
	Model	2,905	3	,407

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	82,731[a]	,044	,060

a. Estimation terminated at iteration number 4 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Bio_Env		Percentage
	Observed		0	1	Correct
Step 1	Bio_Env	0	38	1	97,4
		1	20	5	20,0
	Overall Percentage				67,2

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distance_M_Network	,000	,000	1,126	1	,289	1,000
	Per_Agri	,005	,008	,431	1	,512	1,005
	Per_Sett_Art	-,023	,024	,875	1	,350	,977
	Constant	-,886	,553	2,568	1	,109	,412

a. Variable(s) entered on step 1: Distance_M_Network, Per_Agri, Per_Sett_Art.

G.9. Binary Logistic Regression for the Aesthetic Value benefit type (Method = Enter; Reference Category for Land Cover = Greenery/Water)

Case Processing Summary

Unweighted Cases[a]		N	Percent
Selected Cases	Included in Analysis	64	55,2
	Missing Cases	52	44,8
	Total	116	100,0
Unselected Cases		0	,0
Total		116	100,0

a. If weight is in effect, see classification table for the total number of cases.

Dependent Variable Encoding

Original Value	Internal Value
No	0
Yes	1

Block 0: Beginning Block

Classification Table[a,b]

			Predicted		
			Ik geniet ervan dit landschap te bekijken.		Percentage
	Observed		No	Yes	Correct
Step 0	Ik geniet ervan dit landschap te bekijken.	No	0	10	,0
		Yes	0	54	100,0
	Overall Percentage				84,4

a. Constant is included in the model.

b. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 0	Constant	1,686	,344	23,996	1	,000	5,400

Variables not in the Equation

			Score	df	Sig.
Step 0	Variables	Distance_M_Network	2,321	1	,128
		Per_Agri	,884	1	,347
		Per_Sett_Art	2,056	1	,152
	Overall Statistics		4,691	3	,196

Block 1: Method = Enter

Omnibus Tests of Model Coefficients

		Chi-square	df	Sig.
Step 1	Step	4,908	3	,179
	Block	4,908	3	,179
	Model	4,908	3	,179

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	50,567[a]	,074	,127

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than ,001.

Classification Table[a]

			Predicted		
			Ik geniet ervan dit landschap te bekijken.		Percentage
	Observed		No	Yes	Correct
Step 1	Ik geniet ervan dit landschap te bekijken.	No	1	9	10,0
		Yes	1	53	98,1
	Overall Percentage				84,4

a. The cut value is ,500

Variables in the Equation

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1[a]	Distance_M_Network	,000	,000	1,897	1	,168	1,000
	Per_Agri	,014	,013	1,223	1	,269	1,014
	Per_Sett_Art	-,011	,018	,351	1	,554	,989
	Constant	,427	,943	,205	1	,651	1,532

a. Variable(s) entered on step 1: Distance_M_Network, Per_Agri, Per_Sett_Art.