University Utrecht

Faculty of Geosciences

Master Sustainable Development

The role of knowledge in stimulating the transition towards nature-inclusive agriculture

Exploring Dutch citizens' knowledge of and intention to contribute to nature-inclusive agriculture

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Summary

One of the primary drivers of worldwide biodiversity loss is the conversion of natural ecosystems into agriculture. Furthermore, scale enlargement, agricultural intensification, and land abandonment have contributed to biodiversity loss. Biodiversity in the Netherlands is declining considerably more than elsewhere in the world. The Ministry of Economic Affairs introduced the concept of "nature-inclusive agriculture" (NiA) in the National Nature Vision, intending to enhance and utilize biodiversity in agricultural areas. It was found that 91% of the Dutch citizens did not know that the leading cause of biodiversity loss is food production. The current study aimed to fill the gap in knowledge about what Dutch citizens know and would like to do to support NIA, by examining Dutch citizens' knowledge, attitude and intention regarding NiA. Knowing this is relevant for society as citizens can play an important role in the transition towards NiA as consumers, volunteers, activists, and voters. The study aimed to answer the following research question: *To what extent does knowledge affect Dutch citizens intention to contribute to NiA?* This research question is answered by performing a literature review and conducting a questionnaire based on a pilot test. The questionnaire is validated through an explorative factor analysis. Supporters of NM were approached (N=1550) as the study was written in collaboration with NM. The results of this study mainly relate to women who are fifty years and older, with a high education level, who are members or donators of NM, who grew up in the countryside, and likely appreciate nature and or (sustainable) agriculture. The interest in nature or (sustainable) agriculture of the supporters of NM is expected to cause higher knowledge and intention results than for the Dutch population. The study showed that supporters of NM indicate that they know something about ecosystem services of NiA but not in much detail. It is expected that supporters know relatively more about ecosystem services that are visible to them in their daily lives or received societal attention as these aspects scored higher. Furthermore, the intention to contribute to NiA is mainly focused on private contributions such as political voting and supporters are less inclined to participate through group contributions such as voluntary work. It was found that knowledge significantly predicts intention but the increase in intention is not only caused by the increase in knowledge but likely also caused by other variables that influence the relationship between knowledge and intention.

Keywords: governance, sustainable agriculture, knowledge, intention

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1. Introduction

1.1 Sustainability issue

Globally, human impacts on the environment such as habitat change, climate change, the spread of invasive species, overexploitation of natural resources, and pollution (Tilman et al., 2017) have threatened 1 million out of an estimated total of eight million animal and plant species with extinction (IPBES, 2019). One of the primary drivers of this worldwide biodiversity loss is the conversion of natural ecosystems into agriculture (Erisman et al., 2016). Furthermore, scale enlargement, agricultural intensification, and land abandonment have contributed to biodiversity loss (Ollerton, Erenler, Edwards, & Crockett, 2014; O'Rourke, Charbonneau, & Poinsot, 2016; Sanderson, Kucharz, Jobda, & Donald, 2013). Therefore, agriculture is a main driver of biodiversity loss. However, agriculture is also negatively impacted by the decline of biodiversity as biodiversity supports "food, nutrition and livelihood security, ecosystem and environmental health, and climate change resilience" (Chaudhary, Bhatta, Aryal, Joshi, & Gauchan, 2020, p. 44).

Planbureau voor de Leefomgeving (PBL) (2014) [Netherlands Environmental Assessment Agency] stated in the report "Balance of the Living Environment 2014" that biodiversity in the Netherlands is declining considerably more than elsewhere in the world. Biodiversity is here expressed in Mean Species Abundance, meaning the average population size of native species in an ecosystem relative to their population size in an undisturbed situation. Globally, more than seventy per cent of the total number of species remains whereas in Europe this number has dwindled to fifty per cent. In the Netherlands biodiversity decreased even more drastically, from a remainder of forty per cent in 1900 to fifteen per cent in 2010. The loss of biodiversity triggers vulnerability for migration of invasive species, which directly influences the resilience and resistance ecosystem processes. Subsequently, altered ecosystem processes, through changing species traits, can change biodiversity further and influence ecosystem services that benefit humanity such as nutritious food and water (Chapin et al., 2000). In the Netherlands, biodiversity loss is largely caused by agriculture and urbanisation, environmental pressure and fragmentation. Around seventy per cent of the total land area is used for agricultural purposes (PBL, 2014). Biodiversity loss in nature areas has stopped on average (PBL, 2020). However, this is not true for agricultural areas in which the majority of species populations are still under ongoing threat (PBL, 2020) despite the presence of agri-environment schemes, public and private governance arrangements, and initiatives of businesses in the Netherlands (Runhaar et al., 2017; Runhaar et al., 2019b). According to the *National Nature Vision* and *Netherlands Nature Positive,* long-term conservation of biodiversity can only be achieved if biodiversity increases outside the nature areas (PBL, 2020).

The Ministry of Economic Affairs (2014) introduced the concept of "nature-inclusive agriculture" (NiA) in the National Nature Vision, intending to enhance and utilise biodiversity in agricultural areas. Since the National Nature Vision 2014, the concept of NiA has been widely used in the Netherlands. For example, the Ministry of Agriculture, Nature and Food Quality and several provinces have embraced the concept, still use it, and made subsidies available (Gies, van Doorn, Bos, & van Os, 2019). The National Nature Vision 2014 describes NiA as a balance between agricultural production and the carrying capacity of nature (The Ministry of Economic Affairs, 2014). In successive years, the definition of NiA is further specified as an economically profitable agricultural system that sustainably integrates optimal management of natural resources into business operations, including care for ecological functions and biodiversity on and around the farm (van Doorn et al., 2016). However, the ambition for a structural change to NiA as envisaged by the cabinet has hardly been translated into concrete policy measures (PBL, 2020).

1.2 Previous studies

Various subjects relating to NiA have been studied. Ecological research has looked into the drivers of biodiversity loss (Mazor et al., 2018), the development of nature conservation measures (e.g. Ollerton et al., 2014), and how these insights could be used to enhance agri-environment schemes and public and private governance arrangements (Batáry, Dicks, Kleijn, & Sutherland, 2015). In addition, social research provided insights into the human dimensions of these schemes and arrangements. For example, what the barriers (Roesch-McNally et al., 2018) and motivations (Perry-Hill & Prokopy, 2014; Runhaar et al., 2017; Runhaar, Polman, & Dijkshoorn-Dekker, 2018) are of farmers to engage in nature conservation, and the role of governments and other actors that aim to promote nature conservation by farmers (Lowe, Feindt, & Vihinen, 2010; Runhaar et al., 2017; Westerink et al., 2017). However, limited attention has been paid to the roles of citizens (Runhaar, 2017).

Thus far, social studies about the role of citizens to NiA in the Netherlands have been scant (Runhaar et al., 2019b). Runhaar et al. (2019b) studied how different arguments for enhancing agro-biodiversity, influenced citizen's valuation of and attitude towards agricultural biodiversity. Runhaar, Buijs, and Runhaar (2019a) studied whether, how and why students value agrobiodiversity, and what their preparedness is to contribute to the enhancement of agrobiodiversity. Furthermore, the value of nature to citizens in a more general sense has been studied (De Bakker, Van Koppen, & Vader, 2007; De Boer & Langers, 2017; Hazeleger, Timmermans, de Beer, & Ettema, 2015).

1.3 Problem definition and knowledge gap

WWF (2018) investigated the knowledge of the Dutch citizens about biodiversity loss due to food production, which revealed a fascinating insight. It was found that 91% (of the 1,005 respondents) did not know that the leading cause of biodiversity loss is food production. Moreover, 10% of young adults (18–24 years) in the Netherlands do not know that the food production system harms biodiversity (WWF, 2018). These results are problematic as several studies suggest that knowledge on the functions and benefits of natural environments could change attitudes, intentions, and subsequently, behaviour related to these environments (Cerri, Testa, & Rizzi, 2018; Kaltenborn et al., 2016; Polonsky, Vocino, Grau, Garma, & Ferdous, 2012). Kaiser and Fuhrer (2003, p.609) describe that "knowledge remains an important and highly significant predictor of ecological behaviour". Knowledge alone might not be enough to generate ecological behaviour. Nevertheless, knowledge is a necessary condition (Kaiser & Fuhrer, 2003). Furthermore, knowledge could support people to formulate strong arguments to perform ecological behaviour (Fabrigar, Petty, Smith, & Crites, 2006; Maleksaeidi, & Keshavarz, 2019).

No other literature was found regarding this subject. Runhaar et al. (2019a) state that the baseline knowledge of Dutch citizens about agrobiodiversity, their awareness of agrobiodiversity decline, the importance of the decline, and to what extent these points are related to attitudes citizens have regarding agrobiodiversity, are possibilities for future research. All in all, current research on the knowledge, attitude and intentions of citizens to NiA in the Netherlands has been scant and therefore, the study is focused on closing these knowledge gaps. Knowledge is defined as the understanding of a subject acquired through experience or education (Bolisani & Bratianu, 2018). The study is not focused on behaviour, but on intention which be described as "a person's readiness to perform a behaviour" (Fishbein & Ajzen, 2010, p.39). Fishbein and Ajzen (2010, p.20) describe attitude as the "positive or negative evaluation of performing the behaviour in question".

1.4 Research objective and research questions

The research objective of the study was to study how knowledge relates to the intention to contribute to NiA of Dutch citizens by providing a clear insight into the knowledge, attitude and intention and their mutual relationship of Dutch citizens in 2021, based on literature and a questionnaire. Thus, the main research question and sub-questions are formulated as followed:

To what extent does knowledge of NiA affects Dutch citizens' intention to contribute to NiA?
1. What is the knowledge and attitude of, and intention to contribute to NiA of Dutch citizens?
2. What is the relationship between knowledge and attitude of, and intention to contribute to NiA?
3. What variables explain and influence the relationship between knowledge and attitude of, and intention to contribute to NiA?

In the research question, the dependent variable is the intentions of Dutch citizens to contribute to NiA, the independent variable is knowledge (Burnham, Lutz, Grant, & Layton-Henry, 2008).

1.5 Scientific relevance

Thus far, studies have focused on the valuations, attitudes, and the willingness to contribute to the enhancement of agrobiodiversity of three groups of citizens: students, environmental professionals and people interested in nature conservation in the Netherlands (Runhaar et al., 2019a; Runhaar et al., 2019b). This study contributes to the current body of literature regarding the governance of transitions towards sustainable agriculture by focusing on an unstudied aspect, namely the knowledge of NiA and how knowledge relates to intentions to contribute to NiA of Dutch citizens. Moreover, a different theoretical model is tested (the reasoned action model), further explained in chapter *2. Theory.*

1.6 Societal relevance

This study is relevant for society as citizens can play an important role as consumers, volunteers, activists, and voters (Runhaar et al., 2019b). Citizens can contribute to NiA in several ways. First, citizens can change their voting behaviour, increase political interest in the subject and consequently put NiA on political agendas, support public funding for agri-environment schemes, and legitimise other conservation initiatives. Second, they can demand foods produced with respect for nature (Runhaar et al., 2019b). Third, they can support organisations that stimulate NiA by becoming a member, donate, sign petitions, participate as a volunteer or invest in ground funds (M. J. Douven and M. Kleine Koerkamp, personal communication, November 25, 2020). Chapter *3.3 Items questionnaire* shows a complete overview of the actions that citizens undertake to support NiA.

Besides these points of relevance, the organisation Natuurmonumenten (NM) is very interested in practically using the results of this study (M. J. Douven and M. Kleine Koerkamp, personal communication, November 25, 2020). NM is a Dutch nature conservation organisation, founded in 1905, that purchases and manages nature reserves in the Netherlands (Natuurmonumenten, 2020). One of the main goals of NM is to increase NiA in the Netherlands as this could have a positive effect on NM's nature reserves and nature in general, e.g. less nitrogen deposition. NM uses different ways to increase NiA, one of them is providing information about NiA to their supporters intending to stimulate them to contribute to NiA. Supporters of NM are members and donors (770.000 unique persons) (M. J. Douven and M. Kleine Koerkamp, personal communication, November 25, 2020) and are the units of analysis in this study. NM is unsure which arguments in their communication trigger their supporters to contribute to NiA as they have no insights into the current knowledge, attitude and intentions of supporters. For example, do supporters know anything at all about NiA? What do they think about NiA? How do they want to contribute to NiA? Based on the results of this study, NM can alter their communication and enhance the stimulation of their supporters to contribute to NiA. All in all, the interests of NM and the researcher align, and therefore, this study is written in collaboration with NM. Furthermore, NM has supported this study by providing feedback, additional information, and access to a large group of Dutch citizens.

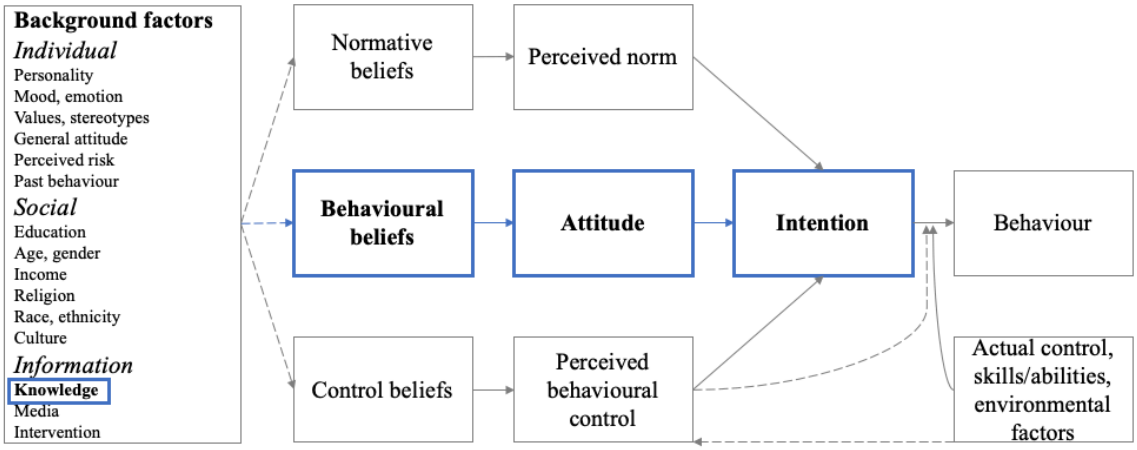
2. Theory

2.1 Theoretical framework

The reasoned action model is one of the most influential approaches to understand, predict, and change intentional human social behaviour (Hagger, 2019; Fishbein & Ajzen, 2010). Fishbein and Ajzen (2010) developed, based on their earlier version of "the theory of reasoned action" (Fishbein & Ajzen, 1975), the "reasoned action model", shown in Figure 1. The reasoned action model is widely applied across multiple behaviours, contexts, and populations (Hagger, 2019). This model states that 1) the attitude towards the behaviour, 2) the perceived norm, and 3) the perceived behaviour control determines the intention of people, which in turn predict their behaviour. People may believe that they do not have the capabilities or lack control (e.g. limited financial resources) for performing the behaviour, which can influence their intentions, named the perceived behaviour control. Furthermore, the perceived norm or in other words social pressures, can cause people to perform or not perform the behaviour (Fishbein & Ajzen, 2010). These three intention predictors can take on different weights as they are influenced by people's beliefs that could be influenced by individual, social, and information background factors (Fishbein & Ajzen, 2010).

Figure 1

Schematic representation of the reasoned action model based on Fishbein and Ajzen (2010)



Note. Items in blue boxes are measured in the study and in black boxes are not measured.

For several reasons, four concepts of this model, knowledge, beliefs, attitude, and intention, are studied for this study. First, the model provides theoretical grounds for measuring relationships between the concepts as it shows that the concepts sequentially influence each other (Fishbein & Ajzen, 2010). Second, allowing more concepts would not be doable considering the time constraints of this study. Third, NM is especially interested in these concepts (M. J. Douven and M. Kleine Koerkamp, personal communication, November 25, 2020) as NM could influence these concepts by altering their communication towards their supporters (Abroms & Maibach, 2008; Eveland & Cooper, 2013; Johnson, Maio, & Smith-McLallen, 2005; Van Den Hooff & De Ridder, 2004).

Davis, Campbell, Hildon, Hobbs, & Michie (2015) identified 82 theories of behaviour and behaviour change in the field of social and behavioural sciences. These theories were analysed to find an appropriate model. First, the reasoned action model was the most appropriate for the study as it specifically focuses on knowledge, attitude and intention. Moreover, it was the most up-to-date and profound model compared to the other commonly used theories such as the stages of change model, social cognitive theory, and information-motivation-behavioural skills model (Davis et al., 2015). Third, the reasoned action model shows how the concepts relate to other (external) items regarding intentional human social behaviour. Furthermore, this model and the corresponding theory indicate how attitude and intention could be measured using a questionnaire, followed for the study. Lastly, many studies were found that used this theory which formed examples of how to measure the concepts.

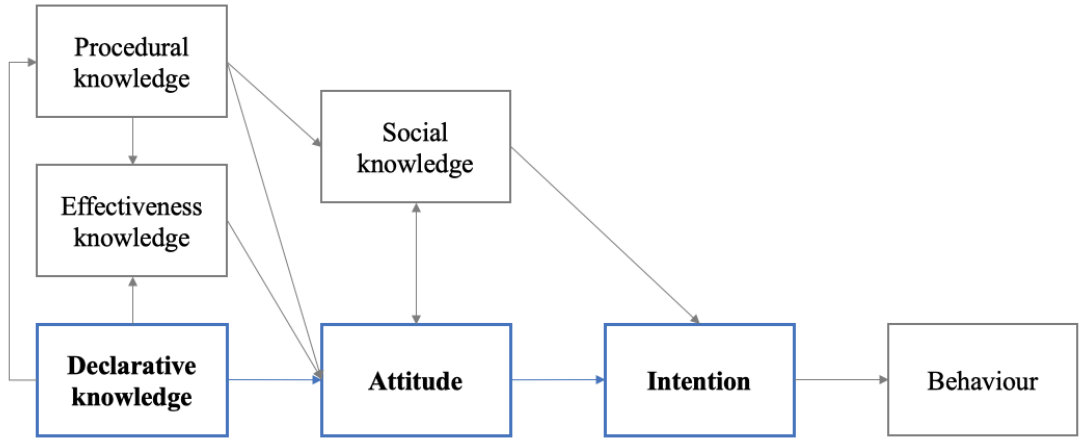
Knowledge. The reasoned action model does not address the origins of the beliefs (the background factors), as the connection between the background factors and beliefs is not necessary in each case. Thus, the reasoned action model does not explain how the background factor "knowledge" could be determined. Therefore, an additional model was used to measure knowledge.

Kaiser and Fuhrer (2003) defined four forms of environmental knowledge, as shown in Figure 2. The four forms are declarative knowledge (how environmental systems work), procedural knowledge (how to achieve a conservational goal), effectiveness knowledge (what the ecological consequences are), and social knowledge (social pressure). WWF (2018) concluded that 91% of the 1,005 respondents did not know that the main cause of biodiversity loss is food production. Therefore, it was expected that Dutch citizens had little knowledge about NiA (declarative knowledge). Considering the time constraints of the study, it was only possible to measure one type of knowledge. The study focuses on declarative knowledge as the first step in exploring Dutch citizens knowledge is examining whether people know how NiA works. Furthermore, Stutzman and Green (1982) showed that declarative knowledge is a precondition to form any attitude while the others do not.

This model is appropriate as it is the only model found that shows the relation of knowledge with intention. Furthermore, it is specified to knowledge about the environment and indicates the forms of environmental knowledge and their mutual relations. Declarative knowledge reduces uncertainty which stimulates people to form an attitude and perform the behaviour (Kaiser & Fuhrer, 2003). Furthermore, various studies have used this model, which could form examples of how to measure declarative environmental knowledge.

Figure 2

Environmental knowledge model shows the relationships between the forms of knowledge, attitude, and intention based on Kaiser & Fuhrer (2003).



Note. Items in blue boxes are measured for the study and in black boxes are not measured.

Behavioural beliefs. The behavioural beliefs of people (see Figure 1) are the positive or negative consequences they expect to experience if they perform the behaviour (Fishbein & Ajzen, 2010). Fishbein and Ajzen (1975) developed the "expectancy-value model", an approach that states that information-processing forms an attitude. This model is currently used by social psychologists and is used for the study to measure behavioural beliefs and attitude. The model states that behavioural beliefs are formed about an object when people associate the object with certain positively or negatively valued attributes such as other objects, characteristics, or events. These attributes are linked to the attitude and, therefore, people automatically acquire an attitude (Fishbein & Ajzen, 1975). So, "we learn to favour behaviours we believe have largely desirable consequences and we form unfavourable attitudes toward behaviours we associate with mostly undesirable consequences" (Ajzen, 1991, p.191).

Attitude. Fishbein and Ajzen (2010) defined two factors that determine the attitude *(A)*, which are, 1) the strength of each behavioural belief (e.g. the scale likely-unlikely) *(b)* and 2) the subjective evaluation of the behavioural beliefs attribute *(e)* (e.g. the scale good-bad). Eq. (1) shows the formula of the expectancy-value model of attitudes (Fishbein & Ajzen, 2010).

$$A \propto \sum (b_i \cdot e_i) \quad (1)$$

In other words, attitude (A) is equal to ($\propto$) the sum ($\sum$) of the strength of each behavioural belief (b_i) multiplied by the subjective evaluation of that behavioural belief (e_i).

Intention. This perceived probability of performing a behaviour could be assessed by using different indicators. "The higher this subjective probability, the more likely it is that the behaviour will in fact be performed" (Fishbein & Ajzen, 2010, p.39). People may have the same attitude but different intentions as also the perceived norm and the perceived behavioural control influences the intentions (Fishbein & Ajzen, 2010). Perceived norm and the perceived behavioural control are not measured for the study.

An addition to the model. According to Runhaar et al. (2019a), place attachment to the countryside is a mediating variable between the place where people grew up (rural or city) and attitude regarding agrobiodiversity. Furthermore, these variables had moderating effects on people's valuation regarding (agro)biodiversity (Runhaar et al., 2019a). Place attachment is operationalised using two constructs named place identity and place dependence (Bricker & Kerstetter, 2000; Kyle, Absher, & Graefe, 2003; Runhaar et al., 2019b; Williams et al., 1992). Place identity is "the symbolic importance of a place as a repository for emotions and relationships that give meaning and purpose to life" and place dependence is "the importance of a place in providing features and conditions that support specific goals or desired activity" (Williams & Vaske, 2003, p.831).

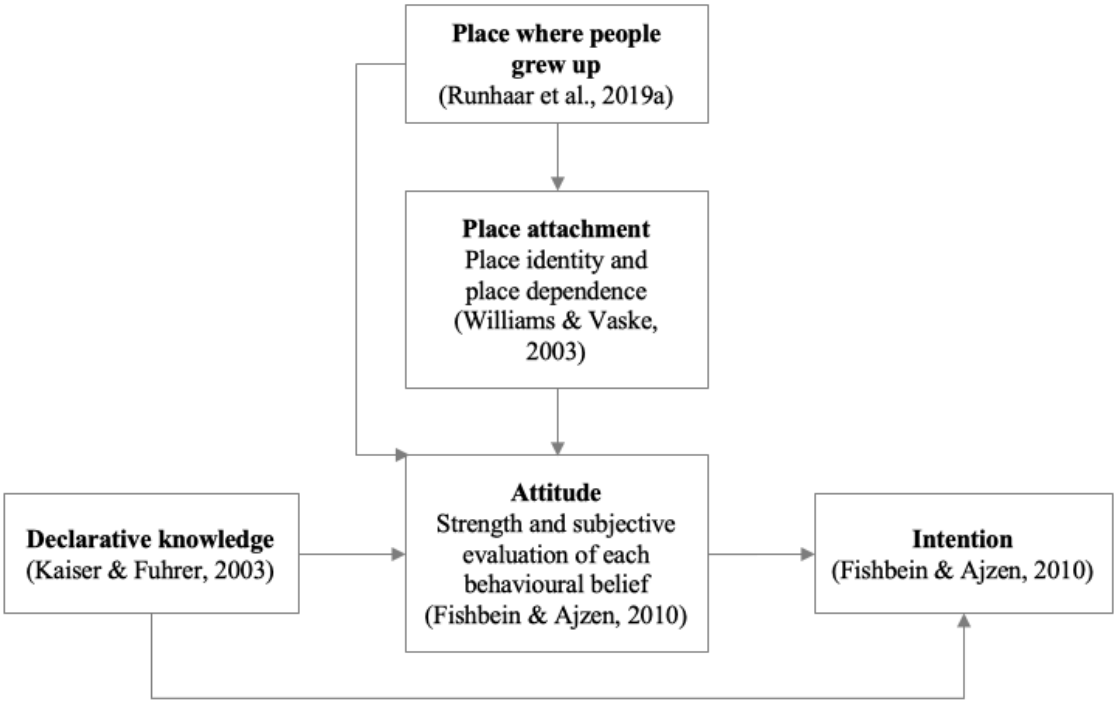
It is of interest to study the influences of these mediating and moderating variables, next to the three items of the reasoned action model, for several reasons. First, the literature suggests that people with higher place attachments have greater social and political involvement and willingness to achieve mutual goals such as conserving characteristics of a place (Raymond, Brown, & Weber, 2010). Thus, higher place attachment could positively influence public support decisions for land (use) change needed to achieve NiA (Verbrugge, & van den Born, 2018). Second, higher place identity (construct of place attachment) is related to more negative evaluations on user impacts on the natural environment (Kyle, Graefe, Manning, & Bacon, 2004), higher willingness to engage in pro-environmental behaviours (Stedman, 2002; Vaske & Kobrin, 2001) and place-protective actions (Devine-Wright & Howes, 2010). It suggests that higher place identity could be related to a higher preparedness to contribute to NiA. Third, several studies showed that place attachment and the place one grew up influence people's valuation regarding (agro)biodiversity (e.g. Runhaar et al. 2019a; Vaske, Jacobs, & Sijtsma, 2011). It would be interesting to compare the results with these studies to identify differences between groups. Lastly, it is interesting to consider these two variables as the relations with knowledge, attitude and intention are not studied before, e.g. do people who grew up in the countryside have a higher amount of knowledge about NiA than people from large cities?

2.2 Analytical framework

The five concepts and their relationships gained from the theoretical framework are illustrated in an analytical framework shown in Figure 3.

Figure 3

Analytical framework



3. Methods

3.1 Research methods

Literature review. The literature review was mainly focused on how knowledge, beliefs, attitude, and intention could be operationalised and measured with a questionnaire. Existing questionnaires partly formed a basis to conduct the questionnaire (Fishbein & Ajzen, 2010; Kaiser & Fuhrer, 2003; Runhaar et al., 2019a; Runhaar et al., 2019b). Performing a literature study about the concepts, their dimensions, and subsequently, indicators increased the content validity of the questionnaire (Taherdoost, 2016). Furthermore, literature was searched concerning NiA in a general sense, the positive and negative consequences of NiA for citizens and how citizens can support farmers in taking actions that support NiA. The content gathered during the literature review is extracted from a large quantity of textual and audio-visual material. Content is gathered via Google Scholar, Scopus, textbooks, and websites of various institutions.

A literature review is an appropriate method for the study as it places the study in the context of existing literature, provides theoretical insights to find connections between phenomena, and clarifies which additional data is needed. Furthermore, it is useful as the information is quickly available, duplication of works is avoided, and it saves resources (Verschuren et al., 2010).

Questionnaire. The data gathered with the questionnaire was achieved through a sample of the 44.000 followers of a monthly NM newletter emailed on March 25, 2021, of NM (M. J. Douven and M. Kleine Koerkamp, personal communication, January 4, 2020). The questionnaire is distributed one time, no reminders were sent, and no invitations via other channels such as social media were deployed due to practical limitations. Only newsletter subscribers of NM are approached, which causes that the sample not represents the general Dutch population, extensively discussed in chapter *5. Discussion.* In total, 2001 people opened the questionnaire, 451 respondents have partly filled in the questionnaire, 1550 people have completely filled in the questionnaire. The 451 respondents consist out of 161 persons who stopped during the introduction text, 16 during the consent form, 87 during the place attachment and place where respondent grew up questions, 63 during the knowledge questions, 70 persons during the attitude questions, 23 during the intention questions, 25 during the questions about the communication of NM (questions not relevant for study) and demographic questions. Fifteen people filled in more than 50% of the questionnaire, and 436 persons filled in between the 4% to 48% of the questionnaire. Two hundred eighty-nine persons did not fill in any question concerning the study variables of the questionnaire. The remaining 172 persons who partly filled in questionnaires could cause difficulties during the analysis of the relationships between the concepts as some results of concepts were missing for specific respondents. To avoid possible errors, only the answers of the 1550 persons who completely filled in the questionnaire are used for this study.

The response rate (RR1) is the number of complete questionnaires (1550) divided by the number of suitable reporting units in the sample (44.000) (AAPOR, 2015). Thus, the response rate is 3.5%. What a high or low response rate is differs per context e.g. approaching method, length and complexity, type of respondents and timing (Stedman, Connelly, Heberlein, Decker, & Allred, 2019). The response rate is compared to the study of Runhaar et al. (2019a) and Runhaar et al. (2019b) as the approaching method (emailing) and type of respondents (nature lovers) and subject (agrobiodiversity) come closest. The response rates were 9% (Runhaar et al., 2019a) and 4% to 9% (Runhaar et al., 2019b). These response rates were labelled as low, therefore, the response to this questionnaire is also considered low. A low response rate can cause bias when the nonresponse is concentrated among a particular group of participants. Chapter *5. Discussion* shows which groups are underrepresented compared to the Dutch population.

The questionnaire was performed online, cross-sectional, in Dutch language and contained closed questions and examples. A cross-sectional survey means that data will be gathered at a particular moment in time from the same sample group (Levin, 2006; Verschuren et al., 2010). Closed, multiple-choice questions were used to categorise respondents and achieve quantifiable data quickly to process and analyse it in a well-structured way based on statistical principles and procedures (Copeland, 2017). Open questions were not used as they could negatively influence the response rate, reduce the motivation of respondents to finish the survey, and open questions are harder to fill in on a smartphone than closed questions. Furthermore, answers to open questions are harder to analyse and could hardly be generalised, while generalisation is needed to answer the research question (Copeland, 2017). Advantages of an online survey are that there is no travelling time, no interviewer bias, and it is easier to ask sensitive questions and organise access to a national population (Owens, 2002). The Dutch version of the questionnaire is used as this is the mother language of the sample population. The Dutch questionnaire is shown in *Appendix 1* and the English questionnaire version in *Appendix 2.* The questionnaire provides examples for the knowledge, attitude, and intention questions to help respondents understand the meaning of the question and stimulate respondents to think about more examples which helps them to determine their knowledge, attitude, and intention (Tourangeau, Conrad, Couper, & Ye, 2014). The study included these examples after the pilot questionnaire as feedback was received about items that needed to be clarified for people who have a very low amount of knowledge regarding NiA or do hardly know how to contribute to NiA. Providing examples could influence the respondent answers as they could affect which and how many arguments they have to create an answer (Tourangeau et al., 2014). To increase the face validity but not decrease the construct validity and reliability, excessive, simple, value-free and short examples were approved by a statistical expert (P. Runhaar, personal communication, 5 March, 2021).

Some ethical issues were taken into consideration for the questionnaire. Prior to the questionnaire, a consent form for data sharing, obtained from the master Sustainable development Blackboard community, was approved by the respondents who were told what would happen during the questionnaire and to prove that data will be used confidentially. Furthermore, the management of data is in line with the General Data Protection Regulation. No opinions were shown in the questionnaire, and questions were asked in a value-free way to ensure that the respondents' emotions were not manipulated (Bryman, 2016).

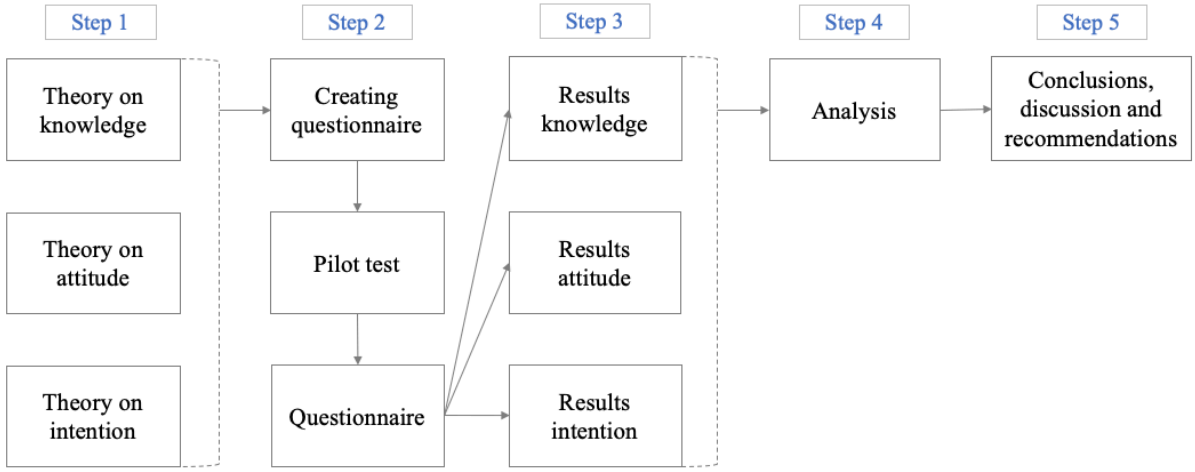
A questionnaire is an appropriate method for the study for several reasons. First, an overall picture of the knowledge, beliefs, attitude and intention is needed to answer the research question. The questionnaire allowed a large number of research units which provided an overall picture of the knowledge, beliefs, attitude and intention. Second, people could provide an extensive diversity of information in a relatively quick way. Third, quantitative research enables determinations of all sorts of statistical relationships between variables needed to answer the research question. Fourth, through standardisation the costs are relatively low, and the practicability high which makes the study feasible within the timeframe (Verschuren et al., 2010).

3.2 Research framework

The schematic representation of the research objective and the steps taken to achieve it are shown in a research framework, see Figure 4. The theory on knowledge, attitude and intention formed the basis for creating the questionnaire items examined with a pilot test. In this pilot test, behavioural beliefs were classified to generate the attitude construct (explained in the next chapter). After evaluating the results achieved from the questionnaire, relationships between the concepts were analysed, and the conclusion, discussion, and recommendations were described (Verschuren et al., 2010).

Figure 4

Research framework



3.3 Items questionnaire

Knowledge. Knowledge is a complex and multi-faceted concept to measure (Raymond et al., 2010). Various ways exist to measure it based on the study's aim and context, e.g. multiple-choice tests, false-true tests, or self-reporting tests (Hunt, 2003). Various studies in the current body of literature regarding the governance of transitions towards (agricultural) sustainability, use self-reporting tests to measure environmental knowledge quantitatively (e.g. Javeline, Hellmann, Cornejo, & Shufeldt, 2013; Lundmark, Sandström, Andersson, & Laikre, 2019; Kaltenborn, Gundersen, Stange, Hagen, & Skogen, 2016; WWF, 2018). The self-reporting scale of Kaltenborn et al. (2016) was used to formulate the knowledge items as the aim and context is most similar to the study, namely measuring the knowledge of environmental topics of citizens (Norwegian population). In the questionnaire of Kaltenborn et al. (2016), ten environmental topics are listed to indicate the level of knowledge on a five-point scale. The ten environmental topics are loss of biological diversity, red list species, organic food production, ecosystem services, fragmentation of areas with untrammelled nature, ecological restoration, conservation of natural areas, environmental toxins, how public environmental management is organised, and climate change (Kaltenborn et al., 2016). These items directly (first eight items) or indirectly (last two items) relate to NiA. This measurement scale was modified by changing, deleting or adding items focused on NiA based on a literature review, as it does not measure NiA specific knowledge.

Van Doorn et al. (2016) have described the ecosystem services of a conventional agricultural system and a nature-inclusive agricultural system. A conventional agricultural system produces food and animal feed, while NiA also delivers a habitat for flora and fauna, attractive landscapes, soil fertility, water regulation, natural pollination, and natural pest control (Van Doorn et al., 2016). The question is to what extent citizens know what these concepts entail and, thus, what the (added) value of NiA is (Runhaar et al., 2019b). The statements to measure knowledge were formulated based on these eight concepts as these items cover all basic aspects of NiA and overlap with the items of Kaltenborn et al. (2016). However, in comparison to the study of Kaltenborn et al. (2016), not ten but eight statements were used as the items. Table 1 provides an overview of the concepts formulated by Van Doorn et al. (2016) and the formulated items for the questionnaire. Furthermore, it shows how the forms of ecosystem services NiA of Van Doorn et al. (2016) relate to the ten environmental topics of Kaltenborn et al. (2015), indicated in *italics*.

Table 1

Eight forms of ecosystem services NiA and the items for this questionnaire

Forms of ecosystem services NiA (Van Doorn et al., 2016)	**Items questionnaire**
1. Food production (*Organic food production*)	Produce food in a nature-inclusive way (e.g. fruit, vegetables, dairy or meat).
2. Production of animal feed	Produce animal feed in a nature-inclusive way (e.g. animal feed from our own land instead of from abroad)
3. Habitat for flora and fauna (*biological diversity & red list species*)	Improve the natural habitat of plants and animals (e.g. wet, nutrient-rich, open landscapes for meadow birds).
4. Attractive landscapes (*fragmentation of areas with untrammelled nature & conservation of natural areas*)	Making landscapes attractive through nature-inclusive agriculture (e.g. rows of trees, ditches, or greater plant diversity)
5. Soil fertility (*ecological restoration*)	Regulate soil fertility (e.g. manure for nutrient supply and management)
6. Water regulation (*ecological restoration*)	The regulation of water (e.g. soil that can retain and supply sufficient water)
7. Natural pollination	The use of natural pollination (e.g. deploying insects such as bees).
8. Natural pest control (*environmental toxins*)	The use of natural pesticides (e.g. deploying natural enemies).

Note. Text in *italics* show the environmental topics of Kaltenborn et al. (2015) which relate to the forms of ecosystem services NiA of Van Doorn et al. (2016)

Attitude. Fishbein and Ajzen (2010) describe two ways to measure attitude, with a semantic differential and with the expectancy-value model. With a semantic differential, respondents were asked to rate the attitude towards performing a certain behaviour (contributing to NiA in the Netherlands in 2021) on a set of bipolar evaluative adjective scales (e.g. good-bad, unpleasant-pleasant, harmful-beneficial, interesting-boring), usually with seven places to choose. The person's attitude is the mean across all scales. The semantic differential was not used for this study for several reasons. First, a disadvantage of the semantic differential is that it is hard to choose the suitable evaluative adjective scales to guarantee the construct validity. There is a tendency that scales load on different factors for different concepts (Fishbein & Ajzen, 2010). Second, it does not provide insights into the foundation of a respondent's attitude toward the behaviour. In contrast, the expectancy-value model identifies beliefs and therefore has differences in the question instead of the scale. Third, creating a valid semantic differential requires a pilot test in which a large number of evaluative adjective scales are tested on factor loadings (Fishbein & Ajzen, 2010). An explorative factor analysis requires at least 300 participants (Field, 2014), which could not be acquired for this study due to the limited accessibility of respondents (M. J. Douven and M. Kleine Koerkamp, personal communication, January 4, 2020). Thus, creating a semantic differential could have led to the inclusion of items that would eventually not have an added value when they do not sufficiently load on a factor. In addition, creating an overextended questionnaire could reduce the motivation of respondents to finish the survey.

The expectancy-value model measures two factors to determine attitude. Fishbein and Ajzen (2010) defined two factors that determine attitude *(A)*:
1) the strength of each behavioural belief (*b)* and; (question four in the questionnaire)
2) the subjective evaluation of the behavioural beliefs *(e)* (question five in the questionnaire)
Attitude is equal to ($\propto$) the sum ($\sum$) of the strength of each behavioural belief (b_i) multiplied by the subjective evaluation of that behavioural belief (e_i) (Fishbein & Ajzen, 2010).

Several meta-analyses (e.g. Armitage & Conner, 2001) show correlations between the expectancy-value model and a semantic differential (mean correlations of .53 and .50) (Fishbein & Ajzen, 2010). Thus, "assessing beliefs about a behaviour's outcomes as well as evaluations of those outcomes generally affords good prediction of the overall attitude toward the behaviour" (Fishbein & Ajzen, 2010, p.104). In this study, solely the expectancy-value model was used to measure attitude as the expectancy-value model, compared to the semantic differential, also provides insights into the beliefs behind the attitude, which were not studied before (Runhaar et al., 2019b) and are especially interesting for NM. Furthermore, construct validity is better guaranteed as the attitude construct is based on items declared by the respondents themselves (see *Appendix 3* responses) instead of the researchers choice of evaluative adjective scales (Fishbein & Ajzen, 2010). Measuring attitude with both the semantic differential and the expectancy-value model was not possible due to practical limitations such as the questionnaires length (M. J. Douven and M. Kleine Koerkamp, personal communication, January 4, 2020).

Based on Fishbein and Ajzen (2010), four steps were followed to create the items that measure attitude with the expectancy-value model. The first step was the performance of a pilot questionnaire (N = 42) in which respondents described their behavioural beliefs about contributing to NiA. A sample size of 25 respondents is generally needed to elicit beliefs for the theory of planned behaviour (Francis et al., 2004). People are capable of processing five to nine items of information at a time under most circumstances. Therefore, the rule of thumb is that attitude is determined by no more than five to nine "salient" beliefs. After that, these different behavioural beliefs were analysed and categorised in Nvivo. Thirdly, the behavioural belief categories that accounted for 75% of all responses listed were used for the questionnaire to formulate questions that measure attitude (Fishbein & Ajzen, 2010). The following behavioural belief categories about contributing to NiA accounted for 75% of all responses in the pilot questionnaire:
- Higher costs for me as a person (e.g. more expensive groceries)
- Choice of fewer different products (e.g. more seasonal fruits and vegetables)
- Choice of more "healthy" products (e.g. fewer pesticides)
- Creating a more sustainable future
- A change in the landscape (e.g. more rows of trees, ditches or greater plant diversity)
- A change in the number of wild animals and plants (e.g. more meadow birds)

Lastly, these selected behavioural belief categories were integrated into the two questions formulated by Fishbein and Ajzen (2010). One question measured the strength of each behavioural belief, and the other question the subjective evaluation of the behavioural belief as previously explained. These four steps, the behavioural beliefs and the categories, are in more detail explained in *Appendix 3* and discussed in chapter *5. Discussion.*

Intention. Fishbein & Ajzen (2010) suggest a semantic differential to measure intention by asking in the questionnaire how likely it is that the respondent would perform a particular behaviour. The study used items that describe the various ways in which citizens can contribute to NiA to create the construct of intention instead of using a semantic differential for the same reasons as described for the attitude concept. Furthermore, using a semantic differential provides no insights into how respondents would or would not like to contribute to NiA. Studying this has a scientific relevance as it is not studied before (Runhaar et al., 2019b), and it would be interesting to study whether there are relations between specific intentions and knowledge or attitude. The societal relevance is, for example, that targeted information regarding certain actions can be offered to stimulate citizens to contribute to NiA (M. J. Douven and M. Kleine Koerkamp, personal communication, January 4, 2020). Moreover, it could be difficult for people to express their intention to contribute to NiA when they are not aware of NiA or do not have a lot of knowledge or experience with the various possibilities to contribute to NiA (Verschuren et al., 2010). Using a semantic differential could provide vague answers as people may not have sufficient information to substantiate their answer. Items regarding several ways to contribute to NiA would have an added value by itself regardless of their factor loadings (M. J. Douven and M. Kleine Koerkamp, personal communication, January 4, 2020). Lastly, several studies in the field of biodiversity and conservation measure intention by using the mean score of different individual intention items (Hughes, 2013; Maleksaeidi & Keshavarz, 2019; Urien & Kilbourne, 2011; Zhu, Wong, & Huang, 2019).

Buijs, Mattijssen, Smits, and van Dam (2019a) studied the routes along which citizens can contribute to a nature-inclusive society. They defined three types of actions that citizens undertake for a nature-inclusive society, self-organisation, participation, and individual behaviour. These three types of action have formed the basis for the intention items. For each type of action were several actions formulated that refer to the contribution to a nature-inclusive society (Buijs et al., 2019a). However, the questionnaire is focused on nature-inclusive agriculture, and therefore, adjustments were made in the formulation of the actions. Table 2 provides an overview of the actions formulated by Buijs et al. (2019a) and the formulation of items for this questionnaire based on these actions. Three actions, namely gardening on my own land, green adoption and greening of the garden in an unorganised form, were not included in this questionnaire. These actions do not relate to the support of the nature-inclusive agricultural system or ecological functions on and around the farm. The types of actions described by Buijs et al. (2019a) correspond with ways citizens can contribute to NiA described by Runhaar et al. (2019b), see chapter *1. Introduction.*

Table 2

Three forms of action from citizens transformed into items for this questionnaire

Types of action Buijs et al. 2019a	**Items questionnaire.** I intend to contribute to NiA …
Individual behaviour 1. Consumer purchasing behaviour 2. Gardening on own land 3. Greening of the garden in unorganised form e.g. nest box, rainwater coupling, etc.	Individual behaviour 1. via my purchasing behaviour (e.g. buy organic and more environmentally friendly food or not eat certain foods) 2. x 3. x
Participation 1. Voluntary work 2. Ecological monitoring 3. Membership nature organisation 4. Participation in policy processes 5. Political voting behaviour 6. Adopt a chicken/fruit tree	Participation 1. by doing voluntary work (e.g. helping on a nature-inclusive farm) 2. by contributing to ecological monitoring (e.g. counting birds) 3. by becoming a member of a nature organisation 4. through participation in policy processes (e.g. get involved in management or development activities at the invitation of the government or other institutions) 5. via my political voting behaviour (e.g. voting for a political party that supports nature) 6. by adopting a product of at a nature-inclusive organisation (e.g. a fruit tree or chicken)

Self-organisation 1. Citizens' initiative 2. Organised actions 3. Social entrepreneurship 4. Green adoption	Self-organisation 1. by organising or joining a citizens' initiative (e.g. jointly buying agricultural land) 2. by organising or participating in **actions** that attempt to influence the politics and policies of governments or companies (e.g. participate in a protest). 3. by organising or joining social enterprises (e.g. a nature-inclusive care farm) 4. x

Note. The "x" indicates that the action could not be transformed to a contribution to NiA.

Place attachment and place where people grew up. The place where people grew up and place attachment was measured exactly as performed in the questionnaire of Runhaar et al. (2019b). Place identity was measured through the following three items: I feel very connected to the countryside; the countryside means a lot to me; and I identify myself strongly with the countryside. Place dependence was measured with the following three items: the countryside is the best place for leisure activities; there is no place better to recreate in nature than in the countryside; no landscape can replace the countryside for my favourite recreational activities. Furthermore, the place where people grew up was divided into three groups: a large city with more than 100.000 inhabitants, a small town or village of 10.000 to 100.000 inhabitants or in rural areas with less than 10.000 inhabitants (Runhaar et al., 2019b).

Socio-demographics. Socio-demographic items were included in the questionnaire as they might affect the study variables and indicate the representativeness of the sample (Cerri et al., 2018; Polonsky et al., 2012). The socio-demographics gender, age, education, geographical region, member or donator of NM were measured in the study as these items show whether the sample represents the Dutch population (Kaltenborn et al., 2015). In the gender question, the option "other" was included for non-binary individuals or people who do not like to tell. Respondents gave their age in years to measure age. The Standard Education Format 2016 of the Netherlands was used to categorise education levels (CBS, 2021d), and the twelve provinces of the Netherlands was used to receive an indication of the geographical spread of the sample (Rijksoverheid, 2021). The question regarding a member or donator of NM was added to analyse differences between these groups, which was relevant for making recommendations to NM, and it provided insights into the representatives of the sample.

Scale of the items. Five-point scales are used for measuring knowledge (1 = very low amount of knowledge to 5 = very high amount of knowledge) and intention (1 = very likely to 5 = very unlikely) as this is easy and quick for respondents to fill in (P. Runhaar, personal communication, 5 March, 2021). Place attachment was measured on a seven-point scale (1 = completely disagree to 7 = completely agree) to be able to compare the results with the study of Runhaar et al. (2019a). Attitude strength (-2 = completely not likely to 2 = completely likely) and subjective evaluation (-2 = completely objectionable to 2 = completely not objectionable) are assessed on a five-point scales for similar reasons as for knowledge, attitude and intention. Following the expectancy value model equation, the minimum score for attitude strength and evaluation could be -12, and the maximum score 12 as strength and subjective evaluation are multiplied for the three different beliefs (2 x 2 x 3) (Fishbein & Ajzen, 2010).

3.4 Validity and reliability

Validity tells us whether an instrument measures what it was designed to measure (Field, 2014). According to Taherdoost (2016), the main types of validity for a questionnaire are face validity, content validity, criterion validity, construct validity, and reliability.

Face validity is the degree to which the concept or construct is in the judgement of non-experts, such as the test-takers, measured or relevant (Mohajan, 2017). Face validity covers, for example, the clearness of the language, the readability and consistency of style and formatting (Taherdoost, 2016). A pilot questionnaire was performed with 42 persons of the members-committee of NM. In this pilot questionnaire, a possibility to leave comments and suggestions was offered based on which adjustments on the questionnaire were made to improve face validity (Kitchenham & Pfleeger, 2002). For example, the formatting of Likert scale questions was changed to improve the readability. All the changes made after the pilot questionnaire are described in *Appendix 4*.

Content validity is the degree to which individual items represent the construct being measured (Field, 2014). Content validity is assured by performing an exhaustive literature review to extract the related items (Taherdoost, 2016). This literature review is described in the previous chapter *3.2 Items questionnaire.* After this literature review, several experts in NiA have evaluated the questionnaire, such as the agricultural group of NM and the three supervisors of the thesis (Yusoff, 2019). They all agreed on performing the pilot and final questionnaire.

Criterion validity is the degree to which the instrument measures what it claims to measure by comparing objective criteria with the instrument (Field, 2014). In other words, "it measures how well one measure predicts an outcome for another measure" (Taherdoost, 2016, p.32). Criterion validity is impractical to measure as the instrument needs to be compared with objective criteria, which often do not exist (Field, 2014). There were no objective criteria or theoretical representations of the concepts knowledge, attitude, intention, and place attachment concerning NiA found. Therefore, the criterion validity could not be established.

Construct validity is the degree to which the instrument is constructed in a way that it successfully tests what it claims to test (Taherdoost, 2016). To test construct validity, an *explorative factor analysis* (EFA) is conducted utilising a *principal component analysis* (PCA) (Brace, Snelgar, & Kemp, 2013). Unfortunately, it was not possible to perform an adequate factor analysis with the data retrieved from the pilot questionnaire as a sample size of less than 300 is generally inadequate for a factor analysis (Field, 2014). Therefore, the questionnaire could not be constructed based on the explorative factor analysis outcomes to measure knowledge, attitude, intention, and place attachment. Nevertheless, the various outcomes of the explorative factor analysis provided valuable insights to increase the construct validity.

Reliability is the ability of a measure to produce the same results under the same conditions (Mohajan, 2017). To test reliability, a reliability analysis is conducted utilising *Cronbach Alpha* (Field, 2014), further elaborated on in this chapter. Furthermore, the reliability of the questionnaire is increased as Qualtrics, the online survey software that is used, automatically performed the questionnaire administration through which the achieved data was easily imported to SPPS where the data was analysed. The quantitative data processing method via Qualtrics and SPSS minimalised possible errors (Verschuren et al., 2010).

Explorative factor analysis. An EFA is conducted utilising PCA for each concept to understand the structure of the set of items (from now on: variables) and assess the degree to which the model tests the concepts (Field, 2014; Ginty, 2013; Gray & Kinnear, 2012). The outputs of the EFA are shown in *Appendix 5*, and Table 3 shows the results of the EFA and reliability analysis per concept. In Table 3, the values in **bold** deviate from the prescribed criteria of an adequate EFA.

The first outputs of the EFA concern a preliminary analysis, entailing data screening, sampling adequacy, and assumption testing. A sample size of 300 or more is required to gain a stable factor solution (Field, 2014). The first output, the *Correlation-matrix,* shows the correlations between each pair of variables arranged in a table. The top half of the table shows the *Pearson's correlation coefficient*, and the bottom half shows the one-tailed significance of these coefficients. Variables with only a small number of correlations coefficients bigger than .3 could be excluded as variables need to measure to some degree the same underlying variable. Furthermore, variables with correlation coefficients greater

than .9 need to be excluded as this could cause multicollinearity in the data. Multicollinearity means that two or more independent variables in a multiple regression model highly correlate, which can cause unstable parameter estimates (Field, 2014). In addition, the *Determinant* of the Correlation-matrix needs to be greater than 0.00001 to be sure that there is no multicollinearity. The sampling adequacy is tested with the *Kaiser-Meyer-Olkin Measure of Sampling Adequacy* (KMO) for which a minimum criterion of 0.5 is required (Kaiser, 1970). Hutcheson and Sofroniou (1999) have provided appealing guidelines for the interpretation of the KMO, namely marvellous (values in 0.90s), meritorious (values in 0.80s), middling (values in 0.70s), mediocre (values in 0.60s), miserable (values in 0.50s) and merde (values below 0.50). The *anti-image correlation matrix* calculates the KMO of individual variables shown at the diagonal elements in this matrix. These values should be greater than 0.5 to ensure that the sample is adequate for the given pair of variables. The *Bartletts Test of Sphericity* shows if the correlations between variables are (overall) significantly different from zero. In other words, if the variables correlate well with each other. This outcome needs to be below 0.05 to be significant. The *Inverse of Correlation matrix* of the PCA is not used as this provides insights into the calculations of the factor analysis, which are irrelevant for this study (Field, 2014).

The second output of the EFA concerns the factor extraction. The output *Total Variance Explained* shows the eigenvalues of each factor before extraction, after extraction, and after rotation. SPSS extracts all factors with eigenvalues greater than 1 (*Kaisers criterion*). Kaiser's criterion is used as the sample size exceeds 250 and the communalities of the four concepts are greater than .6 (Field, 2014). The *Communalities* output shows the communalities, the proportion of common variance within a variable, before and after rotation. In addition to the Kaisers criterion, the *Scree plot* was used for factor extraction. The *Scree plot* is a graph that shows the relative importance of each factor by plotting each factor in a factor analysis (X-axis) against its associated eigenvalue (Y-axis) (Cattell, 1966). The Scree plot provides a reliable criterion for the extraction of a factor with a sample of more than 200 participants (Stevens, 2002). The *Component-matrix* contains the loadings of each variable on each factor before rotation. It is suggested to order variables by their loading size and suppress loadings less than .3 (factor too weak influence on the variable) to make interpretation easier (Field, 2014). These two options are selected for the EFA. The output *Reproduced Correlations* shows the correlations which stem from the factor model rather than the observed data. The difference between the observed correlations and the correlations based on the model are shown in the lower half of the reproduced matrix (*Residuals*). There are no hard-and-fast rules about the proportions of residuals. However, it is suggested that not more than 50% of the residuals is greater than 0.05 (Field, 2014).

The third output of the EFA concerns the factor rotation. The factor structure is optimised through rotation which equalises the importance of the factors a bit and clarifies the loadings. An orthogonal rotation (for uncorrelated factors) and an oblique rotation (for correlated factors) could be used for factor rotation. The closeness of the factors to the X-Axis and Y-axis of the *Component plot in rotated space* indicate whether the loadings of the variables on the factors are successful. The closer to the axis, the more successful. The last step is to look at the content of the variables that exhibit a high load on the same factor to try to identify a common theme.

After the EFA, the reliability was measured through *Cronbach's alpha* per factor extracted *(*values around .7 are good) (Edens & Smits, 2014). Furthermore, the column "Corrected Item-Total Correlation" of the *Item- Total Statistics* output shows whether the scale is reliable. The scale is reliable if all items correlate with a total greater than 0.3. The column "Cronbach's Alpha if Item Deleted" shows the values of the overall alpha if a variable was not included in the calculation. When the Cronbach alpha is greater without a specific variable, it can be considered to delete the variable to increase the reliability.

Table 3

Summary validity and reliability of the concept measures

Preliminary analysis:	**Knowledge**	**Attitude**	**Intention**	**Place attachment**
Sample size (> 300)	1550	1550	1550	1550
Pearson's coefficients (> 0.3 and < 0.9)	No deviant correlations	Two variables deleted (< .3): "Higher costs for me as a person" and "Choice of fewer different products"	No deviant correlations were found within the two groups " private contribution" and "group contribution"	No deviant correlations
One-tailed significance of correlation coefficients (< 0.05)	0.00	0.00	0.00	0.00
Determinant (> 0.00001)	.006	.040	.346	.036
KMO (> 0.5)	.911 (marvellous)	.790 (middling)	.746 (middling)	0.832 (meritorious)
Anti-image correlation matrix (> 0.5 per variable)	.898 - .945	.751 - .860	.715 - .806	.780 - .903
Bartletts Test of Sphericity (< 0.05)	0.00	0.00	0.00	0.00
Factor extraction:	**Knowledge**	**Attitude**	**Intention**	**Place attachment**
Scree plot (Number of components extracted)	Component 1: Knowledge	Component 1: Subjective evaluation Component 2: Strength (confirms theory)	Component 1: Private contribution Component 2: Group contribution Exclusion variables: "Citizens' initiative" and "adopting products" due to cross loading	Component 1: Place identity Component 2: Place dependence (confirms theory)
Component matrix (Loadings > .3)	.812 - .866	.365 - .786	.315 - .707	.322 - .814
Reproduced correlations (< 50% residuals greater than 0.05)	**52%** Exclusion variable: "the use of natural pesticides"	40% Exclusion variable: "choice of more "healthy" products"	**53%**	40%
Factor rotation:	**Knowledge**	**Attitude**	**Intention**	**Place attachment**
Method	Solution could not be rotated as only one component was extracted.	Direct oblimin	Varimax	Direct oblimin
Reliability:	**Knowledge**	**Attitude**	**Intention**	**Place attachment**
Cronbach alpha (>.7)	.929	Strength: .851 Subjective evaluation: .864	Private contribution: **.662** Group contribution: **.655**	Place identity: .867 Place dependence: .833
Corrected Item-Total Correlation (> .3)	.742 - .808	Strength: .769 - .643 Subjective evaluation: .772 -.685	Private contribution: .435 - .506 Group contribution: .429 - .494	Place identity: .736 - .785 Place dependence: .636 - .742:
Cronbach's Alpha if Item Deleted (< Cronbach alpha)	.915 - .922	Strength: **.863** - .757 Subjective evaluation: .780 -.860	Private contribution: .528 - .637 Group contribution: .520 - .608	Place identity: .781 - .852 Place dependence: .719 - .827

Note. The values in **bold** deviate from the prescribed criteria of an adequate EFA.

To sum up, to measure the concept of knowledge, the variable “the use of natural pesticides” was excluded to reduce the percentage of residuals greater than 0.05 from 67% to 52% to make the model a better fit. The percentage of 52% is above the suggested percentage of 50% , however, 50% is a guideline and no lower percentage could be reached. Besides this minor percentage difference, the other criteria of the EFA and the reliability analysis showed that the remaining seven variables are valid and reliable for measuring knowledge.

The R-matrix of attitude showed that the variables “Higher costs for me as a person” (r between 0.03-0.37) and “Choice of fewer different products” (r between 0.03-0.37) did not meet the minimum criterion of .3 correlation sufficiently. For this reason, these two variables were excluded from the EFA. The variable “Choice of more “healthy” products” also needed to be excluded to decrease the percentage of residuals greater than 0.05 from 57% to 40%. After deleting these variables, an EFA was performed with the six remaining variables (three variables for attitude strength and the three variables for attitude subjective evaluation). Theoretical grounds suggested that the stronger the belief is, the more the attribute evaluation contributes to the attitude (Fishbein & Ajzen, 2010). Thus, the theory suggests that the factors “attitude strength” and “attitude subjective evaluation” might correlate. Therefore, an oblique rotation method (*direct oblimin*) is used for the factor rotation with Delta 0 (default value) (Pedhazur & Scmelkin, 1991). The *pattern matrix* showed that two factors have emerged and the *structure matrix* showed the shared variances, indicating that the variables load on more than one factor. In addition, the *component correlation matrix* showed that correlations between the two factors exist and could be interrelated (dependent). Therefore, the obliquely rotated solution gives a better representation of reality which is in line with the theoretical grounds. The column “Cronbach's Alpha if Item Deleted” of the reliability analysis of the component attitude strength shows that the Cronbach's Alpha would increase from .851 to .863 in case the variable “Creating a more sustainable future” was deleted. The variable is not deleted as the measurement tool for attitude would otherwise be lost while the reliability not changes much (only 0.01), and the “Corrected Item-Total Correlation” is well above .3 for this variable (.643). Thus, the EFA and the reliability analysis showed that the six variables are valid and reliable for measuring attitude.

The R-matrix of intention showed that the variable “ecological monitoring ” (.181 - .366) did not meet the minimum criterion of .3 correlation sufficiently. After deleting this variable, an EFA was performed with the nine remaining variables. No theoretical grounds suggest that a correlation would exist between the items. Therefore, the varimax rotation method is used. The rotated component matrix showed that the variables “citizens’ initiative”, “adopting a product of a nature-inclusive organisation”, and “actions that attempt to influence the politics and policies of governments or companies” loaded on more than one factor. Due to these cross-loadings, these variables were deleted from the EFA. The Cronbach alpha of the factor “private contribution” and the factor “ group contribution” is below the suggested .7, making the scale reliability questionable. However, these two subscales will be used for the study as the difference is only 0.04 and 0.05 with .7 and several books and authors suggest that a Cronbach Alpha of .6 could still be used and considered reliable (Hinton, McMurray & Brownlow, 2014; Ursachi, Horodnic & Zait, 2015; van Griethuijsen et al., 2015).

No deviant outputs were found for the EFA of place attachment. The theory suggests that the factors “place identity” and “place dependence” might correlate (Williams & Vaske, 2003). Therefore, an oblique rotation method (*direct oblimin*) was used for the factor rotation with Delta 0 (default value). The Pattern matrix showed that the item “The countryside is the best place for leisure activities” loaded on both factors and, therefore, should be excluded from the measurement. However, this variable is not excluded as it only loaded 0.04 too high on the factor place identity and the measurement tool for place attachment would otherwise be lost. Besides this bit too high value, the EFA and the reliability analysis showed that the variables are valid and reliable for measuring place attachment.

3.5 Analysis of items

Before analysing the items, very different scores from the rest of the data (*outliers*) were analysed. Except the socio-demographic variable "age", almost all variables were measured on a pre-designed Likert scale with a specific number of scale points. Removing values just because they occurred rarely could not be justified as this still could represent the real world (no questionable outliers or errors were found) (Osborne & Overbay, 2004). Nevertheless, outliers can bias parameter estimates and the associated sum of squared errors (Field, 2014). Therefore, it was checked whether the parameters would enormously change after deleting the outliers. Not more than eleven outliers and extreme scores (of the total 1550 scores) per variable were found, leading to very minor differences (less than 0.04) in the parameters when outliers were excluded. In addition, deleting the 5% lowest and highest scores (*5% trimmed mean*) does not deviate much (not more than 0.01) from the mean. Therefore, it was decided not to delete any answers that are indicated an outlier or extreme score.

The next chapter *4. Results* show the outcomes of correlation analyses, simple regression analyses, mediating analyses, and moderating analyses. In addition to showing the results, chapter 4 also describes how the results could be interpreted. Correlations say something about the relationship between two variables without manipulating the variables or the environment in which they are measured. Simple regression analyses were performed to estimate whether one independent variable predicts a dependent variable. A mediator explains the relationship between two other variables, while a moderator influences the relationship between two variables (Field, 2014).

First, correlational analyses were performed to measure whether significant relationships existed between variables (step 1). Significant linear relationships are required to have a valid regression model. After the correlational analyses, simple regression (step 2), mediation and moderation analyses (step 3) were performed with the variables that showed significant relationships.

Correlation analysis. One disadvantage of correlation research is that it does not tell something about the causal influence of variables on each other. With correlational research, there could be a third variable that explains the relationship between two variables. Thus, this study does not provide sufficient evidence for causal relationships between variables (Akoglu, 2018; Brace, Snelgar, & Kemp, 2013; Field, 2014; Schober, Boer, & Schwarte, 2018).

Different statistical correlation tests are appropriate for interval and categorical variables (Field, 2014). Likert data, which were used for almost all questions in the questionnaire, could be analysed with an ordinal and interval measurement scale depending on whether the Likert scale items are combined or not. When Likert scale items are combined into one composite score, such as the mean, the item should be analysed at the interval measurement scale (Boone & Boone, 2012). The concepts knowledge, attitude, intention, and place attachment are interval variables as they represent the mean scores of the items. Thus, parametric tests were appropriate to analyse these variables. The assumptions for parametric tests were met through the use of bootstrapping, as shown in *Appendix 7.* When variables are not measured at an interval scale level but stand-alone and have an ordinal scale, non-parametric measures (assumption-free tests) of correlation should be used to test correlations (Field, 2014; Schober et al. 2018). Spearman's correlation coefficient was used to measure correlations with categorical variables for this study as this correlation coefficient is more appropriate for large sample sizes than Kendall's Tau (Field, 2014). Pearson's and spearman's correlation coefficients can lie between -1 (perfect negative correlation) and 1 (perfect positive correlation). Correlation coefficients of 0 - .1 are very weak, .1 - .3 are weak, .4 - .6 are moderate and .7 - 1 are strong correlations (Akoglu, 2018; Schober et al., 2018).

Simple regression analysis. The regression fits a statistical model to the data in the form of a straight line to summarise the data pattern. The line is assessed by looking at the:

- *Unstandardised beta (B):* B shows the gradient of the regression line and the strength of the relationship. When the B is significant (Sig. < .05), then the independent variable significantly predicts the dependent variable.
- *Standardised beta (β):* Different measurement scales were used to measure the concepts (e.g. five- or seven-point scale), making the unstandardised beta less easy to interpret as it depends on units. For example, a larger number may still point to a smaller effect when the scale is larger. Thus, it is easier to use the standardised beta as it does not depend on units but on standard deviations (scale-free). "The standard beta values tell us the number of standard deviations that the outcomes will change as a result of one standard deviation change in the predictor" (Field, 2014, p. 340).

- *R-Squared (R^2):* the R^2 shows the proportion of variance in the dependent variable that is shared by the independent variable (the higher, the better);
- *F-ratio:* the ratio shows how much variability the model can explain relative to what it cannot explain. In addition, the 95% bias-corrected and accelerated bootstrapped confidence intervals (LLCI and ULCI) and the standard error of B (SE B) were estimated (Field, 2014).

Mediation analysis. SPSS does not contain an analysis through which the mediating effect of, for example, attitude between knowledge and intention could be estimated. Hayes (2013) developed the PROCESS macro for SPSS (available for download at http://afhayes.com) to estimate the indirect effects of mediating variables using bootstrapping procedures. This macro was used for the study to obtain estimates of the indirect effects and their significance by using confidence intervals (Preacher & Hayes, 2008). When zero is not included in the 95% confidence interval of the estimate, the indirect effects are statistically significant (Preacher & Hayes, 2008). A 95% confidence interval means that a "95% confidence interval contains the true value of a parameter in 95% of samples" (Field, 2014, p.416).

Moderation analysis. The developed PROCESS macro for SPSS of Hayes (2013) could also estimate the moderating effects of variables. The PROCESS macro allows dichotomous, categorical and interval variables as moderator variables (Hayes, 2021). Education level is an ordinal variable and could therefore only be entered into regression analyses when transformed into a dummy variable. Dummy variables represent the education level groups by using only zeros and ones. The PROCESS macro of Hayes (2021) created automatically the dummy variables (Hayes, 2021). Unless the moderating analyses were performed with dummy variables, 38 errors occurred during the moderating analyses of education level. For this reason, the moderating effect of education level is not included in the study as the results are questionable due to the possible effects of the errors. 4.1 Knowledge, attitude of and intention to contribute to NiA

This chapter answers the first sub-question: *What is the knowledge and attitude of, and intention to contribute to NiA of Dutch citizens?* The descriptive statistics, such as the mean and standard deviation of knowledge, attitude and intention, are shown in *Appendix 6.*

4. Results

4.1 Knowledge, attitude of and intention to contribute to NiA

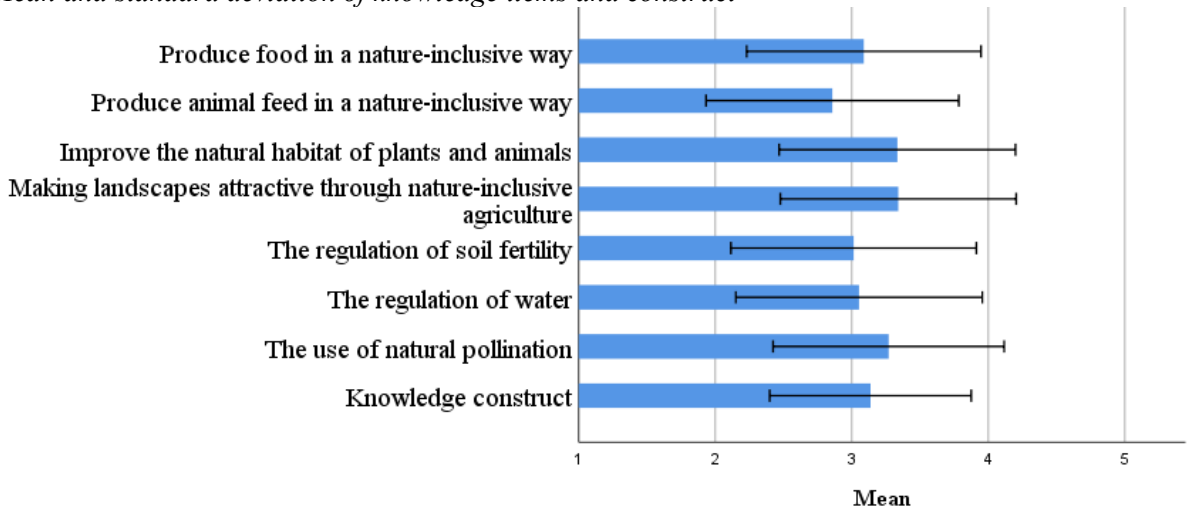
This chapter answers the first sub-question: *What is the knowledge and attitude of, and intention to contribute to NiA of Dutch citizens?* The descriptive statistics, such as the mean and standard deviation of knowledge, attitude and intention, are shown in *Appendix 6.*

4.1.1 Knowledge of NiA

The mean scores of the seven self-reported knowledge items were used to measure the construct of knowledge. Each respondent's scores of the seven knowledge items are summed up and divided by seven to create the knowledge construct. Figure 5 shows the mean (end of the blue bar) and standard deviation (black I-beam) of the knowledge items and the knowledge construct. The standard deviation shows were 68% of the data falls, in other words, how spread out the data is from the mean of the item (Field, 2014). Compared to the mean values, the standard deviations of the items are low, even as the differences between the mean values of the seven items, indicating that the mean values represent the data relatively well.

Figure 5

Mean and standard deviation of knowledge items and construct



Note. Measured on a self-reported five-point scale (1 = very low amount of knowledge, 2 = low amount of knowledge, 3 = not low or high amount of knowledge, 4 = high amount of knowledge, 5 = very high amount of knowledge). Error bars: 95 BCa CI, 1 SD.

Respondents had, on average, a slightly higher amount of knowledge about making landscapes attractive through nature-inclusive agriculture (m = 3.34, sd = .86) and improving the natural habitat of plants and animals (m = 3.33, sd = .87). A high amount of knowledge for these items was expected as landscapes and the natural habitat of plants and animals are most visible to citizens in their daily lives, and biodiversity loss has received increasing societal attention, for example, due to the nitrogen crisis (Erisman, 2021). Furthermore, citizens have a relatively higher amount of knowledge about natural pollination (m = 3.27, sd = .85), which could also be explained through the visibility of insects in citizens daily lives and increased societal attention for the loss of insects such as bees (Hallmann, 2017). Soil fertility and water regulation are assumed to be less visible to citizens. Therefore, it was expected that these items would receive relatively lower mean values. Nevertheless, a group of citizens has a high amount of knowledge about these items, which raised the mean values of the regulation of soil fertility (m = 3.01, sd = .90) and water (m = 3.05, sd = .90). These higher scores are probably caused by the nature of the sample (supporters of NM). In addition, the production of food in a nature-inclusive way is not directly visible for citizens but received relatively high values (m = 3.09, sd = .86). A reason could be the nature of the sample population or increased societal attention, e.g. for food scandals (Mulder, & Biemans, 2018). It was expected that citizens might show a high amount of knowledge about how animal

feed is produced in a nature-inclusive way, e.g. production hay. However, the production of animal feed in a nature-inclusive way received a slightly lower score (m = 2.86, sd = .925). Possible reasons could be that people do not know the differences between conventional animal feed production or the nature-inclusive way, or how food besides grass and hay is produced (e.g. concentrates). Overall, it was expected that citizens would have (a very) low amount of knowledge about NiA, but citizens score their amount of knowledge higher (m = 3.14, sd = .74).

To sum up, supporters of NM indicate that they know something about the ecosystem services of NiA but not in much detail. Furthermore, it is expected that supporters know relatively more about ecosystem services that are visible to them in their daily lives or received societal attention, such as the loss of biodiversity, as these aspects scored higher. It is positive that the knowledge of citizens about NiA was higher than expected. However, an assumption is that the sample could have caused this as the appreciation for nature could be higher of NM supporters compared to Dutch citizens. Thus, the results must be interpreted with caution and were expected to be lower for the Dutch population. Furthermore, a self-reported method was used, which can cause a higher outcome. It is alarming that Dutch citizens probably have a low amount of knowledge about NiA as Dutch agriculture is threatened in different ways that could directly affect Dutch citizens' lives in the future. For example, the knowledge about the production of animal feed and the regulation of soil fertility and water is relatively low. These aspects of NiA are important as 21.1% of the global warming emissions from the livestock sector comes from the production of animal feed, the quality of the soil is deteriorating in the Netherlands, and the precipitation shortages due to extreme heats lead to increasing water scarcity in the Dutch agricultural sector (Rietra, & Oenema, 2018; Rojas-Downing, Nejadhashemi, Harrigan, & Woznicki, 2017; Gilissen, van Kempen, Groothuijse, & van Rijswick, 2019).

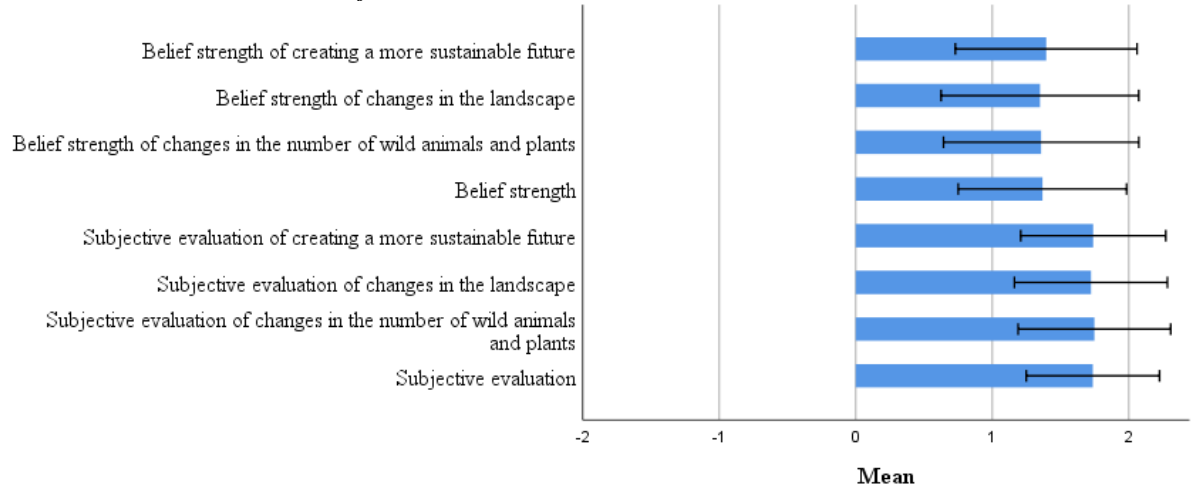
4.1.2 Attitude of NiA

Fishbein and Ajzen (2010, p.20) describe attitude as the "positive or negative evaluation of performing the behaviour in question". The attitude measure was created based on the beliefs provided by 42 respondents in the pilot questionnaire regarding contributing to NiA (open question). The three beliefs used to create the attitude construct are the beliefs that contributing to NiA will lead to the creation of a more sustainable future, changes in the landscape and the number of wild animals and plants. The strength and subjective evaluation of each belief were measured to create the construct of attitude (see details attitude construct in *Appendix 3* and discussion in chapter *5. Discussion*). Attitude is equal to the sum of the strength of each belief multiplied by the subjective evaluation of that belief.

Figure 8 shows the mean and standard deviation of the three belief items for strength and subjective evaluation. The attitude construct has a different scale than the six beliefs items and is therefore not included in Figure 6. Compared to the mean values, the standard deviations of the items are low, even as the standard deviation differences between the belief strength and subjective evaluation items, indicating that the attitude construct represents the data relatively well.

Figure 6

Mean and standard deviation of attitude items



Note. Measured on five-point scale (belief strength: -2 = completely unlikely, -1 = unlikely, 0 = not unlikely or likely, 1 = likely, 2 = completely likely; subjective evaluation: -2 = completely objectionable, -1 = objectionable, 0 = nor objectionable or not objectionable, 1 = not objectionable, 2 = completely not objectionable). Error bars: 95 BCa CI, 1 SD.

Supporters of NM have strong beliefs (m = 1.33 sd = .62) that their contribution to NiA will lead to a more sustainable future, changes in the landscape and number of wild animals and plants in the Netherlands in 2021 and evaluated these beliefs very positive (m = 1.73, sd = .489). In other words, they believe that their contributions could make a positive difference in creating NiA in the Netherlands. Strong and positive beliefs regarding NiA were expected as the sample population supports NM because they believe that their support can help the environment.

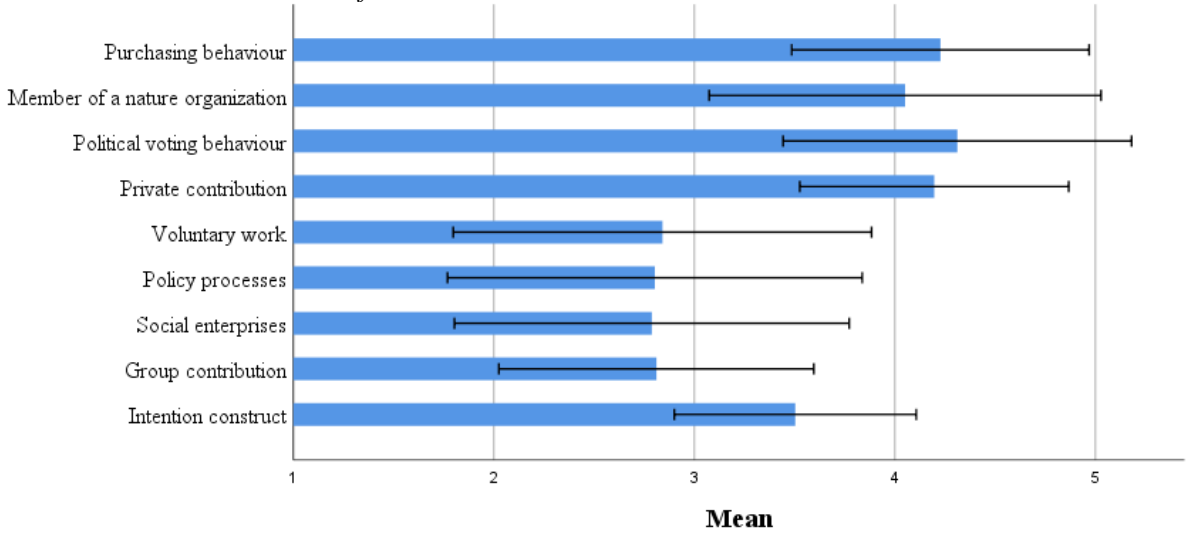
To sum up, the attitude of the supporters of NM is positive towards contributing to NiA, m = 7.6, sd = 3.92, scale -12 to 12. This attitude is great as the attitude positively influences supporters intention to contribute to NiA (Fishbein & Ajzen, 2010). However, an assumption is that the results were expected to be lower for the Dutch population as it is expected that the sample population appreciates nature more. Another limitation is that the attitude construct is based on three elicited beliefs, further elaborated on in chapter *5. Discussion*.

4.1.3 Intention to contribute to NiA

The three items, purchasing behaviour, political voting behaviour and member or donator of nature organisation, contribute to the factor “private contribution”. The three items, voluntary work, participating in policy processes and social enterprises, form the factor “group contribution”. The mean scores of these six intention items were used to measure the construct of intention. Figure 7 shows the mean and standard deviation of the intention items and the private contribution, group contribution and intention construct. Compared to the mean values are the standard deviations of the items low. The differences between the mean values of the private and group contribution items are relatively large, which caused that the intention construct deviates slightly from the means of items (m = 3.50, sd = .60).

Figure 7

Mean and standard deviation of intention items and construct



Note. Measured on five-point scale (1 = very unlikely, 2 = unlikely, 3 = not unlikely or likely, 4 = likely, 5 = very likely). Error bars: 95 BCa CI, 1 SD.

It is likely that Dutch citizens would privately contribute to NiA (m = 4.12, sd = .67) as they have the intentions to change their purchasing behaviour (m = 4.23, sd = .742), political vote (m = 4.31, sd = .869) or become a member or donator of a nature organisation (m = 4.05, sd = .977). The score for purchasing behaviour was higher than expected as it was predicted that the higher prices of organic products would not weigh up against the environmental advantages for Dutch citizens. The high mean value could be explained through the sample population (supporters NM), or, for example, the promotion of organic products via the media and increasing associations with personal healthiness such as higher nutritional value or use of fewer pesticides (Battjes-Fries et al., 2017). The item "political voting behaviour" has five as the middle score when scores were ranked in order of magnitude and has the highest mean, mode and median. Therefore, it can be concluded that respondents have the greatest intention to contribute to NiA via their political voting behaviour, which was expected as this action is not bounded to financial or physical capabilities. The high mean value to become a member or donator of a nature organisation was expected as supporters of NM filled in the questionnaire. The items for the factor "group contribution" score lower on the other hand (m = 2.81, sd = .79), which was expected as these actions generally cost more free time than the private contributions. It is unlikely that Dutch citizens would contribute to NiA through voluntary work (m = 2.84, sd = 1.043), the participation in policy processes (m = 2.80, sd = 1.034), or organising or joining social enterprises (m = 2.79, sd = .984). Besides less free time, no other explanation for these low values could be discovered. Overall, it was expected that citizens would have (very) low intentions to contribute to NiA. However, it seems that citizens are prepared to contribute to NiA through private contributions.

To sum up, supporters of NM have the intention to contribute to NiA but mainly through private contributions such as political voting and less through group contributions such as voluntary work. It is encouraging that the intention of citizens to contribute to NiA is higher than expected as these contributions stimulate the transition towards nature inclusive society (Buijs et al., 2019a). However, an assumption is that the results were expected to be lower for the Dutch population due to the nature of the sample. Nevertheless, the sample could represent the first movement of people who stimulate the transition towards NiA, starting with making private contributions. Products produced in a nature-inclusive way are still often purchased by a niche market. However, the total amount these consumers jointly spend increases for several years (Logatcheva, Hovens, & Baltussen, 2018). Membership of nature organisations and political voting behaviour are also relevant activities as they influence the living environment by increasing the legitimacy and power base of pro-NiA parties (Buijs et al., 2019a).

4.1.4 Answers to the first sub-question

This chapter answered the first sub-question: *What is the knowledge and attitude of, and intention to contribute to NiA of Dutch citizens?* To sum up, supporters of NM indicate that they know something about the ecosystem services of NiA but not in much detail. Furthermore, it is expected that supporters know relatively more about ecosystem services that are visible to them in their daily lives or received societal attention as these aspects scored higher. Supporters believe that their contributions could make a positive difference in creating NiA in the Netherlands. Therefore, they have a positive attitude towards contributing to NiA. The intention to contribute to NiA is mainly focused on private contributions such as political voting and supporters are less inclined to participate through group contributions such as voluntary work. It is encouraging that citizens' knowledge, attitude of and intention to contribute to NiA is higher than expected as it could stimulate the transition towards nature-inclusive society. However, the results were expected to be lower for the Dutch population as supporters of NM have a higher appreciation for nature.

4.2 Relationship between knowledge and attitude of, and intention to contribute to NiA

This chapter answers the second sub-question: *What are the relationships between knowledge and attitude of, and intention to contribute to NiA?* Regression analyses are performed between knowledge, attitude and intention to measure whether the independent variable (knowledge and attitude) significantly predicts the dependent variable (attitude and intention) (Field, 2014). The first step for performing a regression analysis is checking whether the assumption of a linear relationship between the dependent and independent variable is met with correlation analyses. When there is no significant linear relationship between two variables, the model of a regression analysis is invalid (Field, 2014). After that, the predictions that dependent variables explain independent variables are measured with simple regression analyses, and what the mediating effect of attitude is with the mediating analysis. Thus first, the direct links between knowledge, attitude, and intention are measured and after that, whether the relationship changes when the attitude is added to the model.

4.2.1 Correlation analyses

Table 4 shows the means (m), standard deviations (sd), correlations (r) and significance levels (p) between knowledge, attitude and intention. The outputs of the correlation analysis are provided in *Appendix 8*.

Table 4

Means, standard deviations and correlations between knowledge, attitude and intention (Pearson's r)

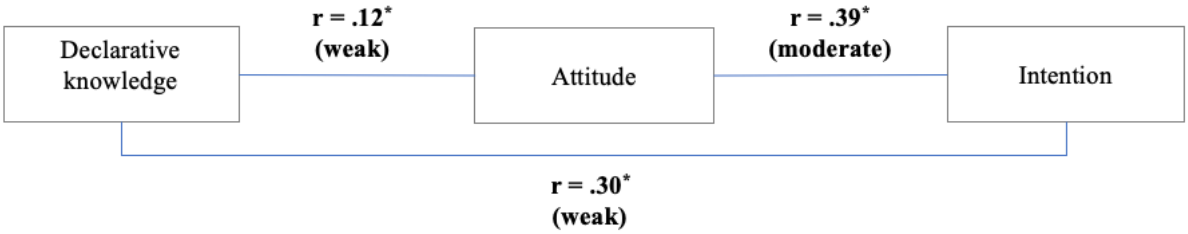
Variables	**m**	**sd**	Knowledge	Attitude
Knowledge	3.1	.74		
Attitude	7.6	3.92	.12*	
Intention	3.5	0.60	.29*	.39*

Note. *p < .001.

Table 4 shows that knowledge, attitude and intention were linearly related as the correlations are significant. The relationship between attitude and intention is moderately strong, between knowledge and attitude weak, and between knowledge and attitude also weak (Akoglu, 2018; Schober et al., 2018). Thus, the prediction that attitude is a mediating variable between knowledge and intention could be tested with a mediating analysis as significant correlations exist between knowledge, attitude and intention. Figure 8 summarises the correlations between knowledge, attitude and intention.

Figure 8

Relationships between the dependent and independent variables



Note. *p = .000

4.2.2 Mediation analyses

The mediation analysis shows the relationship between knowledge and intention mediated by attitude. The PROCESS macro of Hayes (2021) is used to estimate the effect of attitude. Before running the mediation analyses, simple regression analyses are performed to show to what extent the independent variables predict the dependent variables. Table 5 shows the unstandardised beta (b), standard error of B (SE B), the corrected and accelerated lower and upper confidence intervals are shown (LLCI and ULCI), the standardised beta (β) and the R-squares of the simple regression analysis of the knowledge, attitude, and intention. The outputs of the simple regression analysis are provided in *Appendix 9.*

Table 5

Results from simple regression analyses; direct relationships among knowledge, attitude and intention

Predictions	B	SE B	LLCI- ULCI	β	R^2
Knowledge -> intention	.24*	.02*	(.20 - .28)	.30	.09*
Knowledge -> attitude	.62*	.13*	(.38 - .88)	.12	.01*
Attitude -> intention	.06*	.00*	(.05 - .07)	.39	.16*

Note. Confidence intervals and standards errors are based on 1000 bootstrap samples. All F-ratios (F) are significant and well above one. *p < .001.

The strength of predictions. The unstandardised beta of the predictions (B) shows that the independent variables positive and significant predict the dependent variables. Thus, knowledge predicts attitude and intention, and attitude predicts intention. The strength of the relationship between attitude and intention is the greatest (β = .39), followed by the relationship between knowledge and intention (β = .30) and knowledge and attitude (β = .12). The relationship between attitude and intention was expected to be the strongest as the theory describes that these variables relate directly (Fishbein & Ajzen, 2010). The theory also describes that knowledge more closely relates to attitude than intention but seemed not true for this study. The measurement of attitude could be an explanation for this result, further elaborated in chapter *5. Discussion.* Nevertheless, it is positive that knowledge predicts intention as it suggests that knowledge could play a role in increasing the intention to contribute to NiA.

Furthermore, the t-tests associated with these unstandardised betas, shown in *Appendix 9*, are significant (p = 0.00), which means that knowledge and attitude significantly contribute to the model. Attitude has the greatest magnitude of the t-statics (attitude: 16.13, knowledge: 11.15), so the greatest impact on the model. A small confidence interval of B indicates that the value of B of the sample is close to B in the population. The confidence intervals of B are tight, which might suggest that the estimates are likely to represent the supporters of NM, further discussed in chapter *5. Discussion.* Furthermore, the corrected and accelerated confidence intervals (LLCI- ULCI) are small, indicating that points are not heavily spread out from the regression line.

The variance of predictions. The R^2 shows the proportion of variance in the dependent variable that is shared by the independent variable. The R^2 shows that knowledge explains 1% in the variation of the attitude and 9% for intention, and attitude explains 16% of the variance of intention. Thus, if knowledge increases, then intention increases with .3 standard deviations. However, this increase of intention is only for 9% explained by knowledge. It is hard to tell what a high or low R^2 is as this depends on the context (Field, 2014). However, R^2 between attitude and values regarding agrobiodiversity were found between .331 and .591 for the study of Runhaar et al. (2019a), suggesting that R^2 between .01 and .16 are low. Thus, it seems that the independent variables have a small role in increasing the dependent variables. There are likely other variables that could influence the increase of attitude and intention. The consequences of the low R^2 values are further explained in chapter *5. Discussion.*

The simple regression analyses showed that the independent variables significantly predict the dependent variables and that the independent variables have a small role in increasing the dependent variables. The next step is estimating whether these outcomes change when attitude is added to the model by performing a mediation analysis. The output of the PROCESS macro shows the total effect, which is the effect of the knowledge on intention if the attitude was not present (same as the simple regression analysis) and contains the direct and indirect effect. The direct effect is the relationship between knowledge and intention controlling for attitude (no mediation). The indirect effect is the relationship between knowledge and intention through attitude (mediation) (Hayes, 2021). The outputs of the mediating analysis are shown in *Appendix 11.* Table 6 shows the mediation process analyses of knowledge on the intention. The standardised beta values (β) are achieved by performing multiple regression analyses, shown in *Appendix 10.*

Table 6

Results from mediation process analyses: total, direct, and indirect effects of knowledge on the intention

	Effect (B)	SE B	LLCI	ULCI	β
Total effect: R^2 = .09					
Constant	2.75*	.06*	2.62*	2.87*	
Knowledge	.24*	.02*	.20*	.28*	.30*
Direct effect: R^2 = .22					
Constant	2.43*	.06*	2,31*	2.56*	
Knowledge	.21*	.02*	.17*	.24*	.25*
Attitude	.06*	.00*	.05*	.06*	.37*
Indirect effect					
Attitude	.03*	.01*	.02*	.05*	

Note. 95% Confidence intervals and standards errors are based on 1000 bootstrap samples. *p < .001.

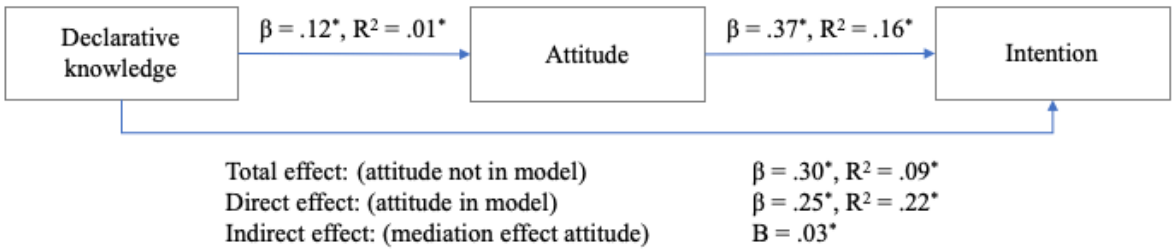
Changes in the strength of predictions. The standardised beta values decreased when attitude was added to the model. The standardised beta value of knowledge decreased from .30 to is .25 and of attitude from .39 to .37. The standardised beta value of the mediation analysis indicates that attitude is more important in increasing intention than knowledge as the value is higher and decreased less. In more detail, when knowledge increases with one standard deviation, which is .738 (see *Appendix 6*), the intention will increase by .25 standard deviations (see β in Table 6). The standard deviation for intention is .60 (see *Appendix 6*), which constitutes a change of .15 for knowledge (.25 x .60). Thus, for every standard deviation of .60 for intention, a standard deviation of knowledge of .15 is reached. For attitude applies, for every .60 intention standard deviation, an increase of 0.22 (.37 x .60) in the standard deviation of attitude is reached. In other words, knowledge increases with 0.15 while attitude with 0.22 per .60 intention standard deviation, indicating that attitude is a greater predictor of intention than knowledge. Furthermore, these findings support the prediction that there is partial mediation of attitude as the standardised beta-values of knowledge decreased.

Changes in the variance of predictions. The R^2 is analysed to know the proportion of variance in intention shared by the knowledge is when attitude is added to the model. For the total effect, knowledge accounted for 9% of the variation in intention (R^2 = .09). For the direct effects (attitude included in the model), this is 22% (R^2 = .22). When the attitude construct is added to the regression analysis, the value of knowledge increases from 9% to 22%, which means that attitude accounts for 13% of the variation in intention (R^2 *change*). Thus, it seems that attitude has a more prominent role in increasing intention than knowledge which was expected as attitude and intention are closer related according to the theory (Fishbein & Ajzen, 2010). Overall, it was expected that knowledge about NiA would explain a slightly higher percentage of the variance of attitude and intention (not 1% and 9%) and would decrease less after adding attitude to the model as various studies indicate that knowledge is an important condition for ecological behaviour (Cerri, Testa, & Rizzi, 2018; Kaltenborn et al., 2016; Kaiser & Fuhrer, 2003; Polonsky et al., 2012).

Mediation effects. Table 5 showed already the significant total effects of knowledge on intention (B = 0.24, t = 12.14, p = 0.00), and that knowledge explains 9% (R^2 = .09) of the variance of intention. The direct effects show that knowledge still significantly predicts intention with attitude in the model (B = .21, t = 11.15, p = .00) and attitude also significantly predicts intention (B = 0.06, t = 16.12, p = 0.00). The unstandardised beta value of knowledge decreased from .24 to .21 when attitude was added to the model and the standardised beta value from .30 to .25. Thus, the strength of the relationship between knowledge and intention becomes weaker when attitude is added to the model. The indirect effects prove that attitude is a mediator of the relation between knowledge and intention as the range of the confidence intervals does not include zero (B = 0, means no effect) (Field, 2014). The indirect effect of knowledge on intention through attitude is only .03. All in all, attitude explains the relationship between knowledge and intention as there was a significant indirect effect of knowledge on intention through attitude, B = .03, BCa CI [.02, .05]. However, this represents a minimal effect. It was expected that attitude would play a more prominent role in the relationship between knowledge and intention. The lower outcomes could be caused through the measurement of attitude based on three beliefs, or other potential mediators explain the relationship between knowledge and intention. Figure 9 summarises the effects of the study variables.

Figure 9

Summary of effects between knowledge, attitude and intention



Note. *p < .01.

4.2.3 Answers to the second-sub question

This chapter answered the second sub-question: *What are the relationships between knowledge and attitude of, and intention to contribute to NiA?* To sum up, the answer to the second sub-question is that knowledge significantly predicts attitude and intention, and attitude the intention. However, knowledge explains only weakly the increase of attitude and intention, and also attitude explains the increase in intention weakly. Furthermore, attitude explains the relationship between knowledge and intention as there was a significant indirect effect of knowledge on intention through attitude. However, this represents only a minimal effect. Stronger relationships were hoped for as it would make the increase of knowledge of Dutch citizens more effective to support the transition towards NiA. Nevertheless, it is positive that knowledge predicts attitude and intention.

4.3 Variables explaining and influencing the relationship between knowledge, attitude and intention

This chapter answers the third sub-question: *What variables explain and influence the relationships between knowledge and attitude of, and intention to contribute to NiA?* The variables analysed in the study are socio-demographic characteristics, place attachment and the place one grew up in. First, the descriptive results of these variables will be described, and after that, their relationships with knowledge, attitude and intention (correlation analyses). With the variables that show significant linear relationships with two of the three study variables, knowledge, attitude or intention, mediating analyses were performed. When a variable only significantly relates to knowledge or attitude or intention, it is not possible to perform a mediation analysis as significant linear relationships are required between all variables to perform a valid mediation analysis (Field, 2014). The same rule applies to the moderating analyses. The mediation analyses show which variables could explain the relationships knowledge, attitude and intention. The moderating analyses show which variables influence these relationships. The descriptive statistics, such as the mean and standard deviation of the socio-demographic characteristics, place attachment and place one grew up are shown in *Appendix 6.*

4.3.1 Socio-demographics, place attachment, and place one grew up

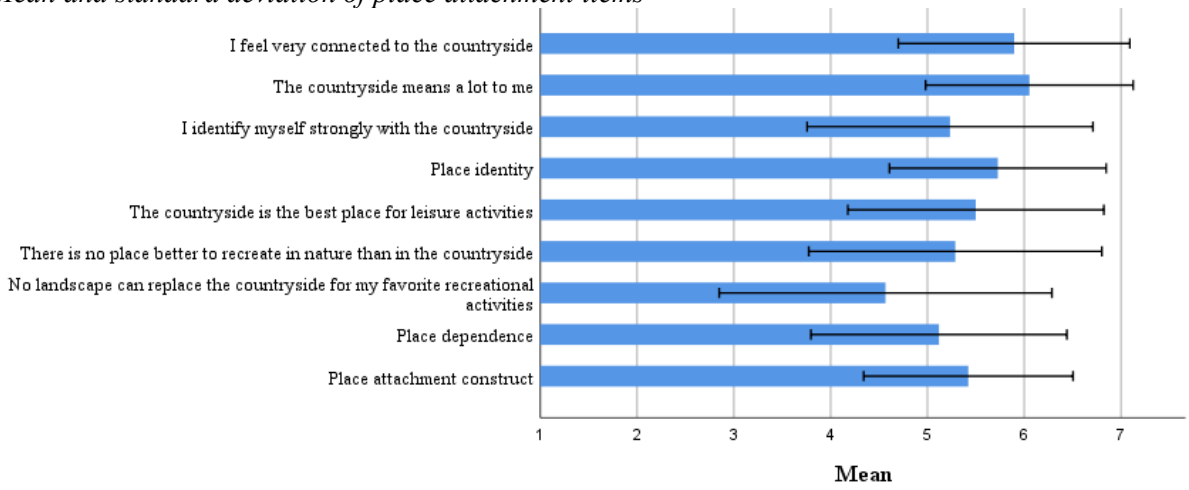
Socio-demographics. Sixty-two per cent of the respondents are women, 37.5% men, and 0.5% answered the option "other". The age of the respondents (m = 60, sd = 13) is divided into the age categories used by CBS (2020) to achieve insights into which category is represented the greatest. The categories 40 - 49 (10.90%), 50 - 59 (21.1%), 60 - 69 (33%), and 70 - 79 (22.6%) represent the largest share of respondents. Most respondents fall within the education level of hbo-, wo-bachelor (40.6%), followed by hbo-, wo-master, doctor (32.5%) and havo, vwo, mbo level 2, 3 or 4 (20.65%). The geographical spread of the sample is well distributed. Only slightly more respondents live in the province Gelderland (5.5% more than the Dutch population) and less in Zuid-Holland (4.9% less than the Dutch population). Furthermore, 77.4% of the respondents were a member or donator of NM.

The five socio-demographic variables were compared with the numbers of the Dutch population of 2020 to evaluate the representativeness of the sample. *Appendix 6* provides an overview of the frequencies and percentages of the samples compared to the Dutch population. Compared to the Dutch population, the sample population has around 12% more women; 40% more people over fifty years old; 40% higher educated people (hbo-, wo-bachelor and higher); 73% more people who participate in environmental organisations (such as NM); and 80% more people who grew up in a small village or the countryside. All in all, it is concluded that the sample is not representative for the Dutch population, which is further elaborated in Chapter *5. Discussion.*

Place attachment. The mean scores of the three "place identity" and three "place dependence" items create the construct of place attachment. Figure 10 shows the mean and standard deviation of the place attachment items. Compared to the mean values, the standard deviations of the items low. The differences between the mean values of the place identity and dependence items are relatively small, indicating that the mean value of place attachment represents the data well.

Figure 10

Mean and standard deviation of place attachment items



Note. Measured on seven-point scale (1 = completely disagree, 2 = disagree, 3 = slightly disagree, 4 = neither disagree nor agree, 5 = slightly agree, 6 = agree, 7 = completely agree). Error bars: 95 BCa CI, 1 SD.

Supporters of NM agreed that they identify themselves with the countryside and slightly agreed that they depend on the countryside for leisure or recreational activities. It was expected that supporters of NM would identify themselves with the countryside and feel attached to the countryside (m = 5.40, sd = 1.08) as they appreciate nature. It is positive that the supporters of NM are attached to the countryside as this could positively influence their attitude regarding contributing to NiA (Runhaar et al., 2019a). However, an assumption is that the appreciation for nature could be higher of NM supporters compared to Dutch citizens. Thus, the results are expected to be lower for the Dutch population.

Place one grew up. Seventy-four per cent of the people in the Netherlands live in urban areas (PBL, 2015). The sample is expected not to be representative in terms of where people grew up as 21.8% of the respondents had spent their youth in a large city (+100,000 inhabitants), 45.6% in a small town or village (10,000 to 100,000 inhabitants), and 32.6% in the countryside (-10,000 inhabitants). People who grew up in a small town or the countryside could be more inclined to fill in the questionnaire, which was slightly expected as the subject is related to the countryside. The place one grew up in could positively influence the attitude regarding NiA (Runhaar et al., 2019a). Therefore, the attitude which relates to intention and knowledge could be higher for this sample than the general Dutch population.

4.3.2 Correlation analyses

A correlational analysis is performed to measure how socio-demographic characteristics, place attachment and place one grew up relate with knowledge, attitude and intention. Table 4 shows the means (m), standard deviations (sd), correlations (r) and significance levels (p) of all the variables. The correlations in **bold** significantly relate to knowledge, attitude and intention, and therefore, relevant for answering the third sub-question. The outputs of the correlation analysis between the variables are provided in *Appendix 8.* The socio-demographic variable about the geographical spread is not included in Table 7 as a correlation analysis with a nominal variable with more than two answer options is not meaningful. Figure 11 provides an overview of the significant correlations with knowledge, attitude or intention.

Table 7

Means, standard deviations and correlations between all variables (Pearson's r and Spearman's rho).

Variables	m	sd	Gender	Member or donator	Age	Education level	Knowledge	Attitude	Intention	Place people grew up
1. Gender [a]										
2. Member or donator [b]			*.02*							
3. Age	59.9	13.31	*-.20***	*-.05*						
4. Education level [c]			*.01*	*-.08***	-.15**					
5. Knowledge	3.1	.74	***-.20*****	*.02*	**.13****	*.04*				
6. Attitude	7.6	3.92	*.04*	***-.09*****	-.03	***.13*****	.12**			
7. Intention	3.5	0.60	*-.03*	***-.18*****	-.03	***.17*****	.30**	.39**		
8. Place people grew up			*-.03**	*.06**	-.06*	*-.08***	**.09****	-.03	-.01	
9. Place attachment [d]	5.4	1.08	*-.03*	*.04*	.13**	*-.15***	**.20****	**.09****	**.13****	.23**

Note. Spearman's rho correlations are indicated in *italics.* *p < .05, **p < .01.

[a] 1 = man, 2 = woman;

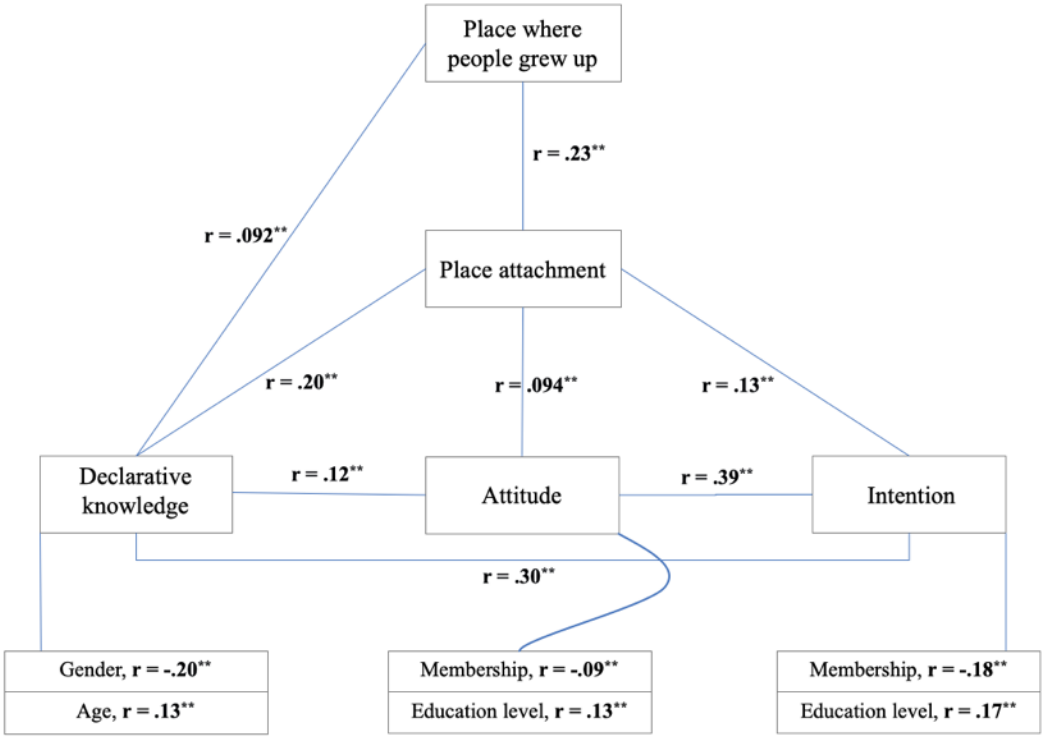
[b] 1 = member or donator, 2 = not member or donator;

[c] 1= primary education, 2 = vmbo (mavo), havo and vwo classes 1, 2 or 3, mbo level 1, 3 = havo, vwo, mbo level 2, 3 or 4, 4 = hbo, wo bachelor, 5 = hbo, wo master, doctor;

[d] 1 = large city with more than 100.000 inhabitants, 2 = small town or village of 10.000 to 100.000 inhabitants, 3 = rural areas with less than 10.000 inhabitants.

Figure 11

Significant correlations between socio-demographics, place attachment and place one grew up with knowledge, attitude and intention



Note. **p < .01.

The relationships found between the socio-demographics, place attachment and place one grew up in with knowledge, attitude and intention are analysed, and explanations are given for these relationships. The relationships between variables unrelated to knowledge, attitude, or intention are not further explained (e.g. relation gender with age), as these relations are not relevant for answering the third sub-question.

Gender. Gender appeared to be related to age ($r = -.20$, $p < .01$) and knowledge ($r = -.20$, $p < .01$), meaning that female respondents were younger and displayed lower levels of knowledge than their male counterparts. In previous studies, no explicit differences between women and men were found regarding knowledge, attitude or values regarding (agro) biodiversity (e.g. Kaltenborn et al., 2016; Runhaar et al., 2019a). Therefore, it was not expected that women showed lower amounts of knowledge than men. No appropriate explanation could be found for this result. In contrast, only explanations were found that could explain the opposite result (women more knowledge than men), e.g. women are more focused on pro-environmental behaviour (Vicente-Molina et al., 2018) and vote more for environmentally conscious parties (CBS, 2012).

Age. The data showed that the older the respondent, the higher their amount of knowledge regarding NiA ($r = .13$, $p < .01$) and attachment to the countryside ($r = .13$, $p < .01$), but the lower the education level ($r = -.15$, $p < .01$) is. It was expected that older people would have a higher amount of knowledge about NiA and a greater place attachment to the countryside as they value nature and agriculture as more important than young people (De Boer, & Langers, 2017) and could have gained knowledge through experiences with, e.g. gardening compared to younger people (Van den Berg, 2018), although younger people are more environmentally aware (Schmeets & Van Hoof, 2016; Schmeets & Gielen, 2015).

Education level. Regarding the education level it appeared that higher education levels relate to more positive attitudes ($r = .13$, $p < .01$) and more intentions to contribute to NiA ($r = .17$, $p < .01$). On the other hand, the higher the education level, the lower the attachment to the countryside ($r = -.15$, $p < .01$). The relationships between education level with attitude and intention were expected as higher educated people consider the environment more important than the lower educated people (Van der Lelij, De Graaf, & Visscher, 2016).

Member or donator. A relationship between membership and intention was found ($r = -.18$, $p < .01$), which means that members and donators have more intentions to contribute to NiA than non-members and donators. It was expected that people who are members or donators of NM have a higher intention to contribute to NiA as they already contribute to NiA by being a member or donator. Through the communication of NM about NiA, it was expected that members or donators of NM would also have a higher amount of knowledge regarding NiA than non-members and donator, however, no relation was found. A reason could be that people might be less interested in NiA compared to other topics.

Place attachment. Place attachment correlates with age ($r = .13$, $p < .01$), education level ($r = .15$, $p < .01$), place one grew up ($r = .23$, $p < .01$), knowledge ($r = .20$, $p < .01$) and intention ($r = .13$, $p < .01$). A positive relationship between place attachment and place one grew up was expected as previous studies showed this relationship (e.g. Runhaar et al., 2019a). However, only a very weak correlation (below .1) between place attachment and attitude was found, which was not expected as previous studies show higher correlations (e.g. Runhaar et al., 2019a). No explanations could be found for this result. However, the measurement of attitude based on three beliefs could have influenced the results, further explained in *5. Discussion.* Common sense can explain the relations between place attachment and knowledge, and place attachment and intention. It is likely that people are willing to support the countryside when they depend on it for leisure or recreational activities, and probably know (more) about the countryside when they identify themselves with it. No studies were found that support this assumption.

Place one grew up. The variable concerning the place where people grew up relates to place attachment ($r = .23$, $p < .01$) and knowledge ($r = .09$, $p < .01$). The relation with place attachment was expected considering previous studies (e.g. Runhaar et al., 2019a). Contrary to what was expected based on previous studies (e.g. Runhaar et al., 2019a), no significant correlation between the place where one grew up and attitude was found. The measurement of attitude based on three beliefs could have caused this, further explained in *5. Discussion.* Unfortunately, this means that the relationship between place attachment and attitude and the predictions that the place where people grew up would influence attitude, mediated by place attachment, could not be confirmed. The mediation effect could not be confirmed as

insignificant linear relationships could cause invalid regression models (Field, 2014; Osborne & Waters, 2002; Poole & O'Farrell, 1971). Thus, no mediating analysis is performed for the place one grew up, place attachment and attitude. Lastly, people who grew up had the countryside know more about NiA than people who grew up in urban areas. The Ministry of Agriculture, Nature and Food Quality (2008) concluded that children from urban areas have less knowledge about nature than children from the countryside. Children from urban areas see nature as something special, something they know from TV, zoo or nature park. In contrast, children from the countryside have more direct experiences with nature (Ministry of Agriculture, Nature and Food Quality, 2008). This difference in knowledge could explain why people who grew up in the countryside know more about NiA.

4.3.3 Mediation analyses

Significant linear relationships exist between place attachment, knowledge, attitude and intention; education level, attitude and intention; and member or donator, attitude and intention. Thus, the mediating effects of place attachment, education level and member or donator could be measured as significant relationships enable valid mediation analyses (Field, 2014). Unfortunately, the effect of membership on the relationship between attitude and intention could not be confirmed as the variable is dichotomous (two categories), and therefore, not accepted in a mediating analysis (Hayes, 2021). Thus, the mediation analyses are focused on whether place attachment explains the relationship between knowledge and intention, and attitude and intention. Furthermore, it is analysed whether education level explains the relation between attitude and intention.

Before conducting mediation analyses, simple regression analyses were performed to measure whether the independent variables significant predict the dependent variables. Table 8 show the results of the simple regression analyses of place attachment and education level. The simple regression analyses can be found in *Appendix 9*.

Table 8

Results from simple regression analyses; direct relationships among place attachment and education level with knowledge, attitude and intention

	B	SE B	LLCI- ULCI	β	R^2
Prediction knowledge -> place attachment -> intention					
Knowledge -> place attachment	.14*	.02*	.10 - .18*	.20*	.04*
Place attachment -> intention	.08*	.02*	.04 - .10*	.13*	.02*
Prediction attitude -> place attachment -> intention					
Attitude -> place attachment	.03*	.01*	.01- .04*	.09*	.01*
Place attachment -> intention	.08*	.02*	.04 - .10*	.13*	.02*
Prediction attitude -> education level -> intention					
Attitude -> education level	.03*	.01*	.02 - .04*	.14*	.02*
Education level -> intention	.12*	.02*	.09 - .15*	.18*	.03*

Note. Confidence intervals and standards errors are based on 1000 bootstrap samples. *$p < .001$.

The strength of predictions. The unstandardised beta values of the predictions (B) show that the independent variables positive and significant predict the dependent variables. Thus, knowledge predicts place attachment and place attachment the intention. Furthermore, attitude predicts place attachment and education level, and education level predicts intention. The strength of the relationships all fall between $\beta = .09$ and $\beta = .20$. The strongest relationship exists between knowledge and place attachment ($\beta = .20$), followed by the relationship between education level and intention ($\beta = .18$). No specific expectations were made regarding these predictions as no studies suggested, analysed or confirmed these predictions before. It is positive that place attachment and education level predict intention. It suggests that the dependence of and identification with the countryside and education could play a role in increasing intention to contribute to NiA.

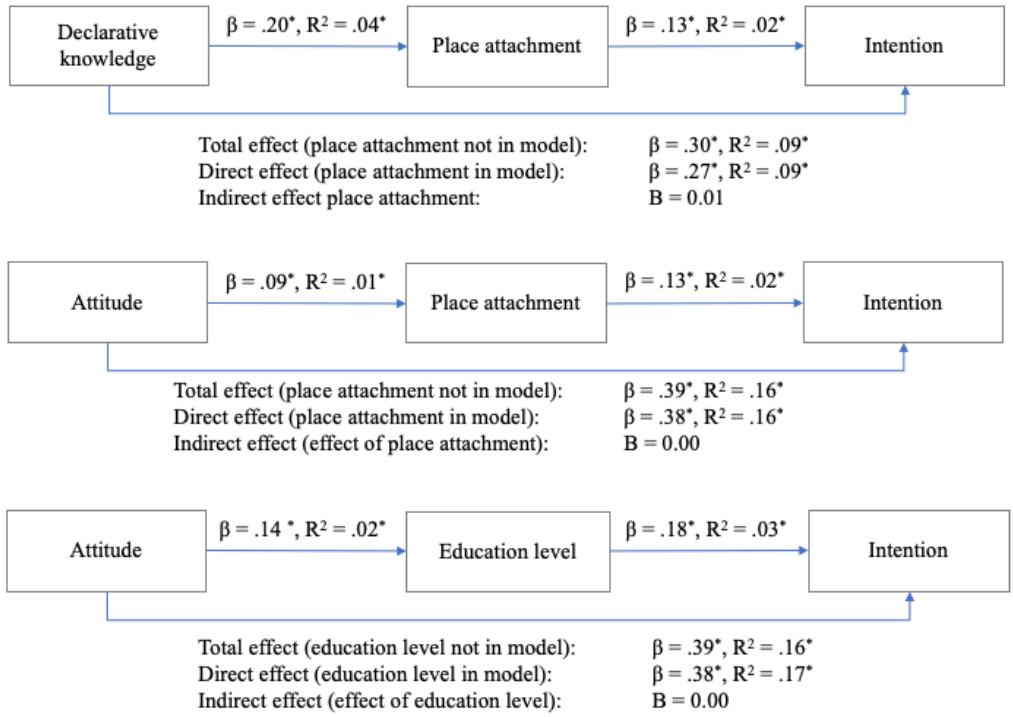
Furthermore, the t-tests associated with these unstandardised betas, shown in *Appendix 9*, are significant ($p = 0.00$), which means that the variables make significant contributions to the model. The confidence intervals of B are tight, which might suggest that the estimates are likely to represent the supporters of NM, further discussed in *5. Discussion*. Furthermore, the corrected and accelerated confidence intervals (LLCI- ULCI) are small, indicating that points are not heavily spread out from the regression line.

The variance of predictions. The R^2 shows that the dependent variables explain only between 1 till 4% of the variation of the independent variables. Comparing to the study of Runhaar et al. (2019a) with R^2 between .33 and .59, the R^2 values below .04 are very low. Thus, it seems that the independent variables have only a very small role in increasing the dependent variables. Therefore, it is expected that other variables exist that explain the variation of the dependent variables. The consequences of the low R^2 are further explained in chapter *5. Discussion.* Overall, slightly higher R^2 values were hoped for as it would be interesting to educate people or led them feel more attached to the countryside to support the transition towards NiA.

The simple regression analyses showed that the independent variables significantly predict the dependent variables and that the independent variables have only a minimal role in increasing the dependent variables. The next step is estimating whether these outcomes change when the mediating variables are added to the model by performing mediation analyses. Figure 12 summarises the output of the PROCESS macro of place attachment and education level. Further details of the mediation analyses can be found in *Appendix 11.*

Figure 12

Mediation effects of place attachment on knowledge, attitude and intention and education level on attitude and intention



Note. *p < .01.

Changes in the strength of predictions. The standardised beta values slightly decreased when place attachment and education level were added to the model. The standardised beta value of the mediation analysis of place attachment between knowledge and intention decreased from .30 to .27 and between attitude and intention from .39 to .38. These results indicate that place attachment is more important in the relationship between attitude and intention as the value is higher and decreased less. The standardised beta value of the mediation analysis of education level between attitude and intention also slightly decreased from .39 to .38. Place attachment and education level seemed to have similar effects on the relationship between attitude and intention as the standardised beta values are the same, even as the R^2 of the total effects. Overall, the strength of the predictions hardly changed when the mediating variables are added to the model, indicating that mediating effects of place attachment and education level are minimal.

Changes variance of predictions. The R^2 hardly changed when place attachment and education level were added to the model. The standardised beta value of the mediation analysis of place attachment between knowledge and intention remained .09, and between attitude and intention, remained .16. The R^2 of the mediation analysis of education level between attitude and intention slightly increased from .16 to .17, indicating that education level accounts for 1% of the variation in intention (R^2 *change*) compared to attitude, which explained 16%. Thus, it seems that attitude has a bigger role in increasing intention than education level which was expected as attitude and intention are closer related according to the theory (Fishbein & Ajzen, 2010). Overall, the R^2 remained almost the same, indicating that the mediating effects of place attachment and education level are minimal.

Mediation effects. The indirect effects of the mediating analyses with place attachment show no mediation effect of place attachment for the relationships between knowledge and attitude, and attitude and intention, as the confidence intervals of the indirect effects contain zero, which means no effect (see *Appendix 11*). The confidence intervals of the indirect effect of education level between attitude and intention show a mediating effect, B = .02, BCa CI [.01, .03]. However, the indirect effect is only .02, and the confidence interval is very low. Thus, the mediation effect of education level is minimal. It is expected that other potential mediators explain the relationship between knowledge, attitude and intention, such as financial capabilities or social norms.

4.4.3 Moderating analyses

The previous chapter discussed whether variables explain the relationships between knowledge, attitude of, and intention to contribute to NiA. This chapter will discuss what the influence of variables is on these relationships. The influence of variables on a relationship, in other words, the moderator between two related variables, is present when the interaction effect is significant ($p < 0.05$). The interaction effect is the independent variable times the moderating variable (Field, 2014). The PROCESS macro of Hayes (2021) is used to estimate the interaction effect. Previous chapters showed that significant linear relationships exist between place attachment, knowledge, attitude and intention; education level, attitude and intention; and member or donator, attitude and intention. Significant interaction effects were only found for the relationship between attitude and intention. Thus, place attachment did not influence the relationship between knowledge and intention.

Table 9 shows the variables which have significant interaction effects on the relationship between attitude and intention. An overview of the complete moderating process analyses of the significant moderators is shown in *Appendix 12*.

Table 9

Results from moderating process analyses: significant interaction effects moderating variables

Moderators	**Relationship between attitude and intention**				
	B	**SE B**	**t**	**p**	**R^2**
Member or donator of NM	.02 (.00 – .03)	.01	2.30	p = .02	.18
Place attachment	.01 (.00 -.01)	.00	2.22	p = .03	.17

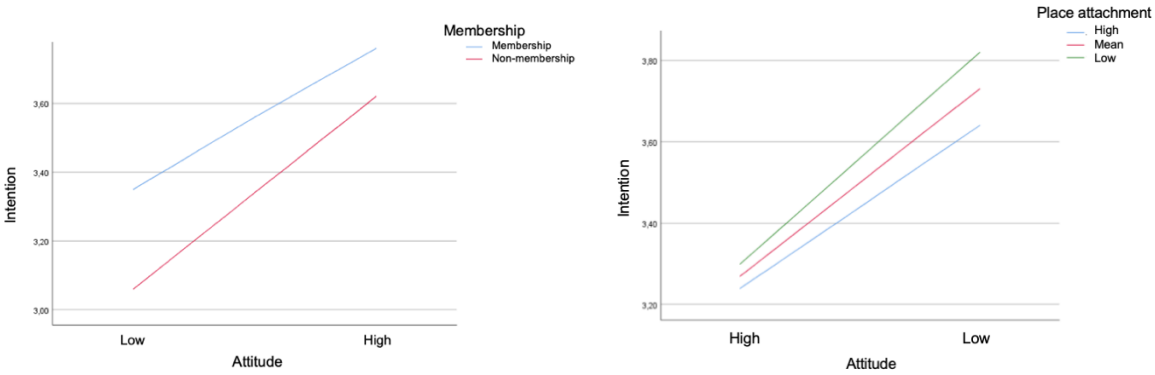
Note. 95% Confidence intervals shown in parentheses and standards errors are based on 1000 bootstrap samples.

Moderation effects. Table 7 shows that membership and place attachment have a joint impact on the relationship between attitude and intention as the unstandardised beta values are significant. The interaction effects for both variables are low, namely B = .02, 95% BCa CI [.00 – .03], p = 0.02 for membership and B = .01, 95% BCa CI [.00 – .01], p = 0.03 for place attachment. The interaction effects did not increase the proportion of variance in the dependent variable shared by the independent variable considerably. Without moderators, R^2 was .16 (see Table 5), and with the moderators, it only increased with .01 or .02 (see Table X). Thus, the moderating effects of membership and place attachment on the relationship between attitude and intention are minimal.

Simple slope analyses. The interaction effects are further analysed with simple slope analyses, shown in Figure 13. A simple slope analysis shows a graph with the regression of the dependent on the independent variable at specific values of the moderator. The two graphs in Figure 13 show that the relationship between attitude and intention is less strong for members and people with higher place attachments (less increasing graph line). No explanation could be found why these groups show less strong relationships between attitude and intention to contribute to NiA. Perhaps, these sample groups base their intention more on other variables instead of attitude, e.g. capabilities or social norms. All in all, the influence of place attachment and member or donator is minimal and therefore not expected to influence the relationship between attitude and intention to a great extent. The minor influences could indicate that other aspects hardly influence the relationship or that other variables not included in the study affect the relationship, such as procedural, effectiveness, and social knowledge, and individual, social and informational background factors (Fishbein & Ajzen, 2010).

Figure 13

Simple slope analysis; moderating effects place attachment and membership on the relationship between attitude and intention



4.3.4 Answers to the third-sub question

This chapter answered the third sub-question: *What variables explain and influence the relationships between knowledge and attitude of, and intention to contribute to NiA?* To sum up, the answer to the third sub-question is that various significant linear relationships exist between the socio-demographic variables, place attachment, place on grew up with knowledge, attitude and intention. Especially place attachment, education level and member or donator showed multiple relationships with knowledge, attitude and intention. Significant linear relationships exist between place attachment, knowledge, attitude and intention; education level, attitude and intention; and member or donator, attitude and intention. Place attachment does not explain the relationships between knowledge and intention, and attitude and intention. Place attachment only influenced the relationship between attitude and intention with a minimal effect. In addition, the variable regarding membership of NM influenced the relationship between attitude and intention slightly. Only education level explained the relationship between attitude and intention a tiny bit. Overall, only three variables were found that explain and influence the relationships between knowledge and attitude of, and intention to contribute to NiA. However, the effects of these variables were nearly zero, which indicates that these variables are less valuable to focus on to stimulate the transition towards NiA. Thus, it would be interesting to study other variables that can explain or influence the relationships between knowledge, attitude and intention.

5. Discussion

5.1 Theoretical implications

The theoretical insights regarding knowledge, attitude, intention, place attachment and the place on grew up are discussed and compared to previous studies to show at which aspects this study deviates from or complements the existing literature. Furthermore, it is discussed how the theoretical insights could contribute to achieving NiA in Dutch society.

5.1.1 Knowledge

Theoretical insights. It was not studied before what Dutch citizens knowledge regarding NiA is. The study tried to meet this call for knowledge by examining the self-reporting knowledge of supporters of NM who most likely have an interest in nature or (sustainable) agriculture. The results showed that supporters of NM indicate that they know something about the ecosystem services of NiA but not in much detail. Furthermore, it is expected that supporters know relatively more about ecosystem services that are visible to them in their daily lives or received societal attention as these aspects scored higher. It is positive that supporters know something about NiA. However, it is noteworthy that knowledge does not explain much in the variation of attitude and intention. Thus, it seems that knowledge plays not a very important role in increasing attitude and intention regarding NiA. These theoretical insights add value to the current body of literature regarding the governance of transitions towards agricultural sustainability as it shows that increasing knowledge alone is not satisfactory for stimulating citizens to contribute to NiA.

Comparison with previous studies. It was expected that knowledge would have a great influence on attitude and intention as several studies suggest that knowledge on the functions and benefits of natural environments could change attitudes, intentions, and subsequently, behaviour related to these environments (Cerri, Testa, & Rizzi, 2018; Kaltenborn et al., 2016; Polonsky et al., 2012). On the other hand, previous studies also showed that knowledge alone might not be enough to generate ecological behaviour (Kaiser & Fuhrer, 2003). This study suggests that knowledge could be a necessary condition for ecological behaviour as it predicts attitude and intention. However, it does not provide enough evidence to state that "knowledge remains an important and highly significant predictor of ecological behaviour" (Kaiser & Fuhrer, 2003, p.609) as knowledge explains only nine per cent of the variation in intention.

Contribution society. A large influence of knowledge on intention would logically imply that interventions to increase knowledge would be promising. However, for the supporters of NM, knowledge does not explain much in the variation of attitude and intention (nine per cent). For the supporters of NM, it might be more effective to focus on other interventions to stimulate them to contribute to NiA instead of increasing knowledge, e.g. providing financial stimulants. Nevertheless, focusing interventions on increasing knowledge is still considered relevant as knowledge explains the variation in intention.

5.1.2 Attitude

Theoretical insights. The added value to the current body of literature of the study is the measurement of attitude and the effects of attitude on knowledge and intention regarding NiA. The study showed that supporters of NM identify themselves with the countryside and slightly agreed that they depend on the countryside for leisure or recreational activities. Furthermore, knowledge predicts attitude and attitude the intention. Attitude explains the relationship between knowledge and intention but only with a minimal effect. This result suggests that other potential mediators could explain the relationship between knowledge and intention or that not all underlying dimensions of attitude are included. Furthermore, the expectancy-value model is used to create the construct of attitude, which also provided insights into the beliefs of 42 supporters of NM, shown in *Appendix 3*. Another interesting theoretical insight is that attitude does not explain much of the variance of intention. Thus, it seems that attitude does not play an important role in increasing intention regarding NiA. These findings suggest that supporters are optimistic regarding NiA but might not directly see themselves as the ones who need to contribute to the transition towards NiA.

Comparison with previous studies. Previous studies suggest the gap between attitude and intention. There is a gap of nine per cent between the perception and practice regarding the support of citizens to nature participation (Hazeleger et al., 2015). The actual behaviour of supporters of NM is expected to be lower due to this gap described by Hazeleger et al. (2015). A reason could be that citizens see the conservation of nature as a shared responsibility. The government is most responsible for the management, conservation and development of nature and landscape, according to 92% of the Dutch citizens (Buijs et al., 2019b). According to Dutch citizens after the government, nature organisations, farmers, businesses, and citizens should be responsible for nature (Buijs et al., 2019b; De Boer & Langers, 2017; Hazeleger et al., 2015). Furthermore, nature issues are still not seen as an acute problem for the majority of the Dutch population (Buijs & Volker, 1997; De Bakker et al., 2007; De Boer, & Langers, 2017), which might explain the gap between attitude and intention.

Nevertheless, it is positive that attitude predicts intention as the attitude of the Dutch population regarding NiA is also expected to be positive for several reasons. First, Dutch citizens strongly support the protection of biodiversity. The support increased from 85% in 2013 to 91% in 2017. Eighty-nine per cent of the Dutch citizens indicate that it is important to protect nature in the countryside, and 63% see more nature in the countryside as important to manage and improve nature (De Boer & Langers, 2017). Second, most Dutch citizens have a 'heart' for nature and are generally optimistic about nature policy (De Bakker et al., 2007). Furthermore, 64% of the Dutch citizens are concerned about developments in rural areas, 24% has great concerns. Women, the elderly and members of NM are most concerned. Lastly, the disappearance of flowers, birds and insects is seen as the greatest threat for rural areas. Sixty-three per cent of the Dutch citizens report the decline of nature in rural areas mainly due to the disappearance of flowers, birds and insects (Buijs et al., 2019b). To sum up, it is expected that Dutch citizens would have a positive attitude towards contributing to NiA as they strongly support biodiversity, are concerned about developments in rural areas, and are aware of the disappearance of flowers, birds and insects.

Contribution to society. Interventions could be focussed on letting citizens know that they have an important role as consumers, volunteers, activists, and voters (Runhaar et al., 2019b). When citizens see that their contributions are valuable for the transition towards NiA, they might have greater intentions to contribute to NiA. Thus, there could be some growth potential in NiA contributions when citizens acknowledge their important and necessary role in the transition towards NiA.

5.1.3 Intention

Theoretical insights. The added value to the current body of literature of the study is that the study showed that supporters of NM have the intention to contribute to NiA but mainly through private contributions and less through group contributions. Furthermore, attitude accounts for 13% of the variation in intention and knowledge for 9%. Thus, the attitude seems to be a more important predictor of intention than knowledge, which aligns with the reasoned action model (Fishbein & Ajzen, 2010).

Comparison with previous studies. The private contributions in the study are low-threshold, small activities that relate to people's daily environment. Several studies indicate that these contributions are more likely to be performed by Dutch citizens than larger group contributions. Boer and Langers (2017) showed that Dutch citizens are mainly involved in nature through low-threshold activities such as writing a signature for nature and less active larger activities such as participating in green citizen initiatives (De Boer & Langers, 2017). The study of Hazeleger et al. (2015) showed that people spontaneously mention mainly 'small' activities when they mention their contribution to nature, such as donating to a nature organisation or maintaining a (vegetable) garden. De Bakker et al. (2007) state that Dutch citizens are more motivated for nature-related issues with close relationships to their daily environment, which private contributions often are. Thus, it is expected that the also Dutch citizens are more likely to perform private contributions.

Runhaar et al. (2019a) conducted a questionnaire on students (N = 342) valuations of and attitudes towards agricultural biodiversity. The focus of this study lies on the attitude of own purchasing behaviour and policy towards agricultural biodiversity measured on 7-point scales. In contrast, the study is focused on intentions to contribute to NiA measured on a 5-point scale. Nevertheless, three questionnaire items overlap and are compared, which is shown in Table 10.

Table 10

Comparison results intentions items study and Runhaar et al. (2019a)

Items study	**Results (5-point scale)**	**Items Runhaar et al. (2019a)**	**Results (7-point scale)**
Sample	1550 supporters of NM	342 students	
I plan to contribute to NiA by becoming a member/donator of a nature organisations	M = 4.05 SD = .98	I am prepared to donate to organisations who protect nature in the countryside	M = 4.02 SD = 1.92
I plan to contribute to NiA by organising or participating in actions (petitions and protests) that attempt to influence the politics and policies of governments or companies	M = 3.17 SD = 1.19	I am prepared to sign a petition in order to protect nature in the countryside (e.g. on Facebook)	M = 4.52 SD = 2.15
I plan to contribute to NiA by via my political voting behaviour	M = 4.31 SD = .87	In my voting behaviour it is important what political parties want to do for nature in agricultural landscapes	M = 4.26 SD = 1.92

As shown in Table 10, the mean values of the study are higher in general, suggesting that supporters of NM have higher intentions to contribute to NiA than students. However, no adequate assessment can be made about the degree of the intentions as the focus of the items and the scales are different. The noticeable point is that the item "I am prepared to sign a petition in order to protect nature in the countryside (e.g. on Facebook)" of Runhaar et al. (2019a) has the highest value. In contrast, the overlapping item of this study scores the lowest. The action "protest" was also integrated into the study item, which could cause a lower value for the study item as people might be less motivated to participate in protests.

Furthermore, comparisons are made with studies regarding particular actions that support nature. Although the study focuses explicitly on NiA, nature is enhanced by NiA, and it allows comparisons between the sample and Dutch citizens. Regarding purchasing behaviour, 95% of the Dutch citizens are prepared to purchase nature-friendly milk (Buijs et al., 2019b). Students are willing to pay more for food that has been produced in nature-friendly ways (Runhaar et al., 2019a). These results correspond with the high intention of the supporters of NM to change their purchasing behaviour to contribute to NiA. De Boer & Langers (2017) also studied purchasing behaviour and various other actions that support nature. Four actions overlap with the items of the study and are therefore compared. The main differences between the study and the study of Boer & Langers (2017) are that this study focuses on the intention (answer option: five-point scale) and not on behaviour (answer option: yes/no). Table 11 shows an overview of the results of Boer & Langers (2017) and the study items.

Table 11

Comparison results of intentions items of the study items and Boer & Langers (2017)

Items study *I intend to contribute to NiA through ...*	**Results (5-point scale)**		**Items Boer & Langers (2017)** *In the past 12 months, have you ...*	**Results (Answer: yes)**
Sample	1550 supporters of NM		2525 Dutch citizens	
Purchasing behaviour	m sd	= 4.23 = .74	Products purchased with a quality mark (Eco, FSC, etc.)	30%
Becoming a member or donator of a nature organisation	m sd	= 4.05 = .98	Provision of extra money for nature protection	20%
Political voting behaviour	m sd	= 4.31 = .87	Considered nature in the choice for a political vote	18%
Organising or participating in actions that attempt to influence the politics and policies of governments or companies (e.g. petition or protest)	m sd	= 3.17 = 1.19	Signed for nature Performed actions for more nature (conservation)	13% 3%
Adopting a product of at a nature-inclusive organisation	m sd	= 3.35 = .99	Participated in an adoption campaign (chicken, calf, cow, field edge, tree, etc.)	2%

The study items that measure private contributions (the first three items in Table 10) score relatively high in the study of Boer & Langers (2017), indicating that supporters of NM are probably more likely to actually perform private instead of group contributions. Furthermore, it shows that signing for nature is preferable over other types of actions, which can explain why the study item scored lower for the item that included signing a petition and actions such as protests. The same conclusion was made by comparing the results with the study of Runhaar et al. (2019a). The chance that the intention to adopt a product of a nature-inclusive organisation will be performed is relatively small as only 2% of the Dutch citizens have done this in 2016 (Boer & Langers, 2017).

Contribution to society. The theoretical insights of the study show that it might be more effective to start motivating Dutch citizens through are low-threshold, small activities that relate to people's daily environment instead of larger group contributions. Besides creating interventions to stimulate citizens to make a private contribution, it could also be an opportunity to stimulate citizens who are already willing to make a private contribution (e.g. supporters of NM) to get involved in larger group contributions such as citizens initiatives or voluntary work.

5.1.4 Place attachment and place one grew up

Theoretical insights. The theoretical insights about the place attachment add value to the current body of literature as it showed that supporters of NM identify themselves with the countryside and slightly depend on the countryside for leisure or recreational activities. Nevertheless, place attachment has a small effect on increasing intention as it explains only 2% of the variation in intention. Furthermore, place attachment does not explain the relationships between knowledge and intention, and attitude and intention. Place attachment only influenced the relationship between attitude and intention with a minimal effect.

Comparison with previous studies. Runhaar et al. (2019a) studied the place attachment of Dutch students. Table 12 compares the results of the supporters of NM with the students. The comparison is possible as the six place attachment items and the question about where people grew up were measured in the same way as performed in the questionnaire of Runhaar et al. (2019a).

Table 12

Comparison results of place attachment and place respondents had spent their youth of the study and Runhaar et al. (2019a).

Variable	Study		Runhaar et al. (2019a)	
Sample	1550 supporters of NM		342 students	
Place attachment				
I feel very connected with the countryside	m sd	= 5.90 = 1.20	m sd	= 5.07 = 1.73
The countryside means a lot to me	m sd	= 6.05 = 1.01	m sd	= 4.96 = 1.67
I strongly identify myself with the countryside	m sd	= 5.23 = 1.48	m sd	= 4.33 = 1.94
The countryside is the best place for recreational activities	m sd	= 5.50 = 1.32	m sd	= 4.36 = 1.57
I prefer to recreate in the countryside	m sd	= 5.29 = 1.51	m sd	= 3.54 = 1.62
For relaxation I prefer the countryside over nature reserve areas	m sd	= 4.57 = 1.72	m sd	= 3.41 = 1.76
Place respondents had spent their youth				
Large city	21.8%		19.0%	
Small town or village	45.6%		38.3%	
Countryside	32.6%		42.7%	

Note. Place attachment values were measured by means of items on a 7-point scale (1 = completely disagree; 2 = disagree; 3 = disagree a little bit; 4 = neither disagree nor agree; 5 = agree a little bit; 6 = agree; 7 = completely agree).

The mean values of the place attachment items of the supporters of NM lay between .83 to 1.75 higher than the study of Runhaar et al. (2019a). Thus, students, which followed technical, environmental, agricultural, educational, planning, earth sciences and languages studies are less attached to the countryside than the supporters of NM. This result could be logically explained due to the expected higher nature appreciation of the supporters. It is expected that there is also a considerable group of Dutch citizens who are attached to the countryside as 41% of the Dutch citizens often spend their free time in the countryside (De Boer & Langers, 2017). Runhaar et al. (2019a) found a mediation effect of place dependence (not place identity factor) between place one grew up and attitude. The study showed that the place where people grew up does not correlate with attitude and intention, only with knowledge. Thus, the place people grew up seemed to have less effect on increasing the intention NM supporters compared to students.

Contribution to society. Interventions could be focussed on making people aware about how they depend on the countryside, e.g. for recreation and production of their food. Through these interventions, citizens may feel more attached to the countryside and value the countryside as more important, increasing their intentions to contribute to NiA. Only 3% of the Dutch citizens see the improvement of nature in the countryside as most important to protect nature, and 12% of the citizens the protection of nature in the countryside (De Boer & Langers, 2017). Furthermore, people who live in cities can be stimulated to visit the countryside to increase their attachment. Only 8% of the inhabitants of the four major cities visit (very) often the countryside, compared to 32% from the rest of the Netherlands (De Boer & Langers, 2017).

5.2 Suggestions for future research

Knowledge. For future studies, it is recommended to study the knowledge level of a broader group of Dutch citizens to test whether and how much their knowledge is lower than that of supporters of NM. It is highly recommended to measure the influence of knowledge on the intention of a broader group of Dutch citizens. This study showed that knowledge does not play an important role in increasing intention, contrasting with previous studies. Furthermore, it would be interesting to estimate knowledge with methods that do not rely on self-reporting. For example, a knowledge measurement based on multiple-choice tests could be an alternative (Hunt, 2003). Moreover, focusing on a broader range of topics that concern NiA could be researched, e.g. how to achieve NiA goals or what the ecological consequences of NiA are.

Attitude. It is recommended to use more items to measure attitude to increase content validity and ensure that all underlying dimensions of attitude are measured. For example, people might have a positive attitude towards contributing to NiA through their associations with healthier and better-tasting food instead of decreasing environmental impact. More mediating and moderating variables between knowledge and intention could be tested as only tiny effects of attitude, place attachment, place where one grew up, and the socio-demographic variables were found. It is recommended to study the attitude of a broader group of Dutch citizens. Does attitude differ between different groups of Dutch citizens? And why? Furthermore, it would be valuable to focus in future research on the other beliefs mentioned by the supporters, shown in the next chapter. For example, the belief that contributing brings higher costs and choice of fewer different products. It could be interesting to know how vital each belief is and why as it determines the attitude, intention and behaviour.

Intention. It would be interesting to study the gap is between intention and behaviour, whether and why the intention differs between different groups of Dutch citizens, and how intentions could be increased. Open questions in the questionnaire or interviews could receive a richer and more concrete picture of Dutch citizens intentions. Moreover, focussing on intentions in more depth could be interesting. For example, the study contained the question of whether respondents would change their purchasing behaviour, which could be deepened by asking whether they would purchase organic fruits, vegetables, dairy or meat; purchase based on the season; not purchase certain foods; or at/from specific locations.

Place attachment and place one grew up. The mediating effect of place attachment between place one grew up and attitude could not be measured due to insignificant correlations with attitude. Although this mediation effect could not be measured, it is still recommended to estimate this mediation in future research as the study of Runhaar et al. (2019a) showed links between place dependence and attitude.

Relationships concepts. It is measured whether knowledge affects intention as the model of Fishbein and Ajzen (2010) showed this direction of the relationship and studying more relationships would fall without the scope of the study. However, this model does not describe whether intention could influence someone's knowledge (counter effect). For example, the intention to buy organic products could lead to more knowledge about NiA when people look for more information to substantiate their intention. Counter effects could also exist for other study variables, e.g. positive attitude towards NiA could lead to more knowledge about NiA. For future research, it would be interesting to also takes these counter effects into account. Furthermore, it is not allowed to draw causal relationships between variables with correlational research. Determining the exact direction of the relationship would require an experimental research design which controls other variables and measures differences. Therefore, it is also recommended to perform experimental research to study the relationships between the concepts.

To sum up, it is recommended to study knowledge, attitude, intention, place attachment, place one grew up, and the (counter) effects and causal relationships between these variables for a broader group of Dutch citizens. Furthermore, qualitative research methods are recommended to achieve a richer and more concrete picture of the concepts and to discover new concepts that could influence citizens behaviour regarding NiA. Relationships between knowledge, attitude, and intention could be explained or influenced by variables not included in the study, as delineation is made in the theoretical frameworks, as shown in Figures 1 and 2 in chapter *2. Theory.* Lastly, it is advisable to measure knowledge and attitude based on measurement scales, not based on self-reporting and three beliefs.

5.3 Limitations

Representativeness. The first limitation of the study is that the sample has compared to the Dutch population, around 12% more women; 40% more people over fifty years old; 40% higher educated people (hbo-, wo-bachelor and higher); 73% more people who participate in environmental organisations (such as NM); and 80% more people who grew up in a small village or the countryside. However, 350 respondents are not members or donators of NM and could represent the Dutch population. Nevertheless, this group is also not representative for the Dutch population. This part of the sample has compared to the Dutch population also more women, older people, higher educated people and people who grew up in the countryside. The exact comparison of the sample with the Dutch population, and the sample without members or donators of NM with the Dutch population, could be found in *Appendix 6.* All in all, the sample is not representative for Dutch citizens. NM knows that the mean age of their supporters is 62, more than half of the members are retired, more than half of the members have followed higher education (hbo/wo), and members are interested in nature, plants, cycling and walking (M. J. Douven and M. Kleine Koerkamp, personal communication, March 10, 2021). The study found a mean age of 60 and also a high education level as 40.6% followed hbo-, wo-bachelor and 32.5% hbo-, wo-master, doctor. Besides age and education level, it is not possible to compare the sample with the supporters of NM as no other information regarding the socio-demographics are known by NM. It could not be stated that the sample adequately represents the supporters of NM as only age and education level are compared, and respondents are not randomly chosen from the supporter population. It is expected that the people interested in nature or NiA have greater motivations to fill in the questionnaire. Therefore, the sample is assumed to represent women who are fifty years and older, with a high education level, who are members or donators of NM, who grew up in the countryside, and likely appreciate nature and or (sustainable) agriculture.

The interest in nature or (sustainable) agriculture of the sample population likely caused higher knowledge and intention results than for the Dutch population. It is expected that the sample population is more involved with nature as they support NM. Buijs and Volker (1997) described that about 8% of the Dutch population could be counted as the “hardcore” for nature conservation. A more recent study by De Boer and Langers (2017) showed similar results, about 10% of the Dutch citizens are very active for nature on many fronts. This group gives shape to the active support for nature, making up just under 1 million citizens. This group will not quickly increase to more than half of the Dutch population (Buijs & Volker, 1997). It is assumed that the sample represents this niche population of people in the Netherlands who care more than average for nature as they support NM and took the effort to fill in the questionnaire. Therefore, it is expected that the average Dutch citizen's knowledge, attitude, and intention is even lower. The characteristics of the supporters of NM who are interested in nature and sustainable agriculture correspond to some extent to the socio-demographics other studies show. Buijs and Volker (1997) found that this niche group often has a higher level of education, thinks more progressively, lives more often in the countryside, is between 30 and 70 years old, has more knowledge of nature, and does more nature recreation. The sample population of the study is also higher educated, grew up in the countryside, has a slightly higher mean age ($m = 60$. $sd = 13$), are expected to have more knowledge about nature and NiA and depend on the countryside for leisure or recreational activities. In addition, other studies explain that women are more focused on pro-environmental behaviour (Vicente-Molina, Fernández-Sainz, & Izagirre-Olaizola, 2018), higher educated people consider the environment more important than the lower educated people (Van der Lelij et al., 2016), and nature and agriculture are more important for elderly than young people (De Boer, & Langers, 2017). These findings also support that the sample is representative only for a specific group of Dutch citizens.

Measurement scale attitude. The attitude construct is based on how likely and how good respondents think they can contribute to creating a more sustainable future, changing landscapes and the number of wild animals and plants. The limitation of the attitude construct is that the attitude construct is based on only these three beliefs concerning contributing to NiA. The study performed a pilot questionnaire with 42 supporters of NM from which beliefs were elicited. A sample size of 25 respondents is generally needed to elicit beliefs for the theory of planned behaviour (Francis et al., 2004). Table 8 shows the beliefs of 42 supporters of NM regarding contributing to NiA. Not more than three beliefs were used in the questionnaire to measure attitude for several reasons. No scale existed that measure the attitude towards contributing to NiA. It existed only for purchasing actions and policy

towards agrobiodiversity. Therefore, a new measurement scale needed to be created. The steps, described by Fishbein and Ajzen (2010), of the expectancy-value model to create a measure for attitude were followed, as explained in chapter *2. Theory*. Following this theory, the beliefs that counted for 75% of all responses listed during the pilot questionnaire were used to measure attitude (in *italics* in Table 8) (Fishbein & Ajzen, 2010). There was no possibility to do an additional pilot test with a minimum number of 200 participants for an explorative factor analysis to determine whether the six beliefs correlated or determine other attitude items due to practical limitations. Lastly, including more than six beliefs in the final questionnaire was not possible as the final questionnaire would have been longer than was desired by NM, which could have led to lower response rates.

Table 8

Beliefs 42 supporters of NM regarding contributing to NiA

Belief categories	Number of times mentioned	Percentage	Cumulative percentage
Increase costs	30	22%	22%
Support number of wild animals and plants	21	16%	38%
Changing landscapes	19	14%	52%
Sustainable future	14	10%	62%
Less choice products	12	9%	71%
Healthy food	10	7%	78%
Good feeling	9	7%	85%
Food origin connection	6	4%	89%
Better taste of food	4	3%	92%
Food without pesticides	4	3%	95%
Increases purchasing time	3	2%	98%
Less convenience	3	2%	100%

Note. Beliefs indicated in *italics* are included in the questionnaire and beliefs in *italics,* and **bold** are used to measure attitude.

The beliefs higher costs, choice of fewer different products and choice of more "healthy" products did not correlate sufficiently with the other three main beliefs as was explored with the factor analysis, and therefore, not used to measure attitude. The consequences of this exclusion could be that not all underlying dimensions of attitude are included in the construct. Nevertheless, the three beliefs were used as they represent attitude towards NiA. Fishbein and Ajzen (2010, p.181) state that "for a wide array of behaviours, across the different meta-analyses, the mean correlations of attitudes with intention range from .45 to .60". The correlation for this study between attitude and intention was .36, thus, lower than was expected. The low correlation between attitude and intention could indicate that not all underlying dimensions of the attitude are included in the construct or that intention is more influenced by social pressures and capabilities (e.g. financial capabilities or free-time), see chapter *2. Theory*.

Measurement scale knowledge. Knowledge is estimated based on a self-reporting measurement scale. With self-reporting measurements, respondents need to accurately assess their own knowledge and easily give socially acceptable answers. Furthermore, what a small or high amount of knowledge is and how persons interpreted a five-point scale could differ per person. It could be challenging to express the knowledge in words when supporters do not know about NiA or are not aware enough of NiA (Verschuren et al., 2010). These limitations of self-reporting measurements were consciously chosen beforehand as they do not outweigh the advantages of collecting data in a simple, quick, low-cost way and keeping the questionnaire small enough to include other questions to measure, for example, attitude, intention, and place attachment.

6. Conclusion

Nature-inclusive agriculture (NiA) is at the heart of enhancing and utilising biodiversity in agricultural areas. In order to achieve this, more research is needed about what Dutch citizens know and think about NiA as they could, for example, support NiA through increasing political interest, demand foods produced with respect for nature and support organisations that stimulate NiA. The current study aimed to fill the gap in knowledge about what Dutch citizens know and would like to do to support NIA, by examining Dutch citizens' knowledge, attitude and intention regarding NiA. The study aimed to answer the following research question: *To what extent does knowledge affect Dutch Citizens intention to contribute to NiA?*

By answering the central question, five main conclusions can be drawn. These conclusions mainly relate to women who are fifty years and older, with a high education level, who are members or donators of NM, who grew up in the countryside, and likely appreciate nature and or (sustainable) agriculture. First, supporters of NM indicate that they know something about the ecosystem services of NiA but not in much detail. Furthermore, it has been shown that supporters know relatively more about NiA ecosystem services that are visible to them in their daily lives or received societal attention as these aspects scored higher. It is alarming that Dutch citizens have probably a lower amount of knowledge about NiA than the supporters of NM. The study revealed that the lower the knowledge level of NiA, the less positive the attitude towards NiA and the lower intention to contribute to NiA.

Second, supporters believe that their contributions could make a positive difference in creating NiA in the Netherlands. Therefore, they have a positive attitude towards contributing to NiA. This positive attitude significantly relates to the intentions of supporters to contribute to NiA. The intention to contribute to NiA is mainly focused on private contributions such as political voting and supporters are less inclined to participate through group contributions such as voluntary work. Supporters have the intention to change their purchasing behaviour, political vote or become a member or donator of a nature organisation to contribute to NiA. It is positive that the supporters are intended to contribute to NiA through private contributions, however, these results are not expected for Dutch citizens.

Third, knowledge significantly predicts attitude and intention, and attitude the intention. However, knowledge explains only weakly the increase of attitude and intention, and also attitude explains the increase in intention very weakly. Furthermore, attitude shows a mediation effect between knowledge and intention. However, this represents only a minimal effect. One could, for instance, imagine that social norms, capability, skills or other environmental factors can facilitate or hinder the relationship between knowledge and the intention.

Fourth, people aged above fifty, men, and people who are attached to the countryside have significantly more knowledge about NiA. Furthermore, members or donators of NM, people who are attached to the countryside and higher educated people have a greater intention to contribute to NiA. For education level, it appeared that higher education levels relate to more positive attitudes and a higher intention to contribute to NiA.

Fifth, it was hypothesised that there would be a relationship between place attachment and attitude and that place where people grew up would influence attitude, mediated by place attachment. However, an insignificant correlation was found between the place where people grew up with attitude. Place attachment only influenced the relationship between attitude and intention with a minimal effect. In addition, the variable regarding membership of NM influenced the relationship between attitude and intention slightly. Only education level explained the relationship between attitude and intention a tiny bit.

All in all, the answer to the research question is that the amount of knowledge affects Dutch citizens intention positively. However, when knowledge increases, intention only increases weakly. In other words, knowledge significantly predicts intention but the increase in intention is not only caused by increase in knowledge but likely also caused by other variables that influence the relationship between knowledge and intention. Stronger relationships were hoped for as it would make the increase of knowledge of Dutch citizens more effective to support the transition towards NiA. Nevertheless, a future in the Netherlands where NiA is recognised and improved could be stimulated by a group of citizens who know about NiA and see the urgency and importance of their support in the transition towards NiA.

7. Recommendations

Following the results and staying in line with the research question, several recommendations are made regarding knowledge of and intention to contribute to NiA. The recommendations to increase knowledge affect the intention to contribute to NiA as when knowledge increases, intention also increases slightly.

Recommendations knowledge of NiA. The results showed that supporters know relatively more about ecosystem services that are visible to them in their daily lives or received societal attention. Therefore, it is recommended to NM, the government or other organisations that support NiA to start with increasing knowledge through educational activities related to citizens daily lives, and in addition, increase societal attention regarding NiA.

First, it is recommended to look for opportunities that increase awareness of Dutch citizens by integrating creative and appealing information about NiA topics that are visible in citizens daily lives, with accessible educational activities. Hazeleger et al. (2015) found that Dutch citizens appreciate educational activities but advertising campaigns less. Educational activities could provide information about agricultural landscapes or biodiversity such as birds and insects through an introductory course or during organised walks with a guide. Citizens who develop interests in nature activities are not necessarily 'automatically' supporting NiA policies, but the chance that they are open to this seems to be present when their knowledge increases and when there is a clear relationship with their own environment (De Bakker et al., 2007). In return, when people decide to support NiA policies, NiA can become a more important policy theme, and societal intention can be increased. This support is desirable as nature is the least important policy theme for Dutch citizens in relation to other policy themes such as healthcare and education (De Boer & Langers, 2017).

Second, it is recommended to focus on young people as the results show that this group is less knowledgeable about NiA and is more environmentally aware (Schmeets & Van Hoof, 2016; Schmeets & Gielen, 2015). For these two reasons, they might be more motivated to see the urgency of NiA. However, young people focus less on nature and more on social group processes with the associated search and learning experiences. Therefore, support for nature will not easily be achieved from young people, it must be fought for through education (Buijs & Volker, 1997). Nature education in schools is considered important by a large majority of citizens (De Bakker et al., 2007). Education about NiA at schools could be a promising instrument for introducing younger generations to nature in agricultural areas and stimulating the transition towards NiA.

Recommendations intention to contribute to NiA. The results showed that supporters of NM have the intention to contribute to NiA but mainly through low-threshold, small private contributions relating to people's daily environment, and less through larger group contributions. Furthermore, the results show that knowledge slightly predicts intention. Therefore, it is expected that when supporters of NM are more aware of the importance of larger group activities, they will also be more inclined to participate in these activities to support NiA. Thus, it is expected that larger group contributions to support NiA have a growing potential, and therefore, also recommendations regarding these activities are made.

First, it is recommended to start motivating Dutch citizens through small private contributions made in the daily environment, and after that focus on larger contributions. There is potential to further increase the involvement of citizens as more than 80% of the Dutch population likes to be involved in nature (De Boer & Langers, 2017). De Boer and Langers (2017) describe that citizens would like to think about plans for nature, receive information and get started with nature maintenance themselves. NM could, for example, involve citizens in their NiA plans, provide them information about it and provide ways in which citizens themselves can contribute to NiA.

Second, it is recommended to focus on the social aspect of group contributions to motivate people. The social aspect is an important motivation for citizens to participate in nature. Doing something together with people from the neighbourhood or with the family motivates a part of the inhabitants to contribute to nature (Hazeleger et al., 2015). In return, group contributions to NiA can support local connections and communities. Providing information about the social advantages of contributing to NiA could stimulate people to make larger contributions.

Third, it is recommended to use rewards for citizens that make larger contributions to NiA. Dutch citizens indicate that rewards stimulate them to do something extra for nature or would help to convince people to transform their intention into behaviour. People who are already doing everyday 'basic' nature supporting activities or are willing to do so, more often indicate that they do not want to receive a reward for this. People willing to perform larger, 'active' activities are more open to being rewarded for their contribution. Especially a nice day out, their own forest hut/camping spot, and exclusive access to an area stimulates them to contribute to nature (Hazeleger et al., 2015). These rewards could also be applied for supporters of NM who decided to make larger contributions such as voluntary work, participation in policy processes or supporting social enterprises that stimulate NiA.

Fourth, it is recommended to promote citizens initiatives regarding NiA to get people involved in group contributions. These initiatives have some growth potential for several reasons. Two-thirds of the Dutch citizen do not know initiatives for nature and landscape in their own place of residence, which is decreased from 67% in 2013 to 61% in 2017. Furthermore, the involvement is mainly expressed in receiving information and very little in the actual participation. Lastly, initiatives that are well known mainly relate to management and maintenance and the realisation of new green areas and not to NiA (De Boer & Langers, 2017). NM could, for example, motivate people to get involved in citizens initiatives that support NiA such as Land van Ons, Herenboerderij or Aardpeer.

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Appendix 1: Dutch questionnaire

Geachte lezer,

Met behulp van deze vragenlijst willen we onderzoeken wat Nederlanders weten over "natuurinclusieve landbouw" en hoe Nederlanders hieraan zouden willen bijdragen. Om dit te onderzoeken, willen wij u vragen deze korte anonieme vragenlijst in te vullen van 10 minuten (voor 5 april).

Door schaalvergroting en intensivering in de landbouw is de voedselproductie in de afgelopen decenNiA enorm toegenomen. Deze ontwikkeling heeft ook een keerzijde: het boerenlandschap is eentoniger geworden en er is steeds minder ruimte voor wilde dieren en planten. Ongeveer 60% van Nederland wordt in beslag genomen door landbouwgrond. Daar is dan ook veel winst te behalen voor de natuur. Daarom wil Natuurmonumenten zich, samen met boeren, politiek en consumenten, inzetten voor meer natuur op het platteland.

De vragenlijst is tot stand gekomen in het kader van een master afstudeeropdracht aan de Universiteit van Utrecht. De resultaten worden gebruikt om Natuurmonumenten te adviseren over communicatie over natuur en landbouw.

Wij willen u er van te voren graag op wijzen dat tijdens het invullen van de vragenlijst, het niet mogelijk is om terug te keren naar een vorige vraag. U kunt dan de vraag niet meer aanpassen.

Bij voorbaat veel dank voor uw tijd!

Vanwege privacy en vanuit de Universiteit Utrecht zijn wij verplicht te vragen een toestemmingsverklaring te accorderen op de volgende pagina.

Door op de knop "Akkoord" aan het einde van deze pagina te klikken, gaat u akkoord met onderstaande punten.

Ik begrijp dat:
- Ik het recht heb om mijn toestemming voor het gebruik van de gegevens in te trekken;
- Ik het recht heb om het onderzoeksrapport achteraf in te zien.

Ik ben het er mee eens dat:
- De gegevens worden verzameld en opgeslagen voor wetenschappelijke doeleinden;
- De volledig anoniem verzamelde gegevens kunnen worden gedeeld en hergebruikt door wetenschappers om andere onderzoeksvragen te beantwoorden.

Ik bevestig dat:
- Ik tevreden ben met de ontvangen informatie over het onderzoek;
- Ik de gelegenheid heb gekregen om vragen te stellen over het onderzoek en dat de gelezen vragen naar tevredenheid zijn beantwoord;
- Ik de gelegenheid heb gekregen om na te denken over deelname aan het onderzoek;
- Ik een eerlijk antwoord zal geven op de gestelde vragen.

1. Waar bent u opgegroeid?
- Voornamelijk in een grote stad met meer dan 100.000 inwoners.
- Voornamelijk in een kleine stad of dorp van 10.000 tot 100.000 inwoners.
- Voornamelijk op het platteland met minder dan 10.000 inwoners.

2. In hoeverre bent u het eens met de volgende stellingen over het Nederlandse platteland?
Onder het platteland wordt verstaan al het gebied buiten de bebouwde kom.

Ik voel me erg verbonden met het platteland.

Voltrekt niet mee eens	Oneens	Een beetje oneens	Niet mee oneens noch eens	Een beetje mee eens	Eens	Voltrekt mee eens

Het platteland betekent veel voor mij.

Voltrekt niet mee eens	Oneens	Een beetje oneens	Niet mee oneens noch eens	Een beetje mee eens	Eens	Voltrekt mee eens

Ik identificeer me sterk met het platteland.

Voltrekt niet mee eens	Oneens	Een beetje oneens	Niet mee oneens noch eens	Een beetje mee eens	Eens	Voltrekt mee eens

Op het platteland is de beste plek voor activiteiten in mijn vrijetijd.

Voltrekt niet mee eens	Oneens	Een beetje oneens	Niet mee oneens noch eens	Een beetje mee eens	Eens	Voltrekt mee eens

Recreëren in de natuur kan nergens beter dan op het platteland.

Voltrekt niet mee eens	Oneens	Een beetje oneens	Niet mee oneens noch eens	Een beetje mee eens	Eens	Voltrekt mee eens

Geen enkel landschap kan het platteland vervangen voor mijn favoriete recreatieve activiteiten.

Voltrekt niet mee eens	Oneens	Een beetje oneens	Niet mee oneens noch eens	Een beetje mee eens	Eens	Voltrekt mee eens

3. De volgende vragen gaan over uw kennis van een natuurinclusief landbouwsysteem.

In welke mate denkt u kennis te hebben van een natuurinclusieve manier produceren van voedsel (bijv. fruit, groenten, zuivel of vlees).

Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel

In welke mate denkt u kennis te hebben van een natuurinclusieve manier produceren van veevoer (bijv. veevoer van eigen grond i.p.v. uit het buitenland).

Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel

In welke mate denkt u kennis te hebben van het verbeteren van de natuurlijke leefomgeving van planten en dieren (bijv. natte, voedselrijke, open landschappen voor weidevogels).

Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel

In welke mate denkt u kennis te hebben van de mogelijkheden om het landschap aantrekkelijker te maken door natuurinclusieve landbouw (bijv. rijen bomen, sloten of een grotere plantendiversiteit).

Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel

In welke mate denkt u kennis te hebben van het onderhouden van de bodemvruchtbaarheid (bijv. mest voor de toevoer en het beheer van voedingsstoffen).

Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel

In welke mate denkt u kennis te hebben van het reguleren van water (bijv. grond wat voldoende water kan vasthouden en leveren).

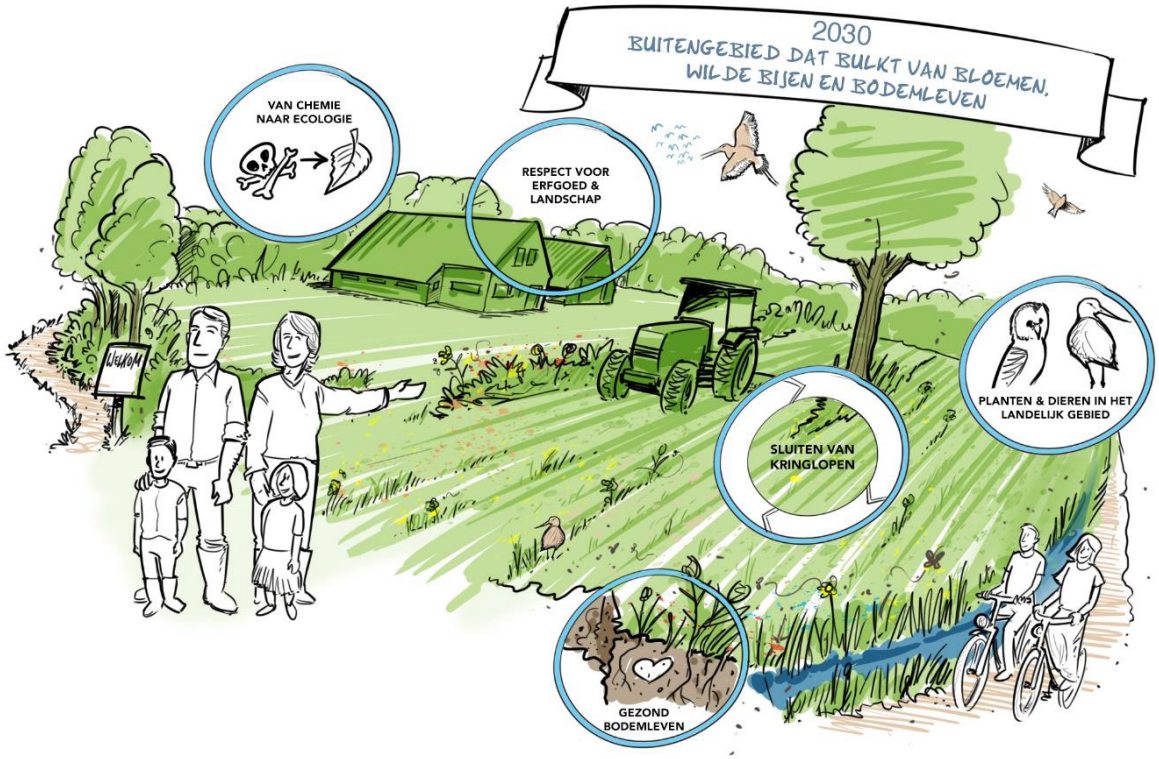
Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel

In welke mate denkt u kennis te hebben van het gebruik van natuurlijke bestuiving (bijv. het inzetten van insecten zoals bijen).

Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel

In welke mate denkt u kennis te hebben van het gebruik van natuurlijke (niet chemische) bestrijdingsmiddelen (bijv. het inzetten van natuurlijke vijanden).

Erg weinig	Weinig	Niet weinig of veel	Veel	Erg veel



Bovenstaande afbeelding geeft de hoofdpunten van een natuurinclusief landbouwsysteem weer. U kunt bijvoorbeeld bijdragen aan een natuurinclusief landbouwsysteem door biologisch en milieuvriendelijker voedsel te kopen of deel te nemen aan burgerinitiatieven die een natuurinclusief landbouwsysteem ondersteunen.

Geef aan in welke mate u de stelling waarschijnlijk vindt.

4. Zelf, als individu, bijdragen aan natuurinclusieve landbouw in Nederland in 2021 zal resulteren in:

Hogere kosten voor mij als persoon (bijv. duurdere boodschappen)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Keuze uit minder verschillende producten (bijv. meer seizoensgebonden groenten en fruit)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Keuze uit meer “gezonde” producten (bijv. minder bestrijdingsmiddelen)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Het creëren van een duurzamere toekomst

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Een verandering in het landschap (bijv. meer rijen bomen, sloten of een grotere plantendiversiteit)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Een verandering van het aantal wilde dieren en planten (bijv. meer weidevogels)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Geef aan in welke mate u de stelling bezwaarlijk vindt.
5. Zelf, als individu, bijdragen aan natuurinclusieve landbouw in Nederland in 2021 zal resulteren in:

Hogere kosten voor mij als persoon (bijv. duurdere boodschappen)

Voltrekt bezwaarlijk	bezwaarlijk	Niet bezwaarlijk of onbezwaarlijk	Niet bezwaarlijk	Voltrekt niet bezwaarlijk

Keuze uit minder verschillende producten (bijv. meer seizoensgebonden groenten en fruit)

Voltrekt bezwaarlijk	bezwaarlijk	Niet bezwaarlijk of onbezwaarlijk	Niet bezwaarlijk	Voltrekt niet bezwaarlijk

Keuze uit meer “gezonde” producten (bijv. minder bestrijdingsmiddelen)

Voltrekt bezwaarlijk	bezwaarlijk	Niet bezwaarlijk of onbezwaarlijk	Niet bezwaarlijk	Voltrekt niet bezwaarlijk

Het creëren van een duurzamere toekomst

Voltrekt bezwaarlijk	bezwaarlijk	Niet bezwaarlijk of onbezwaarlijk	Niet bezwaarlijk	Voltrekt niet bezwaarlijk

Een verandering van het landschap (bijv. meer rijen bomen, sloten of een grotere plantendiversiteit)

Voltrekt bezwaarlijk	bezwaarlijk	Niet bezwaarlijk of onbezwaarlijk	Niet bezwaarlijk	Voltrekt niet bezwaarlijk

Een verandering van het aantal wilde dieren en planten (bijv. meer weidevogels)

Voltrekt bezwaarlijk	bezwaarlijk	Niet bezwaarlijk of onbezwaarlijk	Niet bezwaarlijk	Voltrekt niet bezwaarlijk

6. Dat ik zelf, als individu, bijdraag aan natuurinclusieve landbouw in Nederland in 2021 is:

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

7. In hoeverre zijn onderstaande stellingen over het bijdragen aan natuurinclusieve landbouw van toepassing op u?

Ik ben van plan om bij te dragen aan natuurinclusieve landbouw door mijn koopgedrag (bijv. biologisch en milieuvriendelijker voedsel kopen of bepaalde voedingsmiddelen niet kopen).

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuurinclusieve landbouw door vrijwilligerswerk te doen (bijv. helpen op een natuurinclusieve boerderij)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuur inclusieve landbouw door bij te dragen aan ecologische monitoring (bijv. vogels tellen)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuurinclusieve landbouw door lid of donateur te worden van een natuurorganisatie die natuurinclusieve landbouw ondersteunt.

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuurinclusieve landbouw door beleidsprocessen te beïnvloeden (bijv. op uitnodiging van de overheid of andere instellingen betrokken raken bij management of ontwikkeling bezigheden)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuurinclusieve landbouw via mijn politieke stemgedrag (bijv. stemmen op een politieke partij die zich richt op verduurzaming van de landbouw)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuur inclusieve landbouw door het adopteren van producten van natuurinclusieve organisaties (bijv. een fruitboom)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuur inclusieve landbouw door het organiseren van of mezelf aan te sluiten bij een burgerinitiatief (bijv. gezamenlijk kopen van landbouwgrond)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuur inclusieve landbouw door het organiseren van of deel te nemen aan **acties** die proberen de politiek en het beleid van overheden of bedrijven te beïnvloeden (bijv. meedoen aan een protest).

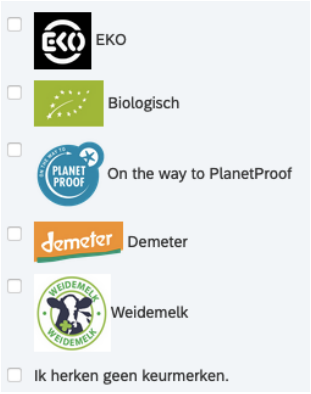
Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

Ik ben van plan om bij te dragen aan natuur inclusieve landbouw door het organiseren van of lid te worden van een sociale onderneming (bijv. een zorgboerderij)

Voltrekt onwaarschijnlijk	Onwaarschijnlijk	Niet onwaarschijnlijk of waarschijnlijk	Waarschijnlijk	Voltrekt waarschijnlijk

8. Kent u keurmerken waarbij rekening wordt gehouden met natuur en milieu? Zo ja, welke?
- Ja, ik ken de volgende keurmerken: __
- Nee, ik ken geen keurmerken die rekening houden met natuur en milieu.

9. Welk van onderstaande keurmerken herkent u? U kunt meerdere antwoorden aanvinken.



10. Vindt u het logisch dat Natuurmonumenten zich via natuurinclusieve landbouw inzet om de biodiversiteit in Nederland te herstellen?

Voltrekt onlogisch	Onlogisch	Niet onlogisch of logisch	Logisch	Voltrekt logisch

11. Heeft u het afgelopen jaar informatie gezien, gelezen of gehoord over natuurinclusieve landbouw?
- Ja, ik heb informatie gezien, gelezen of gehoord over natuurinclusieve landbouw.
- Nee, ik heb afgelopen jaar hierover geen informatie gezien, gelezen of gehoord over natuurinclusieve landbouw.

Indien ja:

11a. Waar heeft u afgelopen jaar informatie gezien, gelezen of gehoord over natuurinclusieve landbouw?
- Media van Natuurmonumenten (sociale media, kranten, tijdschriften, online nieuwsrubrieken)
- Media (kranten, tijdschriften, online nieuwsrubrieken)
- Sociale media (facebook, twitter, linkedin, instagram)
- internet
- Tv
- Advertentie
- Anders, namelijk: ___

11b. Weet u nog wat voor informatie u heeft gezien, gehoord of gelezen over natuurinclusieve landbouw?
- Ja, dit weet ik nog. De informatie ging over: ___
- Nee, dit weet ik niet meer.

Indien ja:

11b.a. Weet u nog wat u vond van de inhoud van deze informatie?
- Ja, dit weet ik nog. Ik vond de inhoud: ___
- nee, dit weet ik niet meer.

12. Bent u een man of een vrouw?
- Man
- Vrouw
- Anders, namelijk: ___

13. Wat is uw leeftijd in jaren? Vul alleen het getal in (bijv. 45): __

14. Wat is uw opleidingsniveau?
- Basisonderwijs
- Vmbo (mavo), havo en vwo klas 1, 2 of 3, mbo niveau 1
- Havo, vwo, mbo niveau 2, 3 of 4
- Hbo-, wo-bachelor
- Hbo-, wo-master, doctor

15. In welke provincie woont u?
- Drenthe
- Gelderland
- Groningen
- Flevoland
- Friesland
- Limburg
- Noord-Brabant
- Noord-Holland

- Overijssel
- Utrecht
- Zeeland
- Zuid-Holland

16. Bent u lid of donateur van Natuurmonumenten?
- Ik ben lid/donateur van Natuurmonumenten
- Ik ben geen lid/donateur van Natuurmonumenten

17. Als u vragen of opmerkingen heeft over de vragenlijst, kunt u contact opnemen met:
Studente Lisa Beekman - m.p.g.beekman@students.uu.nl

Dit onderzoek wordt begeleid door:
Prof. dr. Hens Runhaar (Universiteit Utrecht) - h.a.c.runhaar@uu.nl
Marie Jeanne Douven (Natuurmonumenten) - m.douven@natuurmonumenten.nl

Heeft u interesse in de resultaten van het onderzoek? Vul dan onderstaand uw e-mailadres in. In de zomer zullen wij de resultaten naar u toe mailen. Uw e-mailadres wordt uitsluitend gebruikt voor het versturen van de resultaten van het onderzoek en niet voor andere doeleinden.
- Ja, ik heb interesse. Mijn e-mailadres is: ___
- Nee, ik heb geen interesse.

Appendix 2: English questionnaire

Dear reader,

With the help of this questionnaire we want to investigate what Dutch people know about "nature-inclusive agriculture" and how Dutch people would like to contribute to this. To investigate this, we would like to ask you to complete this short 10-minute anonymous questionnaire (before April 5th).

Due to the scaling up and intensification of agriculture in the Netherlands, food production has increased enormously in recent decades. This development also has a downside: the agricultural landscape has become more monotonous and there is less room for wild animals and plants. About 60% of the Netherlands is taken up by agricultural land. Therefore, on agricultural land is a lot to be gained for nature. That is why Natuurmonumenten wants to work with farmers, politicians and consumers to promote more nature in agricultural landscapes.

The questionnaire was drawn up as part of a master graduation assignment at the University of Utrecht. The results are used to advise Natuurmonumenten on communication about nature and agriculture.

In advance, we would like to point out that while completing the questionnaire, it is not possible to return to a previous question. So, you can no longer adjust the question.

Many thanks in advance for your time!

For privacy reasons and from Utrecht University, we are obliged to ask you to approve a consent form on the next page.

By clicking the "Agree" button at the end of this page, you agree to the points below.

I understand that:
- I have the right to withdraw my consent to use the data;
- I have the right to see the research report afterwards.

I agree that:
- the data to be collected will be obtained and stored for scientific purposes;
- the collected, completely anonymous, research data can be shared and re-used by scientists to answer other research questions;
- video and/or audio recordings may also be used for scientific purposes.

I confirm that:
- I am satisfied with the received information about the research;
- I have been given opportunity to ask questions about the research and that any questions that have been risen have been answered satisfactorily;
- I had the opportunity to think carefully about participating in the study;
- I will give an honest answer to the questions asked.

1. Where did you grow up?
- Mainly in a large city with more than 100,000 inhabitants.
- Mainly in a small town or village of 10,000 to 100,000 inhabitants.
- Mainly in rural areas with less than 10,000 inhabitants.

2. To what extent do you agree with the following statements about the Dutch countryside?
The countryside is understood as all areas outside built-up areas.

I feel very connected to the countryside.

Completely disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Completely agree

The countryside means a lot to me.

Completely disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Completely agree

I identify myself strongly with the countryside.

Completely disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Completely agree

The countryside is the best place for leisure activities.

Completely disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Completely agree

There is no place better to recreate in nature than in the countryside.

Completely disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Completely agree

No landscape can replace the countryside for my favorite recreational activities.

Completely disagree	Disagree	Slightly disagree	Neither disagree nor agree	Slightly agree	Agree	Completely agree

3. The following questions are about your knowledge of a nature-inclusive agricultural system.

To what extent do you think you have knowledge of a nature-inclusive way of producing food (e.g. fruit, vegetables, dairy or meat).

Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge

To what extent do you think you have knowledge of a nature-inclusive way of producing animal feed (e.g. animal feed from your own land instead of from abroad).

Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge

To what extent do you think you have knowledge of improving the natural habitat of plants and animals (e.g. wet, nutrient-rich, open landscapes for meadow birds).

Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge

To what extent do you think you have knowledge of the possibilities of making the landscape more attractive through nature-inclusive agriculture (e.g. rows of trees, ditches or greater plant diversity).

Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge

To what extent do you think you have knowledge of soil fertility maintenance (e.g. fertiliser for the supply and management of nutrients).

Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge

To what extent do you think you have knowledge of regulating water (e.g. soil that can retain and supply sufficient water).

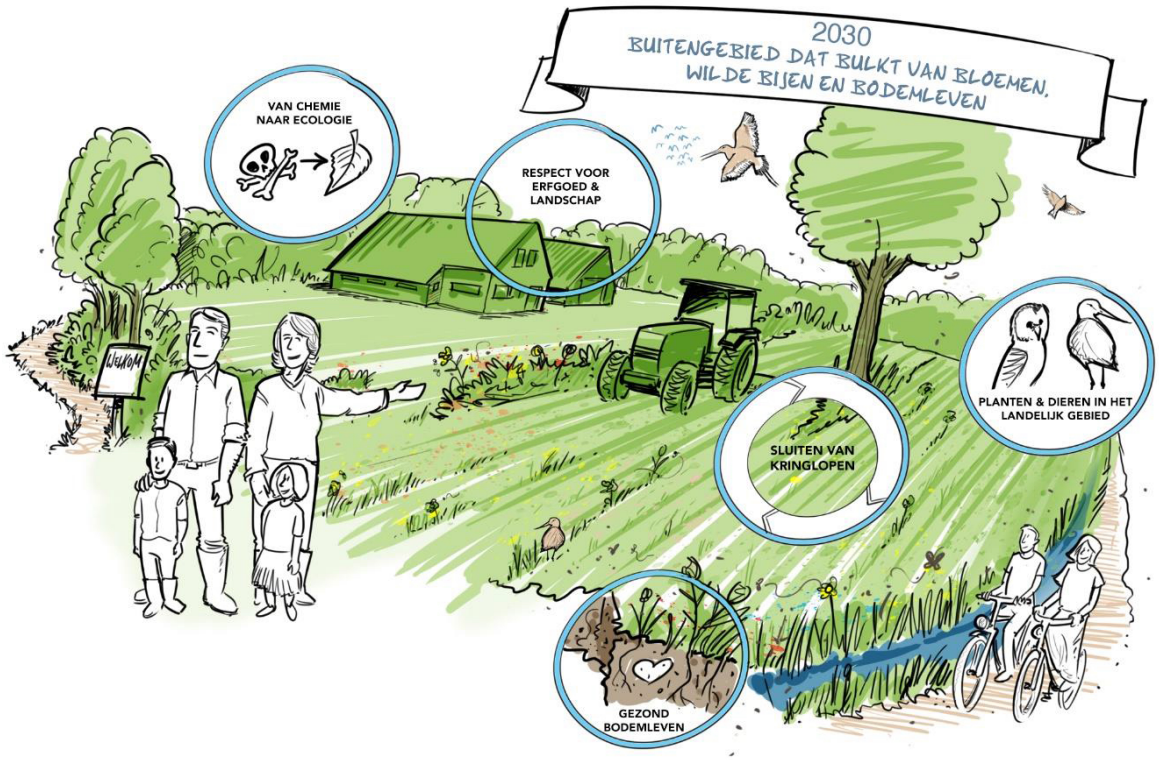
Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge

To what extent do you think you have knowledge of the use of natural pollination (e.g. the use of insects such as bees).

Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge

To what extent do you think you have knowledge of the use of natural (non-chemical) pesticides (e.g. the use of natural enemies).

Very little amount of knowledge	Little amount of knowledge	Not little or high amount of knowledge	High amount of knowledge	Very high amount of knowledge



The image above shows the main points of a nature-inclusive agricultural system. For example, you can contribute to a nature-inclusive farming system by purchasing organic and more environmentally-friendly food or participating in civic initiatives that support a nature-inclusive farming system.

Indicate to what extent you think the statement is likely.
4. As an individual, contributing to nature-inclusive agriculture in the Netherlands in 2021 will result in:

Higher costs for me as a person (e.g. more expensive groceries)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

Choice of fewer different products (e.g. more seasonal fruits and vegetables)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

Choice of more “healthy” products (e.g. less pesticides)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

Creating a more sustainable future

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

A change in the landscape (e.g. more rows of trees, ditches or greater plant diversity)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

A change in the number of wild animals and plants (e.g. more meadow birds)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

Indicate to what extent you find the statement objectionable.

5. Contributing to nature-inclusive agriculture in the Netherlands in 2021, as an individual, will result in:

Higher costs for me as a person (e.g. more expensive groceries)

Completely not objectionable	Not objectionable	Not objectionable or objectionable	Objectionable	Completely objectionable

Choice of fewer different products (e.g. more seasonal fruits and vegetables)

Completely not objectionable	Not objectionable	Not objectionable or objectionable	Objectionable	Completely objectionable

Choice of more "healthy" products (eg less pesticides)

Completely not objectionable	Not objectionable	Not objectionable or objectionable	Objectionable	Completely objectionable

Creating a more sustainable future

Completely not objectionable	Not objectionable	Not objectionable or objectionable	Objectionable	Completely objectionable

A change in the landscape (e.g. more rows of trees, ditches or greater plant diversity)

Completely not objectionable	Not objectionable	Not objectionable or objectionable	Objectionable	Completely objectionable

A change in the number of wild animals and plants (e.g. more meadow birds)

Completely not objectionable	Not objectionable	Not objectionable or objectionable	Objectionable	Completely objectionable

6. The fact that I, as an individual, will contribute to nature-inclusive agriculture in the Netherlands in 2021 is:

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

7. To what extent do the following statements about contributing to nature-inclusive agriculture apply to you?

I intend to contribute to nature-inclusive agriculture through my purchasing behavior (e.g. buying organic and environmentally friendly food or not buying certain foods).

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature-inclusive farming by volunteering (e.g. helping on a nature-inclusive farm)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature-inclusive agriculture by contributing to ecological monitoring (e.g. counting birds)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature-inclusive agriculture by becoming a member or donor of a nature organisation that supports nature-inclusive agriculture.

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature-inclusive agriculture by influencing policy processes (e.g. get involved in management or development activities at the invitation of the government or other institutions)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature-inclusive agriculture through my political voting behavior (e.g. voting for a political party that focuses on making agriculture more sustainable)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature inclusive agriculture by adopting products from nature inclusive organisations (e.g. a fruit tree)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature-inclusive agriculture by organising or joining a citizens' initiative (e.g. joint purchase of agricultural land)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature-inclusive agriculture by organising or participating in actions that seek to influence the politics and policies of governments or companies (e.g. participate in a protest or sign a petition).

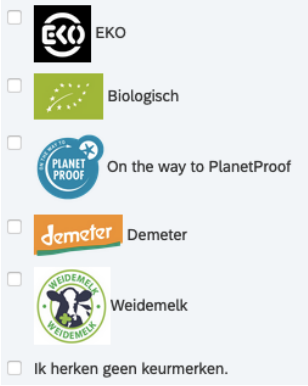
Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

I intend to contribute to nature inclusive farming by organising or joining a social enterprise (e.g. a care farm)

Completely unlikely	Unlikely	Not unlikely or likely	Likely	Completely likely

8. Are you aware of quality marks that consider nature and the environment? If yes which ones?
- Yes, I know the following quality marks: __
- No, I am not aware of any quality marks that consider nature and the environment.

9. Which of the following quality marks do you recognise? You can tick multiple answers.



10. Do you think it is logical that Natuurmonumenten is committed to restoring biodiversity in the Netherlands through nature-inclusive agriculture?

Completely illogical	Illogical	Not illogical or logical	Logical	Completely logical

11. Have you seen, read or heard information about nature-inclusive agriculture in the past year?
- Yes, I have seen, read or heard information about nature-inclusive agriculture.
- No, I have not seen, read or heard any information about nature-inclusive agriculture about this last year.

If yes:

11a. Where have you seen, read or heard information about nature-inclusive agriculture in the past year?
- Media of Natuurmonumenten (social media, newspapers, magazines, online news sections)
- Media (newspapers, magazines, online news sections)
- Social media (facebook, twitter, linkedin, instagram)
- internet
- TV
- Advertisement
- Otherwise, namely: ___

11b. Do you remember what information you saw, heard or read about nature-inclusive agriculture?
- Yes, I remember this. The information was about: ___
- No, I don't remember this.

If yes:
11b.a. Do you remember what you thought of the content of this information?
- Yes, I remember this. I found the content: ___
- no, I don't remember this.

12. Are you male or female?
- Man
- Woman
- Otherwise, namely: ___

13. What is your age in years? Enter only the number (e.g. 45): __

14. What is your education level?
- Primary education
- Vmbo (mavo), havo and vwo classes 1, 2 or 3, MBO level 1
- Havo, vwo, mbo level 2, 3 or 4
- HBO, WO bachelor
- HBO, WO master, doctor

15. In which province do you live?
- Drenthe
- Gelderland
- Groningen
- Flevoland
- Friesland
- Limburg
- Brabant
- Noord-Holland
- Overijssel
- Utrecht
- Zeeland
- Zuid-Holland

16. Are you a member or donor of Natuurmonumenten?
- I am a member / donor of Natuurmonumenten
- I am not a member / donor of Natuurmonumenten

17. If you have any questions or comments about the questionnaire, please contact:
Student Lisa Beekman - m.p.g.beekman@students.uu.nl

This research is supervised by:
Prof. Hens Runhaar (Utrecht University) - h.a.c.runhaar@uu.nl
Marie Jeanne Douven (Natuurmonumenten) - m.douven@natuurmonumenten.nl

Are you interested in the results of the research? Enter your e-mail address below. We will email the results to you in the summer. Your e-mail address will only be used for sending the results of the research and not for other purposes.
- Yes, I am interested. My email address is: ___
- No, I'm not interested.

Appendix 3: Creation attitude measurement

As described in 3.5.2 Beliefs & attitude measurement, the attitude question is created based on the behavioural beliefs of respondents that participated in the pilot questionnaire. Based on the literature of Fishbein and Ajzen (2010), four steps are followed to create the questions that measure attitude, which is detailed explained in this Appendix.

Respondents pilot questionnaire:

A sample size of 25 respondents is generally needed to elicit beliefs for the theory of planned behaviour (Francis et al., 2004). This number is achieved as 42 persons from NM's member committee and the agricultural group have filled in the pilot questionnaire. The member committee consists of 119 active NM members who provide input to NM and help NM with various activities. Initially, the idea was only to approach the member committee as this group is most similar to NM's supporters. However, only nine people filled in the pilot questionnaire after five days. Therefore, it was decided to approach also the agricultural group. It is assumed that 33 people of the agricultural group filled in the pilot questionnaire the following five days. The landscape group consists out of 150 persons that work for NM in different positions such as marketer or ecologist and have a specific interest in agriculture. This group is chosen as it was expected to represent the sample population (M. J. Douven and M. Kleine Koerkamp, personal communication, March 10, 2021).

Step 1:

Fishbein and Ajzen (2010) describe how respondents' beliefs could be retrieved by providing an instruction text and three open questions during a pilot questionnaire. This instruction text with the three corresponding questions is used for this questionnaire to guarantee as much as possible the validity and reliability of the measurement. The answers to these three questions are shown in Table 1 (in Dutch). The instruction text and three open questions used are shown below.

In English:
Please take a few minutes to tell us what you think about contributing yourself to nature-inclusive agriculture. There are no right or wrong responses; we are merely interested in your personal opinions. In response to the three questions that follow, please list the thoughts that come immediately to mind. Write each thought on a separate line (Five lines are provided for each question.)
1. What do you see as the advantages of contributing yourself to nature-inclusive agriculture in the Netherlands in 2021?
2. What do you see as the disadvantages of contributing yourself to nature-inclusive agriculture in the Netherlands in 2021?
3. What else comes to mind when you think about contributing yourself to nature-inclusive agriculture in the Netherlands in 2021?

In Dutch:
Neem een paar minuten de tijd om ons te vertellen wat u ervan zou vinden om zelf, als individu, bij te dragen aan natuurinclusieve landbouw. Er zijn geen goede of foute reacties; we zijn alleen geïnteresseerd in uw persoonlijke idee. Schrijf bij elk van de komende drie vragen, de gedachten op die onmiddellijk in u opkomen. Schrijf elke gedachte op een aparte regel (voor elke vraag zijn vijf regels beschikbaar).
1. Wat zijn volgens u de voordelen voor uzelf wanneer u als individu zou bijdragen aan natuur inclusieve landbouw in Nederland in 2021?
2. Wat zijn volgens u de nadelen voor uzelf wanneer u als individu zou bijdragen aan natuur inclusieve landbouw in Nederland in 2021?
3. Waar denkt u nog meer aan als u denkt aan het zelf, als individu, bijdragen aan natuurinclusieve landbouw in Nederland in 2021?

Table 1

Behavioural beliefs of respondents

Question 1: Advantages
Het creëert meer besef van de gevolgen van mijn eigen doen en laten voor mijn leefomgeving dicht bij huis doordat ik meer inzicht krijg in de werking van de natuur, in de kringloop en mijn plaats daarin.
Een beter leefbare torkomst voor volgende generaties en meer genoegen voor wie in de krten werkzaam is. Het is momenteel een doodloprnde weg.
Op deze wijze help ik mee aan een duurzame toekomst (waarvoor zowel natuur, als boer, als consument samen moeten leven).
een goed gevoel
gezond eten, mooi landschap , meer natuur
Persoonlijk voordeel is een mooiere leefomgeving, meer kennis/kunde over herkomst voedsel en mogelijk ook smaakvoller voedsel.
als ik een boer die pachter is van Natuurmonumenten aanmoedig om natuur inclusieve maatregelen op zijn bedrijf uit te voeren heb ik een goed gevoel en ik kom dichter bij mijn doel
Ik draag bij door biologische producten te kopen, waardoor er geen gif gebruikt wordt, insecten blijven leven en dus de vogels en andere dieren die insecten eten. Ik koop producten die in Nederland geproduceerd zijn en ook in het seizoen passen. Om export en dus vervuilend reizen te voorkomen.
Meer genieten van voedsel, want geeft beter gevoel. Meer natuur om je heen omdat er meer natuur inclusief wordt geboerd.
ik lever dan een bijdrage aan een mooier en biodiverser platteland voedsel zonder gif, gezonder voor mijzelf, en voor de flora en fauna
Het idee hebben 'echt' voedsel te eten
Help dan mee aan het verbeteren van een eerlijke prijs geven voor voedsel geproduceerd op deze gebieden.
Gezondere leefomgeving, vitaal en biodivers platteland.
Ik word er zelf blij van om bij een enthousiaste biologische boer te kopen of op de biologische boerenmarkt. Dat enthousiasme straalt ook op mij af. Daarnaast zijn de producten lekker, van goede kwaliteit en vers. Vooral in de zomer als zoveel mogelijk van eigen land komt. Ik koop dus bijna alleen biologische produkten als het gaat om landbouwprodukten.
als in producten koop die op natuurvriendelijke *natuurinclusiev) wijze zijn geproduceerd draag ik bij meer kans op toename biodiversiteit en ze zijn vaak beter van kwaliteit en lekkerder
Bijdragen aan een prettiger leefomgeving
Ik zou meer seizoensgebonden voedsel tot me nemen.
verbondenheid met de hele keten. Waarde hechten aan het product
Gezondee producten en een goed gevoel
De wereld wordt er mooier en gezonder van, dus ook voor mij.
Duurzaamheid. Biodiversiteit
- Ik draag bij aan meer leefruimte voor planten en dieren in het buitengebied. - Ik steun boeren die mijn omgeving mooier maken. - Ik eet voedsel dat gezonder is voor mij en mijn omgeving. - Ik draag eraan bij dat mijn nazaten in een mooiere, gezondere wereld kunnen leven.
zo veel mogelijk biologische en minder milieubelastende producten kopen
- gezonder - beter voor natuur en landschap - duurzamer toekomst voor kleinkinderen - meer verbonden met directe dorps omgeving
Genieten van een grotere diversiteit in het soms monotone platteland.
Ik bedrijf geen landbouw. IK probeer in mijn tuin zoveel als mogelijk omgevingsvriendelijke mest stoffen te gebruiken
een bijdrage aan meer biodiversiteit
Meer genieten van het landschap. Rijkdom en afwisseling in beleving van natuur en landschap.
mooiere, betere en robuuste natuuromgeving (terugkeer van biodiversiteit) je kan meer genieten van de directe nabije natuur (vs naar parken te trekken) gezonder eten? minder milieu vervuiling dus een schonere omgeving
Grotere betrokkenheid
Betere leefomstandigheden voor alles wat in ons land leeft. Minder consumptie, eer respect voor de natuur.
Het maakt je bewuster dat je zelf kunt bijdragen en ook dat het er toe doet. Want die producten moeten wel verkocht worden. Het kan ook bijdragen tot een ander koopgedrag, bijvoorbeeld meer seizoensgebonden groenten en fruit.
Nederland wordt mooier Schoner, zonder bestrijdingsmiddelen Veiliger afwisselender landschap

mooiere en natuurlijker landschap meer bloemen meer plantensoorten en vogels
mooier landschap goed gevoel lekker eten
Dan heb je meer binding met het landgebruik en het product Dan koop je eerder deze producten Je leeft duurzamer en gezonder
een goed gevoel
meer natuur om van te genieten
Ik kan er zelf niet zoveel aan bijdragen in letterlijke zin, wel d.m.v. actie voeren en lid zijn van o.a. Natuurmonumenten, Milieudefensie en dergelijke organisaties.
Een goed gevoel dat ik iets kan doen voor de natuur en bijv door het kopen van biologische producten hoop ik dat dit ook gezonder is voor mij als persoon.
de juiste producten te kopen, dan moeten ze ook als zodanig zichtbaar zijn.
Een fijn en beter leefgebied op het platteland! Meer natuurwaarden en (bio)diversiteit 'om mij heen' vergroot mijn leefgenot! Goed voor de gezondheid Het bevorderd de recreatie
Quesiton 2: Disadvantages
Door een gebrek aan kennis zou ik onjuiste keuzes kunnen maken die juist zorgen voor een belasting of verstoring van de natuur.
Wellicht kostenverhoging op de korte termijn.
Het kost wat meer (heb ik er graag voor over en kan het missen, andere individuen wellicht niet)
misschien een financiele opdracht
geen enkele
Nadeel kan zijn hogere prijzen en mogelijk minder makkelijk koken omdat er meer rekening gehouden moet worden met het aanbod per seizoen.
er zijn geen nadelen
Ik zie geen nadelen, misschien iets minder aanbod van producten, dat heb ik er graag voor over.
Waarschijnlijk hogere kosten voor producten, maar dat is goed te accepteren.
de kosten voor voedsel worden hoger
Het idee hebben dat de producent van dat voedsel daar een eerlijke prijs voor ontvangt zodat deze op een duurzamere en diervriendelijkere manier het voedsel kan (blijven) produceren
Kan er zo geen bedenken
Hogere voedselkosten/uitgaven.
Het kost wat meer tijd en moeite, naar aparte winkels en het is wat duurder.
Tsja ze zijn vaak wat duurder, maar als je minder of geen cola en chips koopt blijft het onder de streep gelijk
Kosten en vooralsnog lastige verkrijgbaarheid producten
Ik zou me er teveel mee bemoeien, en die tijd heb ik nu niet en wil ik er niet instoppen.
?
Geen
Geen
Hogere kosten
- Het kost me wat meer geld. - Het kost me wat meer tijd.
financïen
geen
Verlies van de identiteit van het "klassieke" landschap.
Geen idee
ik kan geen nadeel bedenken
Ik zie geen nadelen.
duurdere producten niet alles verkrijgbaar tegelijkertijd niet kunnen kopen van producten die niet in NL groeien
Geen
Geen
De kosten: de producten zijn vaak duurder dan de massaproducten van nu. Beperking in het aanbod: je moet je dan ook meer op seizoensgebonden producten richten en minder exotische producten kopen, die ook lekker zijn. Je zult ook minder vlees moeten eten, maar dat eet ik al niet dus is het voor mij niet zo'n probleem, maar voor anderen wel.
Voedsel wordt duurder?

meer bewuster moeten nadenken en principiële keuzes maken als consument, ben ik niet zo goed in, ik houd van gemak duurdere producten... ik heb niet veel te besteden
minder gemak meer geld uitgeven
Geen idee
weinig, hoogstens enigszins financieel
duurder?
Geen.
De effecten van een individu op de noodzaak echt iets te doen om verlies van biodiversiteit te stoppen zijn erg beperkt. Beter zou zijn als de overheid dit doet bv door biologische producten goedkoper te maken dan producten uit de bio-industrie.
kan geld kosten
Natuur inclusief denken en leven is voor iedereen belangrijk! Behalve dat veel producten van biologische bedrijven duurder zijn, kan ik geen nadelen bedenken, in mijn ogen zijn er verder alleen maar voordelen!
Question 3: Other beliefs
Meer bewustzijn en verantwoordelijkheidsgevoel voor waar mijn voedsel vandaan komt doordat i weet waar mijn voedsel vandaan komt en welke kosten, zowel materieel als immaterieel, daarmee gemoeid zijn.
De juiste voeding kopen en uitdragen naar anderen wat het belang daarvsn is.
Mijn invloed ligt voornamelijk in het creeeren van vraag naar producten van naturinclsieve landbouw.
lid worden van eenburgers/boerencooperatie waar je als consumnet aan mee kan doen.
Ik denk onmiddellijk dat de meeste mensen nog steeds gaan voor zo goedkoop mogelijke landbouwproducten. Mijn eigen impact wordt daarmee klein.
Juiste keuzes maken bij het doen van de boodschappen.
dit is de toekomst voor Europa
Ik koop als het kan van boeren dichtbij, dat lukt me niet altijd, soms heb ik haast.
Zelf denk en irriteer ik mijzelf aan hoe vaak mensen voedsel zien als iets wat niets mag kosten. Bijvoorbeeld: men eet het liefst zo goedkoop mogelijk, maar wil wel een dure Iphone en is bereid hiervoor te betalen. Ik ben zelf bereid meer te betalen voor natuurlijkere, betere producten.
boeren worden beloond voor hun bijdrage aan biodiversiteit
Uiteindelijk een mooier landschap als er meer diversiteit komt in de vorm van hagen, bosschages, struiken ed. en dus meer recreatiemogelijkheden
Stimuleren om zelf ook in tuin en straat te letten op meer bloemen, inheemse bomen, minder stenen, meer groen.
lobbywerk, verdienmodellen.
Waarom moet ik een antwoord geven? Als ik niets weet?
mensen in mijn omgeving vertellen over de voordelen, ze laten kennis maken met wat het allemaal kan opleveren
Bijdrage leveren aan organisatie, logistiek en communicatie
Betere toekomst voor iedereen en ik zou me meer verbonden voelen met het platteland. Toch denk ik dat urban farming een betere optie kan zijn, aangezien ik landbouw, hoe natuurinclusief het ook is, liever vervangen zie worden door echte natuur.
Nog meer letten op de herkomst van producten. Bereid zijn die moeite ervoor te nemen.
Actief bepaalde producten gaan mijden
Zoveel mogelijk duurzame en biologische producten kopen
Veel onkruid laten groeien in onze boomgaard
In het stemhokje kiezen voor een partij die een systeemverandering nastreeft, aangestuurd onder centrale regie van de overheid met inzet van een uitgedacht stelsel van premies, subsidies en belastingen. Want hoezeer we als individuen ook ons best doen, de markt gaat de omslag niet (snel genoeg) bewerkstelligen.
promoten bij bekenden van bovenstaande antwoorden
ondersteuning netwerk via o.a NM
Het gevoel iets goed te doen voor de verduurzaming van het huidige landbouwsysteem.
Ik draag niet bij aan landbouw, ik ben ene consument.
koop producten uit eigen omgeving, minder vervoer
Kopen van biologische - en streek gebonden producten.
geen idee
Stimulans voor anderen
Minder consumeren, produkten kopen die plaatselijk zijn geproduceerd met respect voor plant en dier. Als dat meer kost, is dat niet erg. Dan gebruik ik er minder van , maar geniet er meer van.
Bijdragen aan beleid, o.a. via stemgedrag bij verkiezingen en steun van groene, natuur- en natuurinclusieve organisaties en het vaker kopen van producten uit de natuurinclusieve landbouw.
Biologisch voedsel Minder vee Schone lucht
Misschien toch aansluiten bij Herenboeren of andere projecten
leuk
Meer lokaal voedsel kopen
(nog) meer waardering opbrengen

kopen van biologische producten
weet ik niet
Door bijv, te stemmen op partijen die oor hebben voor natuurinclusieve landbouw. En mee te denken aan de toekomst van bijvoorbeeld de omgeving waar je woont.....ik doe dat en heb meegewerkt aan en visie voor de omgeving voor 2030/
bijdrtage voor de toekomst, mooier land
Mijn eigen omgeving (nog) meer inrichten en beheren zodat inlandse kruiden, struiken en bomen weer volop kansen krijgen

Step 2:
The answers given in the pilot questionnaire shown in step 1 were analysed and categorized in Nvivo into twelve categories which are shown in Table 2.

Table 2
Behavioural belief categories

Answer categories	Number of time mentioned
Increase costs	30
Support biodiveristy	21
Greater landschape looks	19
Sustainable future	14
Less choice products	12
Healthy food	10
Good feeling	9
Food origin connection	6
Better taste food	4
Food without pesticides	4
Increase time	3
Less convenience	3
Total number of answer categories:	*139*

Step 3:
The behavioural belief categories that account for 75 % of all responses listed need to be used to measure attitude (Fishbein & Ajzen, 2010). 75 % of 139 responses is 104 responses, so the first six belief categories (increase costs, support biodiversity, greater landscape looks, sustainable future, less choice products, healthy food) were used to measure attitude as they account for 106 responses. Table 3 shows which type of behavioural belief responses are placed within each behavioural belief category (in Dutch).

Table 3
Types of answers within category

Answer categories	Types of answers within category	Examples of responses
Increase costs	Duurder + eerlijke prijs	- duurdere producten - eerlijke prijs geven
Support biodiveristy	Biodiversiteit + meer natuur.	- meer plantensoorten en vogels - Meer natuur om je heen
Better looking landscape	Diversiteit + mooier landschap	- mooiere leefomgeving - meer diversiteit komt in de vorm van hagen, bosschages, struiken
Sustainable future	Duurzaamheid + toekomst + vervuilend vervoer	- minder milieu vervuiling - duurzamer toekomst voor kleinkinderen - export en dus vervuilend reizen te voorkomen
Less product choices	Minder productkeuze + meer seizoensproducten	- niet kunnen kopen van producten die niet in NL groeien - seizoensgebonden groenten en fruit
Healthy food	Gezonder eten	- voedsel dat gezonder is voor mij

Step 4:
Fishbein and Ajzen (2010) formulated two questions to measure attitude:
1. (*Certain behaviour*) will result in (*behavioural belief category*) is: scale from likely to unlikely.
This question measures the strength of each behavioural belief.
2. The (*behavioural belief categories*) is: scale form good to bad.
This question measures the subjective evaluation of that behavioural belief.
These two questions used to formulate for each behavioural belief category a question, thus in total 12 questions are asked to measure attitude to the respondents.

Step 5:
Chapter *2. Theory* describes how the outcomes of these questions are analysed to calculate the attitude. Table 4 shows an example from Fishbein and Ajzen (2010) of this calculation. For this study, three attributes (Support biodiversity, Better looking landscape, Sustainable future) were used.

Table 4
Example measurement attitude of Fishbein and Ajzen (2010).

Voter's Attitude Toward a Candidate

Attribute of candidate	Belief strength (*b*)	Attribute evaluation (e)	*b x e*
Liberal	+3	–3	–9
Democrat	+3	–2	–6
Married	+2	+3	+6
Two children	+1	+2	+2
Favors national health insurance	+1	0	0
Opposes private social security accounts	+2	–3	–6
$A \propto \sum b_i e_i$			–13

Appendix 4: Adjustments questionnaire

Adjustments during the pilot questionnaire (February 27 till March 2):
- Feb 27: Intentions answer options changed to single answer carrousel as respondents did not see all the answer options on one screen, they had to scroll.
- March 1: single answer carrousel for the intentions answer options was not considered easy to use, so changed to a drop list which solved the problem.
- March 1: question about if the respondent is interested in the results is replaced towards the end of the survey. Hence, respondents know what kind of results they can expect.
- March 1: introduction part and consent form placed on two separate pages as it was considered too long all on one page.
- March 2: the survey was closed, 42 people filled in the survey and 13 people did not fill in the questionnaire completely, so these were deleted from the dataset.

After pilot questionnaire (March 2 till March 5):
- Including images for the labels so people would remember them quicker.
- New questions of NM about information sharing added.
- Indicating more clearly that the requested email address will only be used for sending the study results and not for other purposes.
- Example about lease conditions in the intention question deleted to decrease jargon.
- Deleted the three open belief questions and included the created attitude questions.
- Including the recognition question of labels
- Deleted the open question about EKO and Demeter.
- Explanation of what is meant with the countryside included.

After conversation expert (March 5 till March 7):
- Changed seven-point scales to five-point scales as this works more accessible and quicker.
- Social demographics questions were placed at the end of the questionnaire as people have less motivation then.
- Changed the place attachment question to the original version of Runhaar et al. (2019a).
- It is okay if people answer intuitively to the knowledge question.
- Introduction start with where the results will be used for.
- Change 8 to 12 minutes to 10 minutes (Qualtrics also calculated 10 minutes for the questionnaire, including reading the introduction and the consent form).
- For the gender question is the option: other, namely __ added.

After conversation NM:
- delete on the way to planet proof question
- added the figure of nature-inclusive agriculture.
- changed “compleet” into “voltrekt”.
- changed nature inclusive into labels that support nature and the environment
- media NM added

Appendix 5: Explorative factor analyses

Factor Analysis knowledge:

Correlation Matrix[a]

		Produce food in a nature-inclusive way	Produce animal feed in a nature-inclusive way	Improve the natural habitat of plants and animals	Making landscapes attractive through nature-inclusive agriculture	The regulation of soil fertility	The regulation of water	The use of natural pollination
Correlation	Produce food in a nature-inclusive way	1,000	,731	,693	,677	,662	,570	,568
	Produce animal feed in a nature-inclusive way	,731	1,000	,642	,637	,644	,574	,578
	Improve the natural habitat of plants and animals	,693	,642	1,000	,786	,634	,646	,656
	Making landscapes attractive through nature-inclusive agriculture	,677	,637	,786	1,000	,662	,647	,661
	The regulation of soil fertility	,662	,644	,634	,662	1,000	,744	,641
	The regulation of water	,570	,574	,646	,647	,744	1,000	,671
	The use of natural pollination	,568	,578	,656	,661	,641	,671	1,000
Sig. (1-tailed)	Produce food in a nature-inclusive way		,000	,000	,000	,000	,000	,000
	Produce animal feed in a nature-inclusive way	,000		,000	,000	,000	,000	,000
	Improve the natural habitat of plants and animals	,000	,000		,000	,000	,000	,000
	Making landscapes attractive through nature-inclusive agriculture	,000	,000	,000		,000	,000	,000
	The regulation of soil fertility	,000	,000	,000	,000		,000	,000
	The regulation of water	,000	,000	,000	,000	,000		,000

	The use of natural pollination	,000	,000	,000	,000	,000	,000

a. Determinant = ,006

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,911
Bartlett's Test of Sphericity	Approx. Chi-Square	7998,691
	df	21
	Sig.	,000

Anti-image Matrices

		Produce food in a nature-inclusive way	Produce animal feed in a nature-inclusive way	Improve the natural habitat of plants and animals	Making landscapes attractive through nature-inclusive agriculture	The regulation of soil fertility	The regulation of water	The use of natural pollination
Anti-image Covariance	Produce food in a nature-inclusive way	,351	-,152	-,072	-,044	-,070	,016	,003
	Produce animal feed in a nature-inclusive way	-,152	,396	-,029	-,025	-,054	-,011	-,039
	Improve the natural habitat of plants and animals	-,072	-,029	,306	-,138	,008	-,046	-,056
	Making landscapes attractive through nature-inclusive agriculture	-,044	-,025	-,138	,309	-,036	-,027	-,059
	The regulation of soil fertility	-,070	-,054	,008	-,036	,337	-,152	-,045
	The regulation of water	,016	-,011	-,046	-,027	-,152	,363	-,101
	The use of natural pollination	,003	-,039	-,056	-,059	-,045	-,101	,429
Anti-image Correlation	Produce food in a nature-inclusive way	,902[a]	-,409	-,220	-,133	-,204	,046	,007
	Produce animal feed in a nature-inclusive way	-,409	,920[a]	-,083	-,072	-,148	-,030	-,095

	Improve the natural habitat of plants and animals	-,220	-,083	,902[a]	-,450	,025	-,138	-,155
	Making landscapes attractive through nature-inclusive agriculture	-,133	-,072	-,450	,911[a]	-,113	-,081	-,161
	The regulation of soil fertility	-,204	-,148	,025	-,113	,904[a]	-,436	-,119
	The regulation of water	,046	-,030	-,138	-,081	-,436	,898[a]	-,255
	The use of natural pollination	,007	-,095	-,155	-,161	-,119	-,255	,945[a]

a. Measures of Sampling Adequacy(MSA)

Communalities

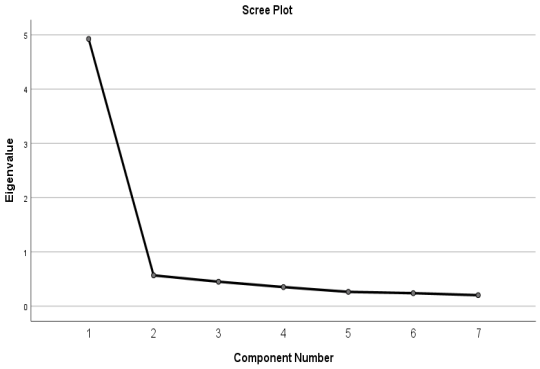
	Initial	Extraction
Produce food in a nature-inclusive way	1,000	,697
Produce animal feed in a nature-inclusive way	1,000	,668
Improve the natural habitat of plants and animals	1,000	,746
Making landscapes attractive through nature-inclusive agriculture	1,000	,750
The regulation of soil fertility	1,000	,722
The regulation of water	1,000	,682
The use of natural pollination	1,000	,659

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	4,924	70,344	70,344	4,924	70,344	70,344
2	,568	8,115	78,459			
3	,451	6,439	84,899			
4	,352	5,028	89,927			
5	,264	3,767	93,694			
6	,239	3,420	97,113			
7	,202	2,887	100,000			

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component 1
Produce food in a nature-inclusive way	,835
Produce animal feed in a nature-inclusive way	,817
Improve the natural habitat of plants and animals	,864
Making landscapes attractive through nature-inclusive agriculture	,866
The regulation of soil fertility	,850
The regulation of water	,826
The use of natural pollination	,812

Extraction Method: Principal Component Analysis.

a. 1 components extracted.

Reproduced Correlations

		Produce food in a nature-inclusive way	Produce animal feed in a nature-inclusive way	Improve the natural habitat of plants and animals	Making landscapes attractive through nature-inclusive agriculture	The regulation of soil fertility	The regulation of water	The use of natural pollination
Reproduced Correlation	Produce food in a nature-inclusive way	,697[a]	,682	,721	,723	,710	,690	,678
	Produce animal feed in a nature-inclusive way	,682	,668[a]	,706	,708	,695	,675	,663
	Improve the natural habitat of plants and animals	,721	,706	,746[a]	,748	,734	,713	,701

	Making landscapes attractive through nature-inclusive agriculture	,723	,708	,748	,750[a]	,736	,715	,703
	The regulation of soil fertility	,710	,695	,734	,736	,722[a]	,702	,690
	The regulation of water	,690	,675	,713	,715	,702	,682[a]	,670
	The use of natural pollination	,678	,663	,701	,703	,690	,670	,659[a]
Residual[b]	Produce food in a nature-inclusive way		,049	-,028	-,046	-,048	-,119	-,110
	Produce animal feed in a nature-inclusive way	,049		-,064	-,071	-,050	-,101	-,085
	Improve the natural habitat of plants and animals	-,028	-,064		,038	-,100	-,067	-,045
	Making landscapes attractive through nature-inclusive agriculture	-,046	-,071	,038		-,074	-,068	-,042
	The regulation of soil fertility	-,048	-,050	-,100	-,074		,042	-,048
	The regulation of water	-,119	-,101	-,067	-,068	,042		,001
	The use of natural pollination	-,110	-,085	-,045	-,042	-,048	,001	

Extraction Method: Principal Component Analysis.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 11 (52,0%) nonredundant residuals with absolute values greater than 0.05.

Rotated Component Matrix[a]

a. Only one component was extracted. The solution cannot be rotated.

Reliability knowledge:

Reliability Statistics

Cronbach's Alpha	N of Items
,929	7

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Produce food in a nature-inclusive way	18,87	20,023	,771	,919
Produce animal feed in a nature-inclusive way	19,10	19,683	,748	,921
Improve the natural habitat of plants and animals	18,63	19,743	,805	,916
Making landscapes attractive through nature-inclusive agriculture	18,62	19,735	,808	,915
The regulation of soil fertility	18,94	19,584	,791	,917
The regulation of water	18,91	19,773	,759	,920
The use of natural pollination	18,69	20,308	,742	,922

Factor Analysis attitude:

Correlation Matrix[a]

		Belief strength of creating a more sustainable future	Belief strength of changes in the landscape	Belief strength of changes in the number of wild animals and plants	Subjective evaluation of creating a more sustainable future	Subjective evaluation of changes in the landscape	Subjective evaluation of changes in the number of wild animals and plants
Correlation	Belief strength of creating a more sustainable future	1,000	,597	,610	,445	,347	,345
	Belief strength of changes in the landscape	,597	1,000	,758	,374	,417	,356
	Belief strength of changes in the number of wild animals and plants	,610	,758	1,000	,407	,407	,418
	Subjective evaluation of creating a more sustainable future	,445	,374	,407	1,000	,642	,640
	Subjective evaluation of changes in the landscape	,347	,417	,407	,642	1,000	,754
	Subjective evaluation of changes in the number of wild animals and plants	,345	,356	,418	,640	,754	1,000
Sig. (1-tailed)	Belief strength of creating a more sustainable future		,000	,000	,000	,000	,000
	Belief strength of changes in the landscape	,000		,000	,000	,000	,000
	Belief strength of changes in the number of wild animals and plants	,000	,000		,000	,000	,000
	Subjective evaluation of creating a more sustainable future	,000	,000	,000		,000	,000
	Subjective evaluation of changes in the landscape	,000	,000	,000	,000		,000
	Subjective evaluation of changes in the number of wild animals and plants	,000	,000	,000	,000	,000	

a. Determinant = ,040

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,790

Bartlett's Test of Sphericity	Approx. Chi-Square	4975,122
	df	15
	Sig.	,000

Anti-image Matrices

		Belief strength of creating a more sustainable future	Belief strength of changes in the landscape	Belief strength of changes in the number of wild animals and plants	Subjective evaluation of creating a more sustainable future	Subjective evaluation of changes in the landscape	Subjective evaluation of changes in the number of wild animals and plants
Anti-image Covariance	Belief strength of creating a more sustainable future	,546	-,112	-,116	-,121	,021	,002
	Belief strength of changes in the landscape	-,112	,383	-,224	,011	-,067	,034
	Belief strength of changes in the number of wild animals and plants	-,116	-,224	,370	-,011	,014	-,057
	Subjective evaluation of creating a more sustainable future	-,121	,011	-,011	,488	-,122	-,120
	Subjective evaluation of changes in the landscape	,021	-,067	,014	-,122	,373	-,213
	Subjective evaluation of changes in the number of wild animals and plants	,002	,034	-,057	-,120	-,213	,380
Anti-image Correlation	Belief strength of creating a more sustainable future	,864[a]	-,244	-,258	-,234	,047	,004
	Belief strength of changes in the landscape	-,244	,751[a]	-,596	,025	-,179	,090
	Belief strength of changes in the number of wild animals and plants	-,258	-,596	,765[a]	-,025	,038	-,153
	Subjective evaluation of creating a more sustainable future	-,234	,025	-,025	,860[a]	-,286	-,278
	Subjective evaluation of changes in the landscape	,047	-,179	,038	-,286	,767[a]	-,566
	Subjective evaluation of changes in the number of wild animals and plants	,004	,090	-,153	-,278	-,566	,765[a]

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
Belief strength of creating a more sustainable future	1,000	,688
Belief strength of changes in the landscape	1,000	,811
Belief strength of changes in the number of wild animals and plants	1,000	,814
Subjective evaluation of creating a more sustainable future	1,000	,720
Subjective evaluation of changes in the landscape	1,000	,819
Subjective evaluation of changes in the number of wild animals and plants	1,000	,825

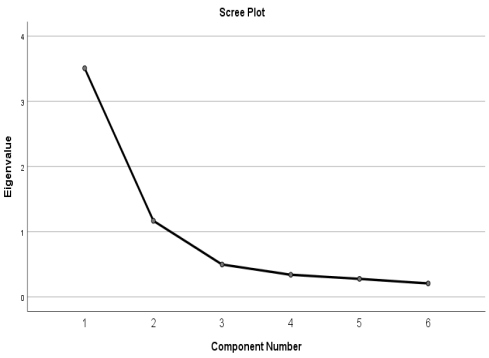
Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3,508	58,470	58,470	3,508	58,470	58,470	2,935
2	1,168	19,472	77,942	1,168	19,472	77,942	2,906
3	,498	8,297	86,238				
4	,340	5,672	91,910				
5	,278	4,628	96,538				
6	,208	3,462	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.



Component Matrix[a]

	Component	
	1	2
Belief strength of creating a more sustainable future	,722	,407
Belief strength of changes in the landscape	,763	,479
Belief strength of changes in the number of wild animals and plants	,786	,444
Subjective evaluation of creating a more sustainable future	,766	-,365
Subjective evaluation of changes in the landscape	,781	-,457
Subjective evaluation of changes in the number of wild animals and plants	,769	-,484

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Reproduced Correlations

		Belief strength of creating a more sustainable future	Belief strength of changes in the landscape	Belief strength of changes in the number of wild animals and plants	Subjective evaluation of creating a more sustainable future	Subjective evaluation of changes in the landscape	Subjective evaluation of changes in the number of wild animals and plants
Reproduced Correlation	Belief strength of creating a more sustainable future	,688[a]	,746	,748	,404	,378	,358
	Belief strength of changes in the landscape	,746	,811[a]	,812	,409	,377	,355
	Belief strength of changes in the number of wild animals and plants	,748	,812	,814[a]	,439	,411	,389
	Subjective evaluation of creating a more sustainable future	,404	,409	,439	,720[a]	,765	,765
	Subjective evaluation of changes in the landscape	,378	,377	,411	,765	,819[a]	,822
	Subjective evaluation of changes in the number of wild animals and plants	,358	,355	,389	,765	,822	,825[a]
Residual[b]	Belief strength of creating a more sustainable future		-,149	-,138	,040	-,031	-,013

	Belief strength of changes in the landscape	-,149		-,053	-,035	,040	,001
	Belief strength of changes in the number of wild animals and plants	-,138	-,053		-,032	-,004	,029
	Subjective evaluation of creating a more sustainable future	,040	-,035	-,032		-,123	-,125
	Subjective evaluation of changes in the landscape	-,031	,040	-,004	-,123		-,068
	Subjective evaluation of changes in the number of wild animals and plants	-,013	,001	,029	-,125	-,068	

Extraction Method: Principal Component Analysis.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 6 (40,0%) nonredundant residuals with absolute values greater than 0.05.

Pattern Matrix[a]

	Component	
	1	2
Belief strength of creating a more sustainable future		,820
Belief strength of changes in the landscape		,915
Belief strength of changes in the number of wild animals and plants		,893
Subjective evaluation of creating a more sustainable future	,811	
Subjective evaluation of changes in the landscape	,911	
Subjective evaluation of changes in the number of wild animals and plants	,930	

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 7 iterations.

Structure Matrix

	Component	
	1	2
Belief strength of creating a more sustainable future	,426	,829

Belief strength of changes in the landscape	,426	,900
Belief strength of changes in the number of wild animals and plants	,463	,902
Subjective evaluation of creating a more sustainable future	,846	,475
Subjective evaluation of changes in the landscape	,905	,442
Subjective evaluation of changes in the number of wild animals and plants	,907	,417

Extraction Method: Principal Component Analysis.

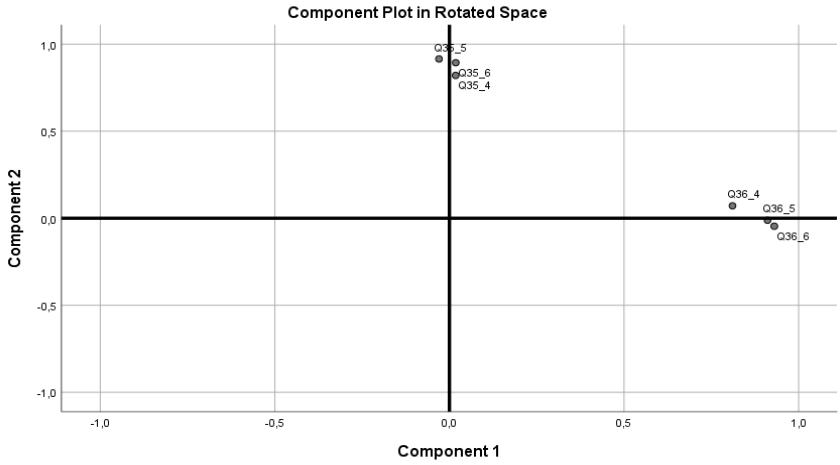
Rotation Method: Oblimin with Kaiser Normalization.

Component Correlation Matrix

Component	1	2
1	1,000	,498
2	,498	1,000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.



Reliability attitude strength:

Reliability Statistics

Cronbach's Alpha	N of Items
,851	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted

Belief strength of creating a more sustainable future	2,71	1,821	,643	,863
Belief strength of changes in the landscape	2,75	1,535	,758	,757
Belief strength of changes in the number of wild animals and plants	2,74	1,542	,769	,746

Reliability attitude subjective evaluation:

Reliability Statistics

Cronbach's Alpha	N of Items
,864	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Subjective evaluation of creating a more sustainable future	3,47	1,099	,685	,860
Subjective evaluation of changes in the landscape	3,49	,974	,772	,780
Subjective evaluation of changes in the number of wild animals and plants	3,46	,978	,771	,781

Factor Analysis intentions:

Correlation Matrix[a]

		Purchasing behaviour	Member of a nature organization	Political voting behaviour	Voluntary work	Policy processes	Social enterprises
Correlation	Purchasing behaviour	1,000	,372	,473	,206	,136	,297
	Member of a nature organization	,372	1,000	,374	,261	,233	,271
	Political voting behaviour	,473	,374	1,000	,157	,177	,249
	Voluntary work	,206	,261	,157	1,000	,376	,437
	Policy processes	,136	,233	,177	,376	1,000	,351
	Social enterprises	,297	,271	,249	,437	,351	1,000
Sig. (1-tailed)	Purchasing behaviour		,000	,000	,000	,000	,000
	Member of a nature organization	,000		,000	,000	,000	,000
	Political voting behaviour	,000	,000		,000	,000	,000
	Voluntary work	,000	,000	,000		,000	,000
	Policy processes	,000	,000	,000	,000		,000
	Social enterprises	,000	,000	,000	,000	,000	

a. Determinant = ,346

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		,746
Bartlett's Test of Sphericity	Approx. Chi-Square	1639,288
	df	15
	Sig.	,000

Anti-image Matrices

		Purchasing behaviour	Member of a nature organization	Political voting behaviour	Voluntary work	Policy processes	Social enterprises
Anti-image Covariance	Purchasing behaviour	,708	-,148	-,263	-,038	,036	-,106
	Member of a nature organization	-,148	,767	-,161	-,086	-,078	-,049
	Political voting behaviour	-,263	-,161	,722	,022	-,051	-,052
	Voluntary work	-,038	-,086	,022	,738	-,190	-,227
	Policy processes	,036	-,078	-,051	-,190	,801	-,150
	Social enterprises	-,106	-,049	-,052	-,227	-,150	,720
Anti-image Correlation	Purchasing behaviour	,716[a]	-,201	-,367	-,052	,047	-,149
	Member of a nature organization	-,201	,806[a]	-,216	-,114	-,099	-,066

	Political voting behaviour	-,367	-,216	,715[a]	,030	-,067	-,072
	Voluntary work	-,052	-,114	,030	,728[a]	-,247	-,312
	Policy processes	,047	-,099	-,067	-,247	,759[a]	-,198
	Social enterprises	-,149	-,066	-,072	-,312	-,198	,762[a]

a. Measures of Sampling Adequacy(MSA)

Communalities

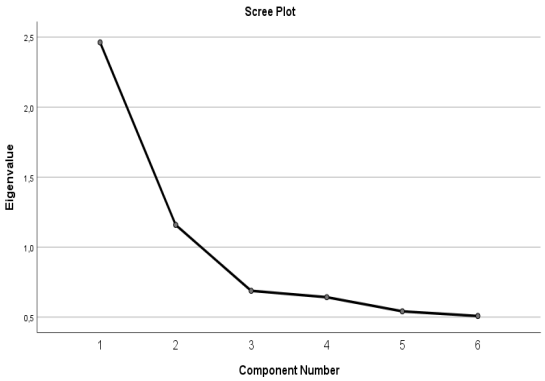
	Initial	Extraction
Purchasing behaviour	1,000	,662
Member of a nature organization	1,000	,503
Political voting behaviour	1,000	,666
Voluntary work	1,000	,641
Policy processes	1,000	,576
Social enterprises	1,000	,574

Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,462	41,036	41,036	2,462	41,036	41,036	1,835	30,576	30,576
2	1,159	19,313	60,349	1,159	19,313	60,349	1,786	29,773	60,349
3	,688	11,461	71,810						
4	,642	10,705	82,516						
5	,541	9,019	91,535						
6	,508	8,465	100,000						

Extraction Method: Principal Component Analysis.



Component Matrix[a]

	Component	
	1	2
Purchasing behaviour	,655	-,483

Member of a nature organization	,660	
Political voting behaviour	,634	-,514
Voluntary work	,630	,493
Policy processes	,570	,501
Social enterprises	,688	,316

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Reproduced Correlations

		Purchasing behaviour	Member of a nature organization	Political voting behaviour	Voluntary work	Policy processes	Social enterprises
Reproduced Correlation	Purchasing behaviour	,662[a]	,558	,663	,174	,131	,298
	Member of a nature organization	,558	,503[a]	,552	,287	,246	,372
	Political voting behaviour	,663	,552	,666[a]	,146	,104	,274
	Voluntary work	,174	,287	,146	,641[a]	,606	,590
	Policy processes	,131	,246	,104	,606	,576[a]	,550
	Social enterprises	,298	,372	,274	,590	,550	,574[a]
Residual[b]	Purchasing behaviour		-,185	-,190	,032	,004	-,002
	Member of a nature organization	-,185		-,178	-,027	-,013	-,101
	Political voting behaviour	-,190	-,178		,011	,073	-,026
	Voluntary work	,032	-,027	,011		-,230	-,152
	Policy processes	,004	-,013	,073	-,230		-,199
	Social enterprises	-,002	-,101	-,026	-,152	-,199	

Extraction Method: Principal Component Analysis.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 8 (53,0%) nonredundant residuals with absolute values greater than 0.05.

Rotated Component Matrix[a]

	Component	
	1	2
Purchasing behaviour	,806	
Member of a nature organization	,656	
Political voting behaviour	,813	
Voluntary work		,793
Policy processes		,756
Social enterprises		,705

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

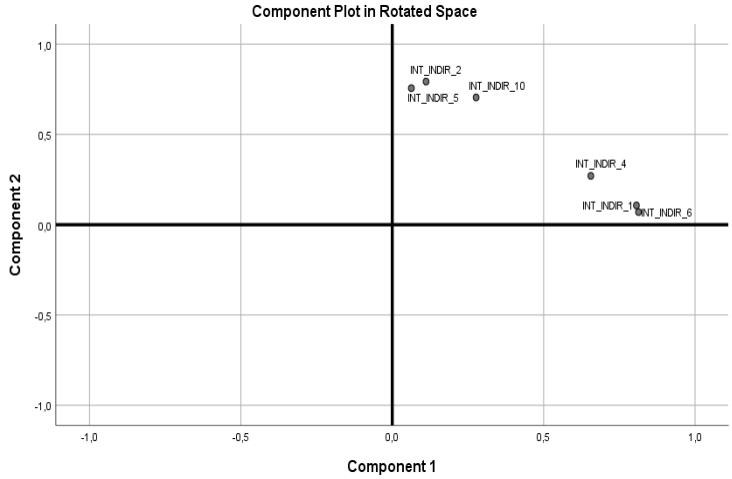
a. Rotation converged in 3 iterations.

Component Transformation Matrix

Component	1	2
1	,720	,694
2	-,694	,720

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.



Reliability individual contribution:

Reliability Statistics

Cronbach's Alpha	N of Items
,662	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Purchasing behaviour	8,36	2,346	,506	,542
Member of a nature organization	8,54	1,916	,435	,637
Political voting behaviour	8,28	2,045	,501	,528

Reliability group contribution:

Reliability Statistics

Cronbach's Alpha	N of Items
,655	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
Voluntary work	5,59	2,754	,494	,520
Policy processes	5,63	2,955	,429	,608
Social enterprises	5,64	2,969	,476	,547

Factor Analysis place attachment:

Correlation Matrix[a]

		I feel very connected to the countryside	The countryside means a lot to me	I identify myself strongly with the countryside	The countryside is the best place for leisure activities	There is no place better to recreate in nature than in the countryside	No landscape can replace the countryside for my favorite recreational activities
Correlation	I feel very connected to the countryside	1,000	,746	,701	,509	,358	,377
	The countryside means a lot to me	,746	1,000	,673	,552	,407	,410
	I identify myself strongly with the countryside	,701	,673	1,000	,553	,412	,442
	The countryside is the best place for leisure activities	,509	,552	,553	1,000	,597	,581
	There is no place better to recreate in nature than in the countryside	,358	,407	,412	,597	1,000	,710
	No landscape can replace the countryside for my favorite recreational activities	,377	,410	,442	,581	,710	1,000
Sig. (1-tailed)	I feel very connected to the countryside		,000	,000	,000	,000	,000
	The countryside means a lot to me	,000		,000	,000	,000	,000
	I identify myself strongly with the countryside	,000	,000		,000	,000	,000
	The countryside is the best place for leisure activities	,000	,000	,000		,000	,000
	There is no place better to recreate in nature than in the countryside	,000	,000	,000	,000		,000
	No landscape can replace the countryside for my favorite recreational activities	,000	,000	,000	,000	,000	

a. Determinant = ,036

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	,832

Bartlett's Test of Sphericity	Approx. Chi-Square	5123,398
	df	15
	Sig.	,000

Anti-image Matrices

		I feel very connected to the countryside	The countryside means a lot to me	I identify myself strongly with the countryside	The countryside is the best place for leisure activities	There is no place better to recreate in nature than in the countryside	No landscape can replace the countryside for my favorite recreational activities
Anti-image Covariance	I feel very connected to the countryside	,369	-,184	-,147	-,028	,009	-,002
	The countryside means a lot to me	-,184	,377	-,094	-,068	-,020	-,004
	I identify myself strongly with the countryside	-,147	-,094	,423	-,073	-,004	-,042
	The countryside is the best place for leisure activities	-,028	-,068	-,073	,481	-,125	-,091
	There is no place better to recreate in nature than in the countryside	,009	-,020	-,004	-,125	,443	-,244
	No landscape can replace the countryside for my favorite recreational activities	-,002	-,004	-,042	-,091	-,244	,449
Anti-image Correlation	I feel very connected to the countryside	,804[a]	-,493	-,371	-,067	,022	-,004
	The countryside means a lot to me	-,493	,835[a]	-,236	-,161	-,048	-,011
	I identify myself strongly with the countryside	-,371	-,236	,876[a]	-,162	-,010	-,097
	The countryside is the best place for leisure activities	-,067	-,161	-,162	,903[a]	-,270	-,196
	There is no place better to recreate in nature than in the countryside	,022	-,048	-,010	-,270	,780[a]	-,546

No landscape can replace the countryside for my favorite recreational activities	-,004	-,011	-,097	-,196	-,546	,796[a]

a. Measures of Sampling Adequacy(MSA)

Communalities

	Initial	Extraction
I feel very connected to the countryside	1,000	,835
The countryside means a lot to me	1,000	,806
I identify myself strongly with the countryside	1,000	,763
The countryside is the best place for leisure activities	1,000	,686
There is no place better to recreate in nature than in the countryside	1,000	,831
No landscape can replace the countryside for my favorite recreational activities	1,000	,812

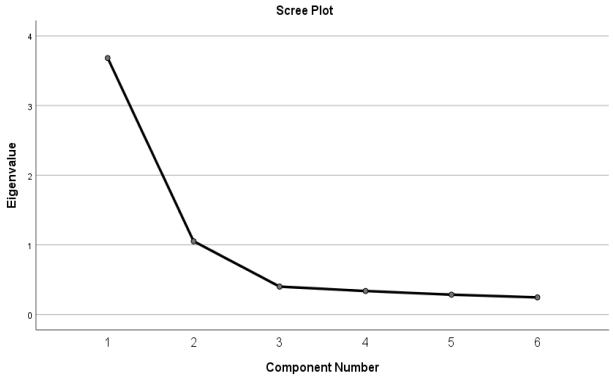
Extraction Method: Principal Component Analysis.

Total Variance Explained

	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings[a]
Component	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total
1	3,682	61,368	61,368	3,682	61,368	61,368	3,183
2	1,051	17,523	78,891	1,051	17,523	78,891	2,877
3	,400	6,671	85,562				
4	,337	5,612	91,174				
5	,284	4,733	95,908				
6	,246	4,092	100,000				

Extraction Method: Principal Component Analysis.

a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.



Component Matrix[a]

	Component	
	1	2
I feel very connected to the countryside	,793	-,453
The countryside means a lot to me	,814	-,377
I identify myself strongly with the countryside	,812	-,322
The countryside is the best place for leisure activities	,808	
There is no place better to recreate in nature than in the countryside	,730	,546
No landscape can replace the countryside for my favorite recreational activities	,738	,517

Extraction Method: Principal Component Analysis.

a. 2 components extracted.

Reproduced Correlations

		I feel very connected to the countryside	The countryside means a lot to me	I identify myself strongly with the countryside	The countryside is the best place for leisure activities	There is no place better to recreate in nature than in the countryside	No landscape can replace the countryside for my favorite recreational activities
Reproduced Correlation	I feel very connected to the countryside	,835[a]	,817	,790	,558	,331	,351
	The countryside means a lot to me	,817	,806[a]	,783	,589	,388	,406
	I identify myself strongly with the countryside	,790	,783	,763[a]	,597	,416	,433

	The countryside is the best place for leisure activities	,558	,589	,597	,686[a]	,690	,691
	There is no place better to recreate in nature than in the countryside	,331	,388	,416	,690	,831[a]	,821
	No landscape can replace the countryside for my favorite recreational activities	,351	,406	,433	,691	,821	,812[a]
Residual[b]	I feel very connected to the countryside		-,071	-,090	-,048	,027	,025
	The countryside means a lot to me	-,071		-,110	-,037	,019	,004
	I identify myself strongly with the countryside	-,090	-,110		-,044	-,005	,009
	The countryside is the best place for leisure activities	-,048	-,037	-,044		-,093	-,110
	There is no place better to recreate in nature than in the countryside	,027	,019	-,005	-,093		-,111
	No landscape can replace the countryside for my favorite recreational activities	,025	,004	,009	-,110	-,111	

Extraction Method: Principal Component Analysis.

a. Reproduced communalities

b. Residuals are computed between observed and reproduced correlations. There are 6 (40,0%) nonredundant residuals with absolute values greater than 0.05.

Pattern Matrix[a]

	Component	
	1	2
I feel very connected to the countryside	,948	
The countryside means a lot to me	,889	
I identify myself strongly with the countryside	,833	
The countryside is the best place for leisure activities	,342	,601
There is no place better to recreate in nature than in the countryside		,940

No landscape can replace the countryside for my favorite recreational activities		,914

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.

a. Rotation converged in 5 iterations.

Structure Matrix

	Component	
	1	2
I feel very connected to the countryside	,912	,410
The countryside means a lot to me	,898	,470
I identify myself strongly with the countryside	,871	,498
The countryside is the best place for leisure activities	,647	,774
There is no place better to recreate in nature than in the countryside	,418	,910
No landscape can replace the countryside for my favorite recreational activities	,439	,901

Extraction Method: Principal Component Analysis.

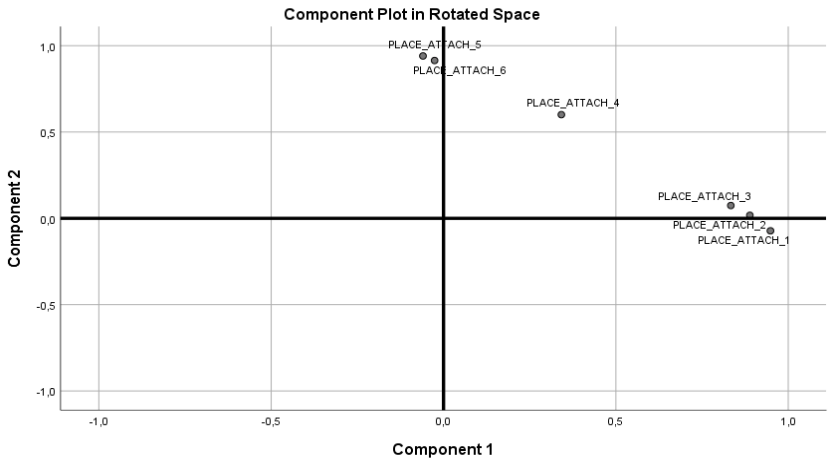
Rotation Method: Oblimin with Kaiser Normalization.

Component Correlation Matrix

Component	1	2
1	1,000	,509
2	,509	1,000

Extraction Method: Principal Component Analysis.

Rotation Method: Oblimin with Kaiser Normalization.



Reliability place identity:

Reliability Statistics

Cronbach's Alpha	N of Items
,867	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
I feel very connected to the countryside	11,29	5,469	,785	,781
The countryside means a lot to me	11,13	6,089	,765	,813
I identify myself strongly with the countryside	11,95	4,500	,736	,852

Reliability place dependence:

Reliability Statistics

Cronbach's Alpha	N of Items
,833	3

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
The countryside is the best place for leisure activities	9,86	8,942	,636	,827
There is no place better to recreate in nature than in the countryside	10,07	7,349	,742	,719
No landscape can replace the countryside for my favorite recreational activities	10,79	6,433	,727	,743

Appendix 6: Descriptive analyses

The data retrieved about the socio-demographics, place attachment, knowledge, attitude, and intentions were analysed by looking at the frequency distribution, the centre of the frequency distribution, the dispersion of the data, and the population's representation. The frequency distribution could be analysed by analysing the values of skewness and kurtosis. The measure of the symmetry of the data (*skewness*) could have a positive value, the frequent scores are clustered at the lower end values (left side). If the skew has a negative value, the frequent scores are clustered at the higher end (right side). Furthermore, the pointiness (*kurtosis*) could be positive, which means that the distribution is heavy-tailed (pointy) or negative, which means light-tailed (flatter). The more skewness and kurtosis values deviate from 0, the greater the distribution deviates from a normal distribution. Any significance tests of skewness and kurtosis such as Kolmogorov-Smirnov test and Shapiro-Wilk test could not be used as they are likely to be significant with large sample sizes (Field, 2014). Parameters for the centre of the frequency distribution (central tendency) are the average score (*mean*), the score that occurs most frequently in the data set (*mode*), and the middle score when scores are ranked in order of magnitude (*median*). Parameters for the dispersion of the data are the average degree to which each score is different from the mean (*variance)* and how far the scores are from the mean, which is the squared root of the variance (*standard deviation*). Furthermore, the difference between the lowest and highest values (*range*) and the range of the middle 50 % of scores (*interquartile range*) are parameters to analyse the dispersion of the data. A parameter for the representation of the population is the standard deviation of the sample mean (*standard error*). The smaller the standard error, the more likely it is that the sample reflects the population. Furthermore, the range of scores in which the population mean will fall in for 95 % of the samples reflects the representation of the population (*confidence interval for the mean*). The smaller the interval, the closer the sample mean is to the true mean. Thus, the better the representation of the population is (Field, 2014).

Table 1

Descriptive statistics age

Variables	Frequency distribution		Central tendency			Dispersion				Representation	
	Skewness	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
Age (scale)	-.62	-.02	59.90	70	63	177.22	13.31	82.00	18.00	.34	-.62 - -.02

Table 2

Comparison socio-demographics sample and Dutch population

	Sample		Dutch population		Difference sample with Dutch population in % ages
Gender					
Man	581	(37.48%)	8 759 554	(50.32%)	- 12.84%
Woman	961	(62%)	8 648 031	(49.68%)	12.32%
Other	8	(0.52%)	0		0.52%
Age					
- 19 years	1	(0.06%)	3775257	(21.69%)	-21.63%
20 – 29 years	38	(2.45%)	2233550	(12.83%)	-10.38%
30 – 39 years	107	(6.90%)	2147931	(12.34%)	-5.44%
40 – 49 years	169	(10.90%)	2208076	(12.68%)	-1.78%
50 – 59 years	327	(21.10%)	2532418	(14.55%)	6.55%
60 – 69 years	511	(32.97%)	2113846	(12.14%)	20.83%
70 – 79 years	350	(22.58%)	1574419	(9.04%)	13.54%
80 – 89 years	41	(2.65%)	692257	(3.98%)	-1.33%
90 – 99 years	5	(0.32%)	127433	(0.73%)	-0.41%
+ 100 years	1	(0.06%)	2398	(0.01%)	0.05%
Education level					
Primary education	7	(0.45%)	1339	(9.41%)	-8.96%
Vmbo (mavo), havo and vwo classes 1, 2 or 3, MBO level 1	90	(5.81%)	2897	(20.35%)	-14.54%
Havo, vwo, mbo level 2, 3 or 4	320	(20.65%)	5314	(37.33%)	-16.68%
Hbo-, wo-bachelor	629	(40.58%)	2963	(20.81%)	19.77%
Hbo-, wo-master, doctor	504	(32.52%)	1723	(12.10%)	20.42%
Provinces					
Drenthe	69	(4.45%)	493682	(2.84%)	1.61%
Gelderland	271	(17.48%)	2085952	(11.98%)	5.50%
Groningen	74	(4.77%)	585866	(3.37%)	1.40%
Flevoland	36	(2.32%)	423021	(2.43%)	-0.11%
Friesland	68	(4.39%)	649957	(3.73%)	0.66%
Limburg	62	(4.00%)	1117201	(6.42%)	-2.42%
Noord-Brabant	210	(13.55%)	2562955	(14.72%)	-1.17%
Noord-Holland	209	(13.48%)	2879527	(16.54%)	-3.06%
Overijssel	111	(7.16%)	1162406	(6.68%)	0.48%
Utrecht	148	(9.55%)	1354834	(7.78%)	1.77%
Zeeland	38	(2.45%)	383488	(2.20%)	0.25%
Zuid-Holland	254	(16.39%)	3708696	(21.31%)	-4.92%
Member or donator					
Member/donator	1200	(77.42%)	705000	(4.05%)	73.37%
Not member/donator	350	(22.58%)	16702585	(95.95%)	-73.37%
Total	**1550**		**17407585**		**99.99%**

Note. Based on (CBS, 2020; CBS, 2021a; CBS, 2021b; CBS, 2021c; Natuurmonumenten, 2020).
In the education level data of the Dutch population are 230 people that don't know their education level, these 230 people are excluded from Table 2 (CBS, 2021a).

Table 3

Comparison socio-demographics sample of 350 people who are not member or donator of NM and Dutch population.

	Sample 350 non-members		**Dutch population**		**Difference sample with Dutch population in percentages**
Gender					
Man	127	(36.28%)	8 759 554	(50.32%)	-14.04
Woman	220	(62.86%)	8 648 031	(49.68%)	13.18
Other	3	(0.85%)	0		0.85
Age					
- 19 years	1	(0.28%)	3775257	(21.69%)	-21.41
20 – 29 years	19	(5.43%)	2233550	(12.83%)	-7.4
30 – 39 years	25	(7.14%)	2147931	(12.34%)	-5.2
40 – 49 years	39	(11.14%)	2208076	(12.68%)	-1.54
50 – 59 years	72	(20.6%)	2532418	(14.55%)	6.05
60 – 69 years	114	(32.57%)	2113846	(12.14%)	20.43
70 – 79 years	74	(21.14%)	1574419	(9.04%)	12.1
80 – 89 years	6	(1.71%)	692257	(3.98%)	- 2.27
90 – 99 years	0	(0%)	127433	(0.73%)	- 0.73
+ 100 years	0	(0%)	2398	(0.01%)	- 0.01
Education level					
Primary education	3	(0.85%)	1339	(9.41%)	-8.56
Vmbo (mavo), havo and vwo classes 1, 2 or 3, MBO level 1	29	(8.28%)	2897	(20.35%)	-12.07
Havo, vwo, mbo level 2, 3 or 4	79	(22.57%)	5314	(37.33%)	-14.76
Hbo-, wo-bachelor	146	(41.71%)	2963	(20.81%)	20.9
Hbo-, wo-master, doctor	93	(26.57%)	1723	(12.10%)	14.47
Provinces					
Drenthe	17	(4.86%)	493682	(2.84%)	2.02
Gelderland	70	(20%)	2085952	(11.98%)	8.02
Groningen	14	(4%)	585866	(3.37%)	0.63
Flevoland	7	(2%)	423021	(2.43%)	-0.43
Friesland	22	(6.28%)	649957	(3.73%)	2.55
Limburg	19	(5.42%)	1117201	(6.42%)	-1
Noord-Brabant	49	(14%)	2562955	(14.72%)	-0.72
Noord-Holland	44	(12.57%)	2879527	(16.54%)	-3.97
Overijssel	32	(9.14%)	1162406	(6.68%)	2.46
Utrecht	27	(7.71%)	1354834	(7.78%)	-0.07
Zeeland	12	(3.42%)	383488	(2.20%)	1.22
Zuid-Holland	37	(10.57%)	3708696	(21.31%)	-10.74
Member or donator					
Member/donator	0	(0%)	705000	(4.05%)	-4.05
Not member/donator	350	(100%)	16702585	(95.95%)	4.05
Total	**350**		**17407585**		**99.99%**

Note. Based on (CBS, 2020; CBS, 2021a; CBS, 2021b; CBS, 2021c; Natuurmonumenten, 2020).
In the education level data of the Dutch population are 230 people that don't know their education level, these 230 people are excluded from Table 3 (CBS, 2021a).

Table 4

Descriptive statistics place attachment items

Items	Frequency distribution		Central tendency			Dispersion				Representation	
	Skewness	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
I feel very connected to the countryside.	-1.730 =	3.63	5.90	6	6.00	1.43	1.20	6	1	.03	5.84-5.96
The countryside means a lot to me.	-2.08	6.09	6.05	6	6.00	1.15	1.07	6	1	.03	6.00-6.11
I identify myself strongly with the countryside.	-.85	.10	5.23	6	6.00	2.18	1.48	6	2	.04	5.16-5.31
The countryside is the best place for leisure activities.	-1.13	1.09	5.50	6	6.00	1.75	1.32	6	1	.03	5.43 - 5.57
There is no place better to recreate in nature than in the countryside.	-.96	.17	5.29	6	6.00	2.29	1.51	6	1	.04	5.21-5.36
No landscape can replace the countryside for my favourite recreational activities.	-.36	-.91	4.57	6	5.00	2.95	1.72	6	3	.04	4.48-4.65
Place attachment mean value	-.99	1.38	5.42	6	5.67	1.17	1.08	6	1.33	.03	5.37 - 5.48

Note. Values were measured on a 7-point scale (1 = Completely disagree, 2 = Disagree, 3 = Slightly disagree, 4 = Neither disagree nor agree, 5 = Slightly agree, 6 = Agree, 7 = Completely agree)

Table 5

Descriptive statistics place respondents spend their youth

Items	Frequency distribution		Central tendency			Dispersion				Representation	
	Skewness	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
Place respondents spend their youth	-.17	-1.11	2.11	2	2.00	.53	.73	2	1	.02	2.07-2.14

Note. Values were measured on a 3-point scale (1 = Large city (+100,000 inhabitants), 2 = Small town or village (10,000 to 100,000 inhabitants), 3 = Rural areas (-10,000 inhabitants).

Table 6

Descriptive statistics knowledge items

Items	Frequency distribution		Central tendency			Dispersion				Representation population	
	Skewness	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
Produce food in a nature-inclusive way	-.25	-.23	3.09	3	3.00	.74	.86	4	1	.02	3.05-3.13
Produce animal feed in a nature-inclusive way	-.06	-.34	2.86	3	3.00	.86	.92	4	1	.02	2.81-2.90
Improve the natural habitat of plants and animals	-.27	.00	3.33	3	3.00	.75	.87	4	1	.02	3.29-3.38
Making landscapes attractive through nature-inclusive agriculture	-.30	-.13	3.34	4	3.00	.75	.86	4	1	.02	3.30-3.38
The regulation of soil fertility	-.12	-.21	3.01	3	3.00	.81	.90	4	2	.02	2.97-3.06
Regulation of water	-.19	-.16	3.05	3	3.00	.81	.90	4	1	.02	3.01-3.10
The use of natural pollination	-.24	.00	3.27	3	3.00	.72	.85	4	1	.02	3.23-3.31
Not used for measuring the construct of knowledge											
The use of natural pesticides	-.13	.05	3.10	3	3.00	.74	.86	4	1	.02	3.06 - 3.14
Knowledge mean items	-.20	-.11	3.14	3	3.14	.54	.74	4	1	.02	3.10 - 3.17

Note. Values were measured on a 5-point scale (1 = Very small amount of knowledge, 2 = Small amount of knowledge, 3 = Not small or high amount of knowledge, 4 = High amount of knowledge, 5 = Very high amount of knowledge). N= 1550.

Table 7

Descriptive statistics of the attitude strength items

Items	Frequency distribution		Central tendency			Dispersion				Representation	
	Skew	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
Creating a more sustainable future	-.96	1.30	1.39	2	1	.44	.66	4	1	.02	1.36 - 1.43
A change in the landscape	-1.27	2.62	1.35	2	1	.52	.72	4	1	.02	1.31 - 1.39
A change in the number of wild animals and plants	-1.15	1.87	1.36	2	1	.51	.71	4	1	.02	1.32 - 1.39
Belief strength	-1.12	2.12	1.33	2	1.33	.3	.62	4	1	.02	1.34 - 1.40
Not used for measuring the construct of attitude											
Higher costs for me as a person	-.90	1.81	.96	1	1.00	.49	.70	4	0	.02	.92 - .99
Choice of fewer different products	-.98	1.12	.88	1	1.00	.66	.81	4	0	.02	.84 - .92
Choice of more “healthy” products	-1.04	2.04	1.32	1	1.00	.48	.69	4	1	.02	1.28 - 1.35

Note. Values were measured on a 5-point scale (-2 = Completely unlikely, -1 = Unlikely, 0 = Not likely or unlikely, 1 = Likely, 2 = Completely likely). N= 1550.

Table 8

Descriptive statistics of the attitude subjective evaluation items

Items	Frequency distribution		Central tendency			Dispersion				Representation	
	Skew	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
Subjective evaluation: Creating a more sustainable future	-2.20	5.46	1.74	2	2	.28	.53	4	0	.01	1.71 - 1.77
Subjective evaluation: A change in the landscape	-2.41	7.48	1.72	2	2	.31	.56	4	0	.01	1.69 - 1.75
Subjective evaluation: A change in the number of wild animals and plants	-2.69	8.85	1.75	2	2	.31	.56	4	0	.01	1.72 - 1.78
Subjective evaluation	-2.45	8.06	1.73	2	2.00	.24	.49	4	.33	.01	1.71 - 1.76
Not used for measuring the construct of attitude											
Higher costs for me as a person	-.68	.35	.85	1	1.00	.73	.85	4	1	.02	.80 - .89
Choice of fewer different products	-.68	.75	1.11	1	1.00	.52	.72	4	1	.02	1.07 - 1.14
Choice of more “healthy” products	-1.53	3.09	1.61	2	2.00	.35	.59	4	1	.01	1.58 - 1.64

Note. Values were measured on a 5-point scale (-2 = Completely unlikely, -1 = Unlikely, 0 = Not likely or unlikely, 1 = Likely, 2 = Completely likely). N= 1550.

Table 9

Descriptive statistics attitude

Item	Frequency distribution		Central tendency			Dispersion				Representation	
	Skew	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
Attitude construct	-.54	-.30	7.61	12	8	15.40	3.92	2	7	. 01	7.42-7.81

Note. Construct based on expectancy value method, scale -12 to 12.

Table 10

Descriptive statistics intention items

Items	Frequency distribution		Central tendency			Dispersion				Representation	
	Skewness	Kurtosis	Mean	Mode	Median	Variance	Std. deviation	Range	Inter. range	Std. error mean	95% CI mean
Via my purchasing behaviour	-1.01	1.79	4.23	4	4.00	.55	.74	4	1	.02	4.19 - 4.26
Do voluntary work	.32	-.45	2.84	3	3.00	1.09	1.04	4	1	.03	2.79-2.89
Contribute to ecological monitoring	-.07	-.74	3.27	3	3.00	1.12	1.06	4	2	.03	3.21-3.32
Become a member of a nature organizations	-.92	.36	4.05	5	4.00	.95	.98	4	2	.02	4.00-4.10
Participate in policy processes	.25	-.53	2.80	2	3.00	1.07	1.03	4	2	.03	2.75-2.85
Via my political voting behaviour	-1.34	1.81	4.31	5	5.00	.76	.87	4	1	.02	4.27-4.35
Adopt a product of at a nature inclusive organisation	-.163	-.467	3.35	3	3.00	.986	.993	4	1	.02	3.30-3.40
Organizing or joining a citizens' initiative	.206	-.555	2.92	3	3.00	1.155	1.075	4	2	0.3	2.87-2.97
Organizing or participating in actions that attempt to influence the politics and policies of governments or companies	-.117	-.918	3.17	3	3.00	1.406	1.186	4	2	.03	3.11-3.23
Organizing or joining social enterprises	.268	-.208	2.79	3	3.00	.969	.984	4	1	.02	2.74-2.84
Contributing to NiA in general											
Contributing to NiA	-.81	1.07	4.04	4	4.00	.652	.808	4	1	.021	4.00 - 4.08
Intention construct	-.31	.54	3.50	3.50	3.50	.364	.60	4.00	.83	.015	3.47-3.53
Intention private contribution	-1.07	1.70	4.12	4.33	4.33	.45	.67	4.00	.67	.017	4.16 - 4.23
Intention group contribution	.20	-.17	2.81	3	2.67	.62	.79	4.00	1.00	.012	2.78 - 2.85

Note. Values were measured on a 5-point scale (1 = Completely unlikely, 2 = Unlikely, 3 = Not likely or unlikely, 4 = Likely, 5 = Completely likely). N= 1550.

Appendix 7: Assumptions parametric tests

Field (2014) describes four forms of assumptions that can cause bias for parametric tests. These assumptions for parametric tests are independence, normality, linearity, and homoscedasticity of variance.

Independence. The observations between and within the sample are independent as the respondents were not influenced by each other or related measurements or other subjects (Field, 2014). In addition, the Durbin-Watson static shows whether the assumption of independent errors is met. Field (2014) suggests that these values need to be between 1 and 3. The Durban Watson values are all between 1.874 and 1.909, which substantiates that the assumption of independence has been met.

Linearity. There is linearity when there is no curve visible from the dots in the ZRESID vs ZPRED graph. No curves are visible in the scatterplots of Figure 1 till 6, so linearity is not a problem for study variables. In addition, Pearson's r and Spearman's correlations (see Appendix 8) also showed significant linear relationships between the study variables. Only for the mediating variable "environment youth" where no significant or sufficient correlations found, therefore, these variable is not included in the regression analysis as linearity is required.

Homoscedasticity. The scatterplot of standardised residuals (*ZRESID) and standardised predicted values (*ZPRED) shows the homoscedasticity and linearity of residuals. Homoscedasticity is reached when there is no systematic relationship between errors (random array of dots) (Field, 2014). The scatterplots, including the attitude as the dependent variable, are slightly skewed to the upper or right side, but the dots are still random.

Normality. According to Field (2014), normality is not important in a large sample due to the probability theory "central limit theorem". This probability theory states that the sample distribution approximates a normal distribution when the sample size becomes larger. Therefore, normality is not considered a problem for this study as the sample size is considered large (N=1550). Nevertheless, normality is double-checked by analysing the *Probability-Probability plot* (P-P plot) and the histogram of the regression analysis. When the dots of the P-P plot come close to the straight line, normality could be assumed. The dots in the P-P plots with attitude as the dependent variable are slightly skewed to the left, indicating non-normality. Thus, there is some concern whether the attitude values have violated the assumption of normality.

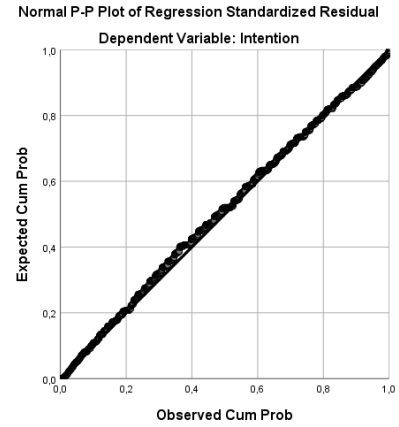
Bootstrapping

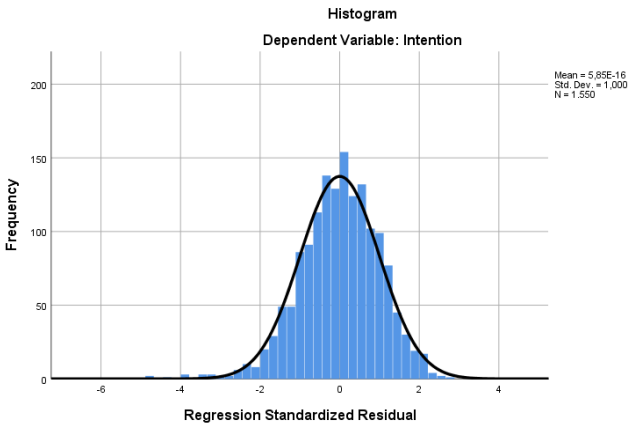
To overcome the concerns around the assumptions of normality and homoscedasticity, bootstrapping is performed, a resampling technique that estimates statistics on a population by sampling a dataset with replacement. Bootstrap confidence intervals and significance values not rely on normality and homoscedasticity and therefore give an accurate estimate of the true population value of b for each predictor (Field, 2014). Bootstrapping is performed for all analyses. The bias-corrected and accelerated (BCa) confidence intervals are used as these are more accurate than the 95% percentile confidence intervals, which are computed through SPSS (Tibshirani & Efron, 1993). All in all, parametric tests were used for this study as no assumption is violated by the use of bootstrapping, and the statistical expert advised it (P. Runhaar, personal communication, May 26, 2021).

Regression plots: independent knowledge and dependent intention

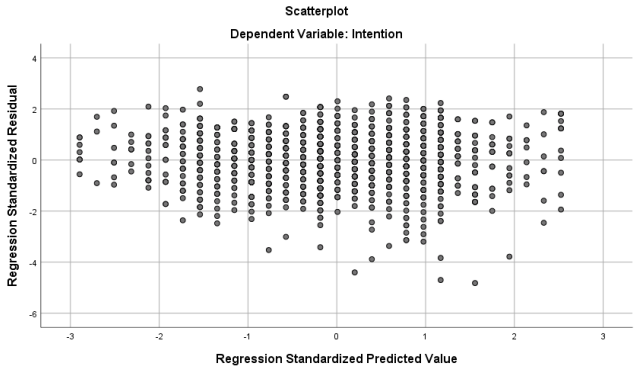
Durban Watson value: 1.874

P-P plot and histogram:





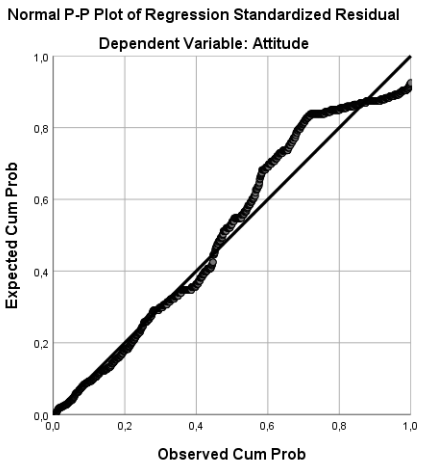
*ZRESID vs. *ZPRED graph:

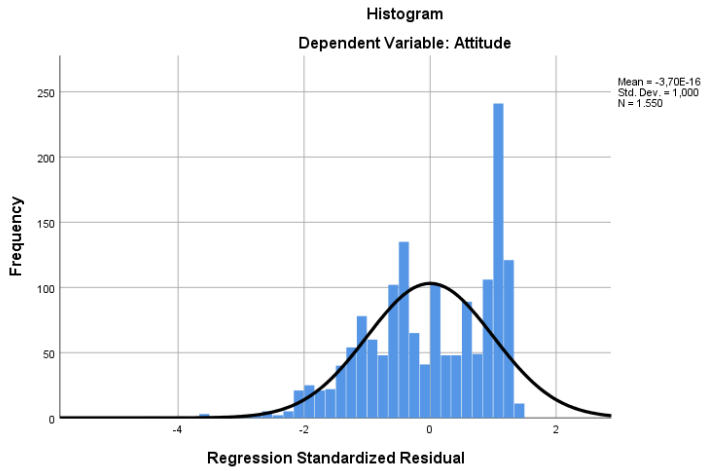


Regression plots: independent knowledge and dependent attitude

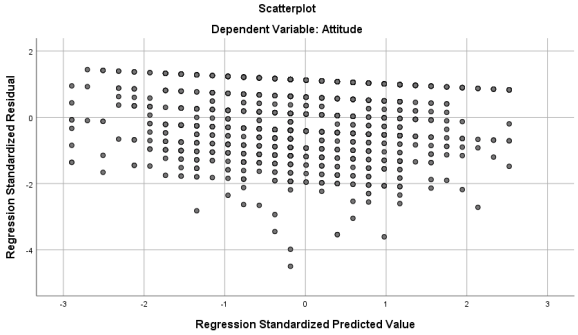
Durban Watson value: 1.889

P-P plot and histogram:





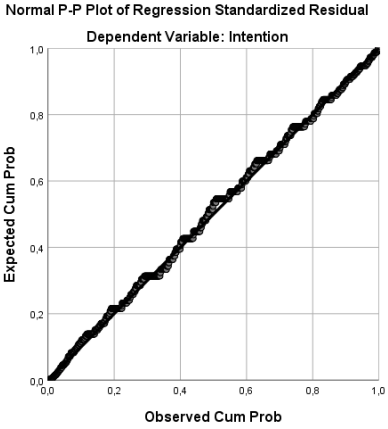
*ZRESID vs. *ZPRED graph:

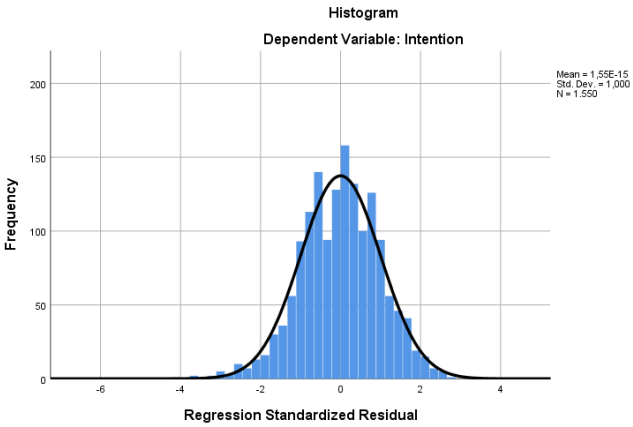


Regression plots: independent attitude and dependent intention

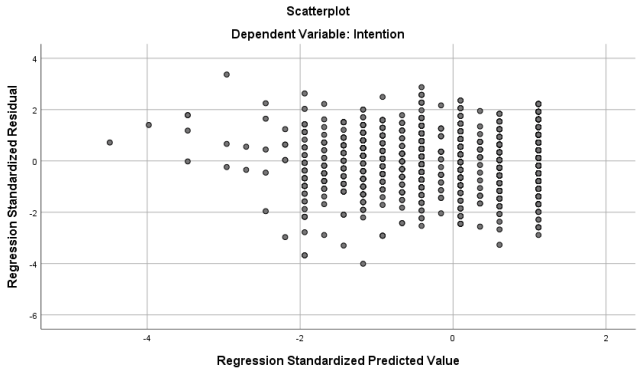
Durban Watson value: 1.909

P-P plot and histogram:





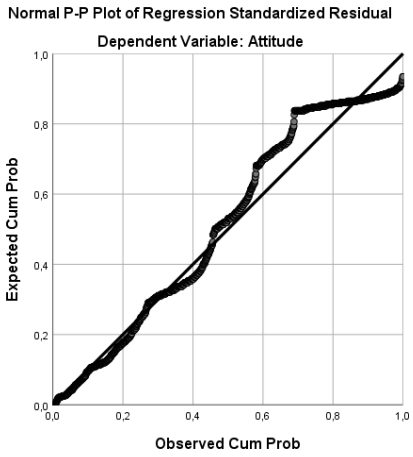
*ZRESID vs. *ZPRED graph:

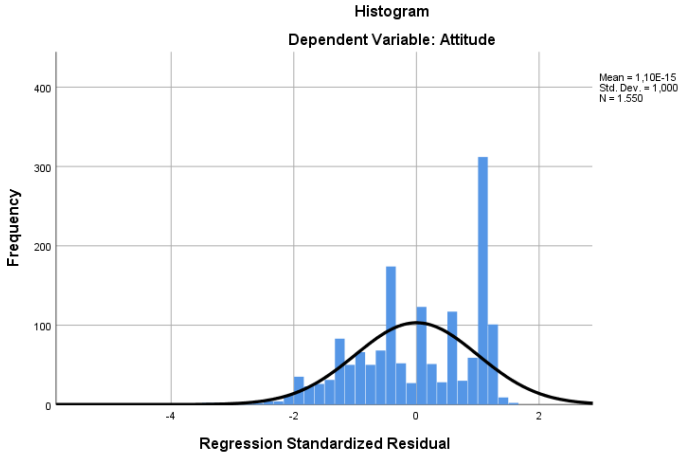


Regression plots: independent place attachment and dependent attitude

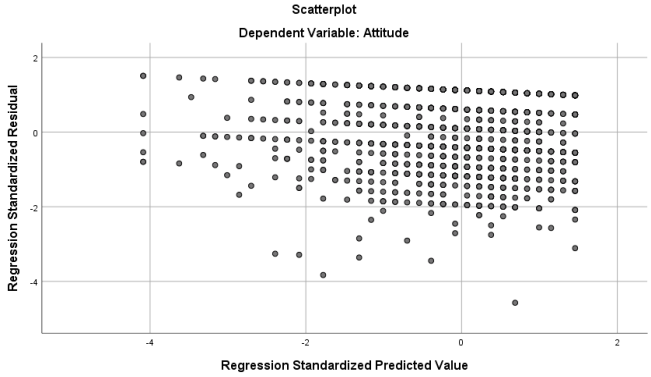
Durban Watson value: 1.901

P-P plot and histogram:





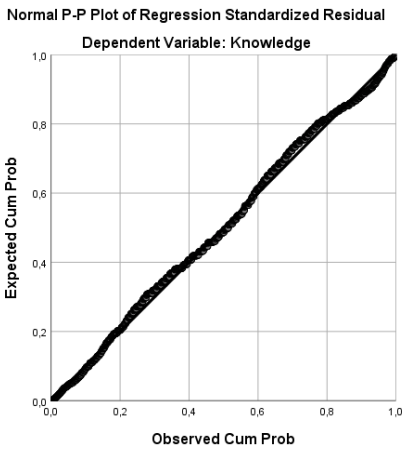
*ZRESID vs. *ZPRED graph:

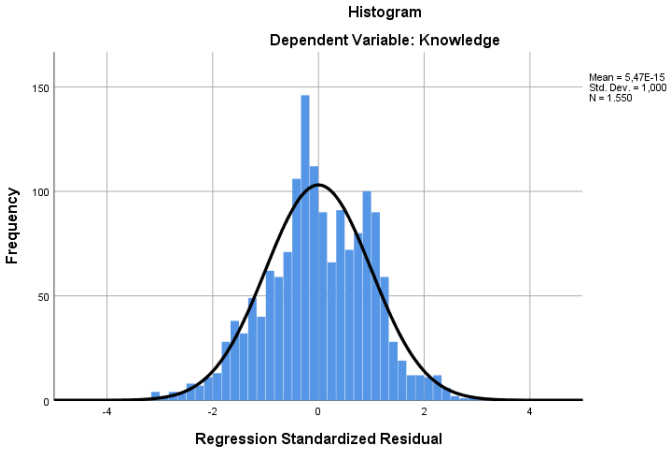


Regression plots: independent place attachment and dependent knowledge

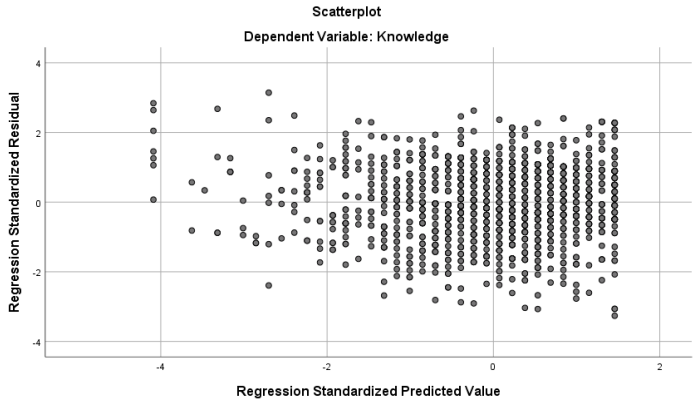
Durban Watson value: 1.934

P-P plot and histogram:





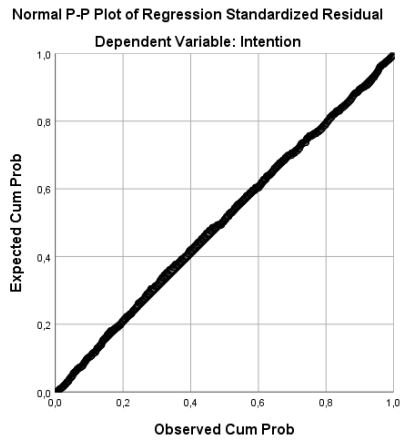
*ZRESID vs. *ZPRED graph:

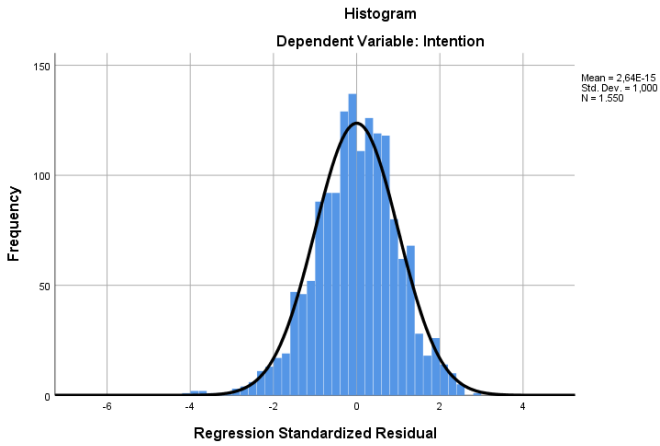


Regression plots: independent place attachment and dependent intention

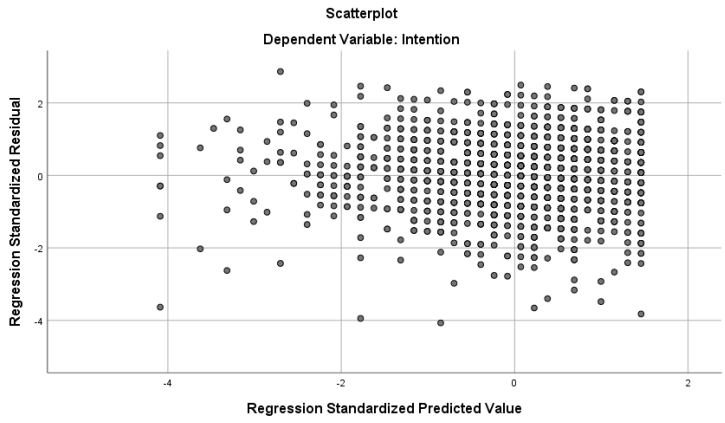
Durban Watson value: 1.891

P-P plot and histogram:





*ZRESID vs. *ZPRED graph:



Appendix 8: Correlation analyses

Pearson correlations

				Knowledge	Attitude	Intention	Place attachment	Age
Knowledge	Pearson Correlation			1	,116**	,295**	,204**	,129**
	Sig. (2-tailed)				,000	,000	,000	,000
	N			1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		0	,000	,000	,001	,000
		Std. Error		0	,025	,026	,028	,029
		BCa 95% Confidence Interval	Lower	.	,067	,240	,146	,073
			Upper	.	,166	,347	,263	,184
Attitude	Pearson Correlation			,116**	1	,394**	,094**	-,034
	Sig. (2-tailed)			,000		,000	,000	,180
	N			1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,000	0	,000	,000	,002
		Std. Error		,025	0	,022	,025	,026
		BCa 95% Confidence Interval	Lower	,067	.	,353	,046	-,093
			Upper	,166	.	,435	,144	,025
Intention	Pearson Correlation			,295**	,394**	1	,133**	-,029
	Sig. (2-tailed)			,000	,000		,000	,260
	N			1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,000	,000	0	,000	,000
		Std. Error		,026	,022	0	,027	,025
		BCa 95% Confidence Interval	Lower	,240	,353	.	,084	-,076
			Upper	,347	,435	.	,184	,021
Place attachment	Pearson Correlation			,204**	,094**	,133**	1	,129**
	Sig. (2-tailed)			,000	,000	,000		,000
	N			1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,001	,000	,000	0	,000
		Std. Error		,028	,025	,027	0	,027
		BCa 95% Confidence Interval	Lower	,146	,046	,084	.	,074
			Upper	,263	,144	,184	.	,180
Age	Pearson Correlation			,129**	-,034	-,029	,129**	1
	Sig. (2-tailed)			,000	,180	,260	,000	
	N			1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,000	,002	,000	,000	0
		Std. Error		,029	,026	,025	,027	0
		BCa 95% Confidence Interval	Lower	,073	-,093	-,076	,074	.
			Upper	,184	,025	,021	,180	.

**. Correlation is significant at the 0.01 level (2-tailed).

c. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Spearmans rho correlations

				Knowledge	Attitude	Intention	Place attachment	Place youth	Gender	Member or donator of NM	Age	Education level
Spearman's rho	Knowledge	Correlation Coefficient		1,000	,134**	,303**	,234**	,092**	-,200**	,024	,133**	,037
		Sig. (2-tailed)		.	,000	,000	,000	,000	,000	,345	,000	,148
		N		1550	1550	1550	1550	1550	1550	1550	1550	1550
		Bootstrap[c]	Bias	,000	,000	,000	,000	,000	-,001	,001	,001	,000
			Std. Error	,000	,025	,025	,024	,025	,025	,026	,026	,026
			BCa 95% Confidence Interval	Lower	.	,087	,252	,189	,040	-,247	-,028	,082	-,018
				Upper	.	,185	,351	,278	,136	-,152	,080	,185	,090
	Attitude	Correlation Coefficient		,134**	1,000	,388**	,101**	-,030	,037	-,091**	-,055*	,130**
		Sig. (2-tailed)		,000	.	,000	,000	,238	,140	,000	,030	,000
		N		1550	1550	1550	1550	1550	1550	1550	1550	1550
		Bootstrap[c]	Bias	,000	,000	,000	,000	,000	,000	-,002	,001	-,001
			Std. Error	,025	,000	,022	,025	,025	,025	,027	,026	,025
			BCa 95% Confidence Interval	Lower	,087	.	,346	,052	-,080	-,015	-,145	-,107	,079
				Upper	,185	.	,428	,153	,019	,092	-,050	-,004	,177
	Intention	Correlation Coefficient		,303**	,388**	1,000	,133**	-,009	-,026	-,179**	-,037	,168**
		Sig. (2-tailed)		,000	,000	.	,000	,713	,314	,000	,142	,000
		N		1550	1550	1550	1550	1550	1550	1550	1550	1550
		Bootstrap[c]	Bias	,000	,000	,000	,000	-,001	,001	-,002	,001	,000
			Std. Error	,025	,022	,000	,026	,026	,026	,025	,025	,025
			BCa 95% Confidence Interval	Lower	,252	,346	.	,080	-,059	-,076	-,226	-,087	,115
				Upper	,351	,428	.	,183	,042	,029	-,134	,014	,216
	Place attachment	Correlation Coefficient		,234**	,101**	,133**	1,000	,227**	-,030	,040	,114**	-,151**
		Sig. (2-tailed)		,000	,000	,000	.	,000	,242	,112	,000	,000
		N		1550	1550	1550	1550	1550	1550	1550	1550	1550
		Bootstrap[c]	Bias	,000	,000	,000	,000	-,001	,000	-,002	,000	,000
			Std. Error	,024	,025	,026	,000	,024	,026	,026	,025	,025
				Lower	,189	,052	,080	.	,180	-,079	-,006	,061	-,203

		BCa 95% Confidence Interval	Upper	,278	,153	,183	.	,274	,022	,084	,161	-,101
Place youth	Correlation Coefficient			,092**	-,030	-,009	,227**	1,000	-,063*	,060*	-,057*	-,076**
	Sig. (2-tailed)			,000	,238	,713	,000	.	,012	,019	,024	,003
	N			1550	1550	1550	1550	1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,000	,000	-,001	-,001	,000	,000	-,001	-,001	,000
		Std. Error		,025	,025	,026	,024	,000	,025	,025	,025	,024
		BCa 95% Confidence Interval	Lower	,040	-,080	-,059	,180	.	-,112	,012	-,107	-,123
			Upper	,136	,019	,042	,274	.	-,016	,109	-,010	-,028
Gender	Correlation Coefficient			-,200**	,037	-,026	-,030	-,063*	1,000	,016	-,199**	,008
	Sig. (2-tailed)			,000	,140	,314	,242	,012	.	,539	,000	,765
	N			1550	1550	1550	1550	1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		-,001	,000	,001	,000	,000	,000	-,002	,001	,000
		Std. Error		,025	,025	,026	,026	,025	,000	,025	,026	,026
		BCa 95% Confidence Interval	Lower	-,247	-,015	-,076	-,079	-,112	.	-,035	-,251	-,048
			Upper	-,152	,092	,029	,022	-,016	.	,060	-,147	,065
Member or donator of NM	Correlation Coefficient			,024	-,091**	-,179**	,040	,060*	,016	1,000	-,046	-,080**
	Sig. (2-tailed)			,345	,000	,000	,112	,019	,539	.	,071	,002
	N			1550	1550	1550	1550	1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,001	-,002	-,002	-,002	-,001	-,002	,000	,000	-,002
		Std. Error		,026	,027	,025	,026	,025	,025	,000	,025	,025
		BCa 95% Confidence Interval	Lower	-,028	-,145	-,226	-,006	,012	-,035	.	-,096	-,123
			Upper	,080	-,050	-,134	,084	,109	,060	.	,000	-,038
Age	Correlation Coefficient			,133**	-,055*	-,037	,114**	-,057*	-,199**	-,046	1,000	-,151**
	Sig. (2-tailed)			,000	,030	,142	,000	,024	,000	,071	.	,000
	N			1550	1550	1550	1550	1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,001	,001	,001	,000	-,001	,001	,000	,000	,001
		Std. Error		,026	,026	,025	,025	,025	,026	,025	,000	,025
			Lower	,082	-,107	-,087	,061	-,107	-,251	-,096	.	-,200

		BCa 95% Confidence Interval	Upper	,185	-,004	,014	,161	-,010	-,147	,000	.	-,099
Education level	Correlation Coefficient			,037	,130**	,168**	-,151**	-,076**	,008	-,080**	-,151**	1,000
	Sig. (2-tailed)			,148	,000	,000	,000	,003	,765	,002	,000	.
	N			1550	1550	1550	1550	1550	1550	1550	1550	1550
	Bootstrap[c]	Bias		,000	-,001	,000	,000	,000	,000	-,002	,001	,000
		Std. Error		,026	,025	,025	,025	,024	,026	,025	,025	,000
		BCa 95% Confidence Interval	Lower	-,018	,079	,115	-,203	-,123	-,048	-,123	-,200	.
			Upper	,090	,177	,216	-,101	-,028	,065	-,038	-,099	.

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

c. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Appendix 9: Simple regression analyses

Simple regression with independent variable knowledge and dependent variable intention:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					
					R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	,295[a]	,087	,086	,57681	,087	147,362	1	1548	,000	1,874

a. Predictors: (Constant), Mean scores knowledge

b. Dependent Variable: MeanIntention

Bootstrap for Model Summary

Model	Durbin-Watson	Bootstrap[a]			
		Bias	Std. Error	BCa 95% Confidence Interval	
				Lower	Upper
1	1,874	-,692	,050	.	.

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49,029	1	49,029	147,362	,000[b]
	Residual	515,035	1548	,333		
	Total	564,064	1549			

a. Dependent Variable: MeanIntention

b. Predictors: (Constant), Mean scores knowledge

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2,747	,064		42,926	,000	2,622	2,873					
	Mean scores knowledge	,241	,020	,295	12,139	,000	,202	,280	,295	,295	,295	1,000	1,000

a. Dependent Variable: MeanIntention

Bootstrap for Coefficients

Model		Bootstrap[a]					
						BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	2,747	-,002	,067	,001	2,619	2,868
	Mean scores knowledge	,241	,000	,022	,001	,198	,284

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Simple regression with independent variable knowledge and dependent variable attitude:

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	,116[a]	,014	,013	3,89859	,014	21,189	1	1548	,000	1,889

a. Predictors: (Constant), Mean scores knowledge

b. Dependent Variable: Mean scores attitude

Bootstrap for Model Summary

Model	Durbin-Watson	Bootstrap[a]			
				BCa 95% Confidence Interval	
		Bias	Std. Error	Lower	Upper
1	1,889	-,683	,045	.	.

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	322,056	1	322,056	21,189	,000[b]
	Residual	23528,074	1548	15,199		
	Total	23850,130	1549			

a. Dependent Variable: Mean scores attitude

b. Predictors: (Constant), Mean scores knowledge

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	5,679	,433		13,129	,000	4,831	6,528					

	Mean scores knowledge	,618	,134	,116	4,603	,000	,355	,881	,116	,116	,116	1,000	1,000

a. Dependent Variable: Mean scores attitude

Bootstrap for Coefficients

Model			Bootstrap[a]				
						BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	5,679	-,004	,426	,001	4,750	6,488
	Mean scores knowledge	,618	,001	,133	,001	,377	,882

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Simple regression with independent variable attitude and dependent variable intention

Model Summary[b]

Model					Change Statistics					
	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	,394[a]	,155	,155	,55474	,155	284,921	1	1548	,000	1,909

a. Predictors: (Constant), Mean scores attitude

b. Dependent Variable: MeanIntention

Bootstrap for Model Summary

Model		Bootstrap[a]			
				BCa 95% Confidence Interval	
	Durbin-Watson	Bias	Std. Error	Lower	Upper
1	1,909	-,698	,050	.	.

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87,682	1	87,682	284,921	,000[b]
	Residual	476,382	1548	,308		
	Total	564,064	1549			

a. Dependent Variable: MeanIntention

b. Predictors: (Constant), Mean scores attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	3,042	,031		98,829	,000	2,981	3,102					
	Mean scores attitude	,061	,004	,394	16,880	,000	,054	,068	,394	,394	,394	1,000	1,000

a. Dependent Variable: MeanIntention

Bootstrap for Coefficients

Model		B	Bootstrap[a] Bias	Std. Error	Sig. (2-tailed)	BCa 95% Confidence Interval Lower	Upper
1	(Constant)	3,042	,001	,034	,001	2,973	3,113
	Mean scores attitude	,061	,000	,004	,001	,053	,068

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Simple regression analysis with independent variable place attachment and dependent variable intention:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Place attachment construct[b]	.	Enter

a. Dependent Variable: Intention construct

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,133[a]	,018	,017	,59825

a. Predictors: (Constant), Place attachment construct

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	10,021	1	10,021	27,999	,000[b]
	Residual	554,043	1548	,358		
	Total	564,064	1549			

a. Dependent Variable: Intention construct

b. Predictors: (Constant), Place attachment construct

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	3,100	,078		39,902	,000
	Place attachment construct	,074	,014	,133	5,291	,000

a. Dependent Variable: Intention construct

Bootstrap for Coefficients

Model		B	Bootstrap[a] Bias	Bootstrap[a] Std. Error	Bootstrap[a] Sig. (2-tailed)	Bootstrap[a] BCa 95% Confidence Interval Lower	Bootstrap[a] BCa 95% Confidence Interval Upper
1	(Constant)	3,100	,002	,086	,001	2,936	3,270
	Place attachment construct	,074	,000	,016	,001	,043	,103

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Simple regression analysis with independent variable education level and dependent variable intention:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	EducationLevel[b]	.	Enter

a. Dependent Variable: Intent

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,180[a]	,033	,032	,59375

a. Predictors: (Constant), EducationLevel

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	18,342	1	18,342	52,030	,000[b]
	Residual	545,721	1548	,353		

	Total	564,064	1549			

a. Dependent Variable: Intent

b. Predictors: (Constant), EducationLevel

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,020	,069		43,923	,000
	EducationLevel	,121	,017	,180	7,213	,000

a. Dependent Variable: Intent

Bootstrap for Coefficients

Model			Bootstrap[a]				
						BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	3,020	,003	,075	,001	2,872	3,175
	EducationLevel	,121	-,001	,018	,001	,088	,153

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Simple regression analysis with independent variable knowledge and dependent variable place attachment:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Placeatt[b]	.	Enter

a. Dependent Variable: Knowl

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,204[a]	,042	,041	,723

a. Predictors: (Constant), Placeatt

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	35,271	1	35,271	67,552	,000[b]
	Residual	808,267	1548	,522		
	Total	843,538	1549			

a. Dependent Variable: Knowl

b. Predictors: (Constant), Placeatt

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	2,381	,094		25,366	,000
	Placeatt	,139	,017	,204	8,219	,000

a. Dependent Variable: Knowl

Bootstrap for Coefficients

Model		B	Bootstrap[a] Bias	Bootstrap[a] Std. Error	Bootstrap[a] Sig. (2-tailed)	Bootstrap[a] BCa 95% Confidence Interval Lower	Bootstrap[a] BCa 95% Confidence Interval Upper
1	(Constant)	2,381	-,004	,108	,001	2,163	2,585
	Placeatt	,139	,001	,020	,001	,101	,181

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Simple regression analysis with independent variable attitude and dependent variable education level:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Attitude[b]	.	Enter

a. Dependent Variable: EducationLevel

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,140[a]	,020	,019	,889

a. Predictors: (Constant), Attitude

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24,377	1	24,377	30,869	,000[b]
	Residual	1222,436	1548	,790		
	Total	1246,814	1549			

a. Dependent Variable: EducationLevel

b. Predictors: (Constant), Attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,746	,049		75,970	,000
	Attitude	,032	,006	,140	5,556	,000

a. Dependent Variable: EducationLevel

Bootstrap for Coefficients

Model			Bootstrap[a]				
						BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	3,746	,003	,052	,001	3,643	3,856
	Attitude	,032	,000	,006	,001	,020	,044

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Appendix 10: Multiple regression analyses

Multiple regression analysis with independent variable knowledge, dependent variable intention, mediating variable attitude:

The correlation matrix of the multiple regression output shows that there is no multicollinearity as there are no substantial correlations (r > .9) between the independent variables knowledge and attitude. Furthermore, the Variance Inflation Factor (VIF) values are all well below 10, the tolerance statistics are all above 0.2 and no variable has higher variance proportions than the highest eigenvalue which indicates that there is no collinearity within the data (Field, 2014). The significant F-ratio of the ANOVA output shows that both models significantly improved the ability to predict the dependent variable compared to not fitting the model.

Descriptive Statistics

			Bootstrap[a]			
					BCa 95% Confidence Interval	
		Statistic	Bias	Std. Error	Lower	Upper
MeanIntention	Mean	3,5035	-,0007	,0151	3,4733	3,5309
	Std. Deviation	,60345	-,00070	,01224	,58208	,62478
	N	1550	0	0	.	.
Mean scores knowledge	Mean	3,14	,00	,02	3,10	3,17
	Std. Deviation	,738	-,001	,013	,713	,761
	N	1550	0	0	.	.
Mean scores attitude	Mean	7,6174	,0001	,1021	7,4239	7,8083
	Std. Deviation	3,92392	-,00005	,06459	3,80153	4,05124
	N	1550	0	0	.	.

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Model Summary[c]

					Change Statistics					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	,295[a]	,087	,086	,57681	,087	147,362	1	1548	,000	
2	,467[b]	,218	,217	,53387	,131	260,002	1	1547	,000	1,927

a. Predictors: (Constant), Mean scores knowledge

b. Predictors: (Constant), Mean scores knowledge , Mean scores attitude

c. Dependent Variable: MeanIntention

Bootstrap for Model Summary

		Bootstrap[a]		
Model	Durbin-Watson	Bias	Std. Error	BCa 95% Confidence Interval

				Lower	Upper
2	1,927	-,710	,050	.	.

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49,029	1	49,029	147,362	,000[b]
	Residual	515,035	1548	,333		
	Total	564,064	1549			
2	Regression	123,135	2	61,568	216,010	,000[c]
	Residual	440,929	1547	,285		
	Total	564,064	1549			

a. Dependent Variable: MeanIntention

b. Predictors: (Constant), Mean scores knowledge

c. Predictors: (Constant), Mean scores knowledge , Mean scores attitude

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients			95,0% Confidence Interval for B		Correlations			Collinearity Statistics	
		B	Std. Error	Beta	t	Sig.	Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF
1	(Constant)	2,747	,064		42,926	,000	2,622	2,873					
	Mean scores knowledge	,241	,020	,295	12,139	,000	,202	,280	,295	,295	,295	1,000	1,000
2	(Constant)	2,429	,062		38,890	,000	2,306	2,551					
	Mean scores knowledge	,206	,019	,252	11,153	,000	,170	,243	,295	,273	,251	,986	1,014
	Mean scores attitude	,056	,003	,365	16,125	,000	,049	,063	,394	,379	,362	,986	1,014

a. Dependent Variable: MeanIntention

Bootstrap for Coefficients

Model		Bootstrap[a]					
						BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper

1	(Constant)	2,747	-,001	,065	,001	2,622	2,873
	Mean scores knowledge	,241	,000	,021	,001	,196	,283
2	(Constant)	2,429	7,613E-5	,062	,001	2,310	2,552
	Mean scores knowledge	,206	,000	,020	,001	,168	,245
	Mean scores attitude	,056	-3,399E-5	,004	,001	,049	,064

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics: Tolerance	Collinearity Statistics: VIF	Collinearity Statistics: Minimum Tolerance
1	Mean scores attitude	,365[b]	16,125	,000	,379	,986	1,014	,986

a. Dependent Variable: MeanIntention

b. Predictors in the Model: (Constant), Mean scores knowledge

Collinearity Diagnostics[a]

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions: (Constant)	Variance Proportions: Mean scores knowledge	Variance Proportions: Mean scores attitude
1	1	1,973	1,000	,01	,01	
	2	,027	8,621	,99	,99	
2	1	2,827	1,000	,01	,01	,02
	2	,146	4,395	,04	,07	,96
	3	,026	10,393	,95	,93	,02

a. Dependent Variable: MeanIntention

Multiple Regression with independent variable attitude, dependent intention and mediating variable education level:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Attitude[b]	.	Enter
2	EducationLevel[b]	.	Enter

a. Dependent Variable: Intent

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,394[a]	,155	,155	,55474

2	,414[b]	,171	,170	,54965

a. Predictors: (Constant), Attitude

b. Predictors: (Constant), Attitude, EducationLevel

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	87,682	1	87,682	284,921	,000[b]
	Residual	476,382	1548	,308		
	Total	564,064	1549			
2	Regression	96,700	2	48,350	160,040	,000[c]
	Residual	467,364	1547	,302		
	Total	564,064	1549			

a. Dependent Variable: Intent

b. Predictors: (Constant), Attitude

c. Predictors: (Constant), Attitude, EducationLevel

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3,042	,031		98,829	,000
	Attitude	,061	,004	,394	16,880	,000
2	(Constant)	2,720	,066		41,019	,000
	Attitude	,058	,004	,376	16,105	,000
	EducationLevel	,086	,016	,128	5,464	,000

a. Dependent Variable: Intent

Bootstrap for Coefficients

Model		B	Bootstrap[a]				
			Bias	Std. Error	Sig. (2-tailed)	BCa 95% Confidence Interval Lower	Upper
1	(Constant)	3,042	,000	,034	,001	2,972	3,103
	Attitude	,061	-2,178E-5	,004	,001	,053	,068
2	(Constant)	2,720	-,003	,070	,001	2,586	2,847
	Attitude	,058	-3,798E-5	,004	,001	,050	,065
	EducationLevel	,086	,001	,016	,001	,055	,120

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	EducationLevel	,128[b]	5,464	,000	,138	,980

a. Dependent Variable: Intent

b. Predictors in the Model: (Constant), Attitude

Multiple Regression independent variable knowledge, dependent variable intention and mediating variables attitude and place attachment:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Knowl[b]	.	Enter
2	Attitude[b]	.	Enter
3	Placeatt[b]	.	Enter

a. Dependent Variable: Intent

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,295[a]	,087	,086	,57681
2	,467[b]	,218	,217	,53387
3	,470[c]	,221	,219	,53324

a. Predictors: (Constant), Knowl

b. Predictors: (Constant), Knowl, Attitude

c. Predictors: (Constant), Knowl, Attitude, Placeatt

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	49,029	1	49,029	147,362	,000[b]
	Residual	515,035	1548	,333		
	Total	564,064	1549			
2	Regression	123,135	2	61,568	216,010	,000[c]

	Residual	440,929	1547	,285		
	Total	564,064	1549			
3	Regression	124,465	3	41,488	145,908	,000[d]
	Residual	439,599	1546	,284		
	Total	564,064	1549			

a. Dependent Variable: Intent

b. Predictors: (Constant), Knowl

c. Predictors: (Constant), Knowl, Attitude

d. Predictors: (Constant), Knowl, Attitude, Placeatt

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	2,747	,064		42,926	,000
	Knowl	,241	,020	,295	12,139	,000
2	(Constant)	2,429	,062		38,890	,000
	Knowl	,206	,019	,252	11,153	,000
	Attitude	,056	,003	,365	16,125	,000
3	(Constant)	2,307	,084		27,509	,000
	Knowl	,198	,019	,243	10,527	,000
	Attitude	,056	,003	,361	15,946	,000
	Placeatt	,028	,013	,050	2,163	,031

a. Dependent Variable: Intent

Bootstrap for Coefficients

Model			Bootstrap[a]				
						BCa 95% Confidence Interval	
		B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper
1	(Constant)	2,747	,003	,064	,001	2,621	2,878
	Knowl	,241	-,001	,020	,001	,200	,280
2	(Constant)	2,429	,001	,064	,001	2,301	2,556
	Knowl	,206	-,001	,019	,001	,168	,243
	Attitude	,056	,000	,004	,001	,048	,065
3	(Constant)	2,307	,004	,090	,001	2,141	2,497
	Knowl	,198	-,001	,020	,001	,161	,235
	Attitude	,056	,000	,004	,001	,047	,064
	Placeatt	,028	-,001	,014	,051	,001	,053

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Attitude	,365[b]	16,125	,000	,379	,986
	Placeatt	,076[b]	3,079	,002	,078	,958
2	Placeatt	,050[c]	2,163	,031	,055	,953

a. Dependent Variable: Intent

b. Predictors in the Model: (Constant), Knowl

c. Predictors in the Model: (Constant), Knowl, Attitude

Multiple Regression independent variable knowledge, dependent variable intention and mediating variables place attachment:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method
1	Intention construct[b]	.	Enter
2	Placeatt[b]	.	Enter

a. Dependent Variable: Knowl

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,295[a]	,087	,086	,705
2	,339[b]	,115	,114	,695

a. Predictors: (Constant), Intention construct

b. Predictors: (Constant), Intention construct, Placeatt

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	73,321	1	73,321	147,362	,000[b]
	Residual	770,217	1548	,498		
	Total	843,538	1549			
2	Regression	96,754	2	48,377	100,216	,000[c]
	Residual	746,783	1547	,483		
	Total	843,538	1549			

a. Dependent Variable: Knowl

b. Predictors: (Constant), Intention construct

c. Predictors: (Constant), Intention construct, Placeatt

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	1,874	,106		17,747	,000
	Intention construct	,361	,030	,295	12,139	,000
2	(Constant)	1,348	,129		10,486	,000
	Intention construct	,333	,030	,272	11,286	,000
	Placeatt	,115	,016	,168	6,967	,000

a. Dependent Variable: Knowl

Bootstrap for Coefficients

Model		B	Bootstrap[a] Bias	Bootstrap[a] Std. Error	Bootstrap[a] Sig. (2-tailed)	Bootstrap[a] BCa 95% Confidence Interval Lower	Bootstrap[a] BCa 95% Confidence Interval Upper
1	(Constant)	1,874	-,002	,118	,001	1,624	2,112
	Intention construct	,361	,001	,033	,001	,297	,426
2	(Constant)	1,348	-,003	,151	,001	1,062	1,636
	Intention construct	,333	,001	,033	,001	,270	,401
	Placeatt	,115	,000	,019	,001	,078	,151

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Placeatt	,168[b]	6,967	,000	,174	,982

a. Dependent Variable: Knowl

b. Predictors in the Model: (Constant), Intention construct

Multiple Regression independent variable attitude, dependent variable intention and mediating variables place attachment:

Variables Entered/Removed[a]

Model	Variables Entered	Variables Removed	Method

1	Intention construct[b]	.	Enter
2	Placeatt[b]	.	Enter

a. Dependent Variable: Attitude

b. All requested variables entered.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,394[a]	,155	,155	3,60723
2	,396[b]	,157	,156	3,60468

a. Predictors: (Constant), Intention construct

b. Predictors: (Constant), Intention construct, Placeatt

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3707,413	1	3707,413	284,921	,000[b]
	Residual	20142,717	1548	13,012		
	Total	23850,130	1549			
2	Regression	3748,899	2	1874,449	144,258	,000[c]
	Residual	20101,231	1547	12,994		
	Total	23850,130	1549			

a. Dependent Variable: Attitude

b. Predictors: (Constant), Intention construct

c. Predictors: (Constant), Intention construct, Placeatt

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1,365	,540		-2,527	,012
	Intention construct	2,564	,152	,394	16,880	,000
2	(Constant)	-2,065	,667		-3,096	,002
	Intention construct	2,527	,153	,389	16,503	,000
	Placeatt	,153	,085	,042	1,787	,074

a. Dependent Variable: Attitude

Bootstrap for Coefficients

Model		Bootstrap[a]					
						BCa 95% Confidence Interval	
	B	B	Bias	Std. Error	Sig. (2-tailed)	Lower	Upper

1	(Constant)	-1,365	-,029	,514	,005	-2,326	-,469
	Intention construct	2,564	,008	,142	,001	2,288	2,854
2	(Constant)	-2,065	-,022	,648	,003	-3,272	-,889
	Intention construct	2,527	,008	,145	,001	2,237	2,830
	Placeatt	,153	-,002	,089	,082	-,021	,324

a. Unless otherwise noted, bootstrap results are based on 1000 bootstrap samples

Excluded Variables[a]

Model		Beta In	t	Sig.	Partial Correlation	Collinearity Statistics Tolerance
1	Placeatt	,042[b]	1,787	,074	,045	,982

a. Dependent Variable: Attitude

b. Predictors in the Model: (Constant), Intention construct

Appendix 11: Mediation analyses

Mediation analyses Knowledge, attitude, intention:

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.5.3 ***************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : Intention
    X  : Knowledge
    M  : Attitude

Sample
Size:  1550

**************************************************************************
OUTCOME VARIABLE: Attitude


Model Summary
          R       R-sq        MSE          F        df1        df2
      ,1162      ,0135    15,1990    21,1893     1,0000  1548,0000

      p
      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     5,6791      ,4326    13,1289      ,0000     4,8306     6,5276
Knowledge     ,6179      ,1342     4,6032      ,0000      ,3546      ,8812



**************************************************************************
OUTCOME VARIABLE: Intention

Model Summary
          R       R-sq        MSE          F        df1        df2
      ,4672      ,2183      ,2850   216,0098     2,0000  1547,0000

      p
      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,4285      ,0624    38,8899      ,0000     2,3061     2,5510
Knowledge     ,2064      ,0185    11,1530      ,0000      ,1701      ,2427
Attitude      ,0561      ,0035    16,1246      ,0000      ,0493      ,0629



************************* TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE: Intention

Model Summary
          R       R-sq        MSE          F        df1        df2          p
      ,2948      ,0869      ,3327   147,3619     1,0000  1548,0000      ,0000

Model
              coeff         se          t          p       LLCI       ULCI
constant     2,7473      ,0640    42,9263      ,0000     2,6217     2,8728
Knowledge     ,2411      ,0199    12,1393      ,0000      ,2021      ,2800
```

```
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of Knowledge on Intention
     Effect         se          t          p       LLCI       ULCI
      ,2411      ,0199    12,1393      ,0000      ,2021      ,2800


Direct effect of Knowledge on Intention
     Effect         se          t          p       LLCI       ULCI
      ,2064      ,0185    11,1530      ,0000      ,1701      ,2427


Indirect effect(s) of Knowledge on Intention:
             Effect     BootSE   BootLLCI   BootULCI
Attitude     ,0347      ,0077      ,0200      ,0500


Partially standardized indirect effect(s) of Knowledge on Intention:
      Effect     BootSE   BootLLCI   BootULCI
Attitude     ,0575      ,0125      ,0341      ,0825


Completely standardized indirect effect(s) of Knowledge on Intention:
      Effect     BootSE   BootLLCI   BootULCI
Attitude     ,0424      ,0092      ,0252      ,0610


*********** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS ************

OUTCOME VARIABLE: Attitude
              Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant     5,6791     5,6638      ,4216     4,8692     6,4894
Knowledge    ,6179      ,6231      ,1299      ,3682      ,8707

----------

OUTCOME VARIABLE: Intention
              Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant     2,4285     2,4294      ,0629     2,3055     2,5503
Knowledge     ,2064      ,2059      ,0198      ,1684      ,2438
Attitude      ,0561      ,0562      ,0039      ,0488      ,0642


********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for % ile bootstrap confidence intervals:
  1000

------ END MATRIX -----
```

Mediating analyses attitude, education level, intention:

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 ****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : Intent
    X  : Attitu
    M  : Educatio
```

```
Sample
Size:  1550

**************************************************************************
OUTCOME VARIABLE:
 Educatio

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,14        ,02        ,79      30,87       1,00    1548,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      3,75        ,05      75,97        ,00       3,65       3,84
Attitu         ,03        ,01       5,56        ,00        ,02        ,04

**************************************************************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,41        ,17        ,30     160,04       2,00    1547,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      2,72        ,07      41,02        ,00       2,59       2,85
Attitu         ,06        ,00      16,10        ,00        ,05        ,06
Educatio       ,09        ,02       5,46        ,00        ,06        ,12

************************** TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,39        ,16        ,31     284,92       1,00    1548,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      3,04        ,03      98,83        ,00       2,98       3,10
Attitu         ,06        ,00      16,88        ,00        ,05        ,07

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps
c_cs
        ,06        ,00      16,88        ,00        ,05        ,07        ,10
,39

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps
c'_cs
        ,06        ,00      16,10        ,00        ,05        ,06        ,10
,38

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Educatio        ,00        ,00        ,00        ,00

Partially standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Educatio        ,00        ,00        ,00        ,01

Completely standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
Educatio        ,02        ,00        ,01        ,03

********************** ANALYSIS NOTES AND ERRORS ************************
```

```
Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  1000

NOTE: Variables names longer than eight characters can produce incorrect output.
      Shorter variable names are recommended.

------ END MATRIX -----
```

Mediating analyses knowledge, place attachment, intention:

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : Intent
    X  : Knowl
    M  : PlaceAtt

Sample
Size:  1550

**************************************************************************
OUTCOME VARIABLE:
 PlaceAtt

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,20        ,04       1,12      67,55       1,00    1548,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      4,48        ,12      38,14        ,00       4,25       4,71
Knowl          ,30        ,04       8,22        ,00        ,23        ,37

**************************************************************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,30        ,09        ,33      78,83       2,00    1547,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      2,56        ,09      28,76        ,00       2,38       2,73
Knowl          ,23        ,02      11,29        ,00        ,19        ,27
PlaceAtt       ,04        ,01       3,08        ,00        ,02        ,07

************************* TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,29        ,09        ,33     147,36       1,00    1548,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      2,75        ,06      42,93        ,00       2,62       2,87
Knowl          ,24        ,02      12,14        ,00        ,20        ,28
```

```
************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps
c_cs
        ,24        ,02      12,14        ,00        ,20        ,28        ,40
,29

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps
c'_cs
        ,23        ,02      11,29        ,00        ,19        ,27        ,38
,28

Indirect effect(s) of X on Y:
             Effect     BootSE   BootLLCI   BootULCI
PlaceAtt        ,01        ,01        ,00        ,02

Partially standardized indirect effect(s) of X on Y:
             Effect     BootSE   BootLLCI   BootULCI
PlaceAtt        ,02        ,01        ,01        ,04

Completely standardized indirect effect(s) of X on Y:
             Effect     BootSE   BootLLCI   BootULCI
PlaceAtt        ,02        ,01        ,00        ,03

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  1000

------ END MATRIX -----
```

Mediating analyses attitude, place attachment, intention:

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 4
    Y  : Intent
    X  : Attitu
    M  : PlaceAtt

Sample
Size:  1550

**************************************************************************
OUTCOME VARIABLE:
 PlaceAtt

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,09        ,01       1,16      13,77       1,00    1548,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      5,23        ,06      87,43        ,00       5,11       5,34
Attitu         ,03        ,01       3,71        ,00        ,01        ,04
```

```
**************************************************************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,41        ,16        ,30     152,62       2,00    1547,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      2,76        ,07      36,98        ,00       2,61       2,90
Attitu         ,06        ,00      16,50        ,00        ,05        ,07
PlaceAtt       ,05        ,01       4,16        ,00        ,03        ,08

************************ TOTAL EFFECT MODEL ****************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,39        ,16        ,31     284,92       1,00    1548,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      3,04        ,03      98,83        ,00       2,98       3,10
Attitu         ,06        ,00      16,88        ,00        ,05        ,07

************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y **************

Total effect of X on Y
     Effect         se          t          p       LLCI       ULCI       c_ps
c_cs
        ,06        ,00      16,88        ,00        ,05        ,07        ,10
,39

Direct effect of X on Y
     Effect         se          t          p       LLCI       ULCI      c'_ps
c'_cs
        ,06        ,00      16,50        ,00        ,05        ,07        ,10
,39

Indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
PlaceAtt        ,00        ,00        ,00        ,00

Partially standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
PlaceAtt        ,00        ,00        ,00        ,00

Completely standardized indirect effect(s) of X on Y:
            Effect     BootSE   BootLLCI   BootULCI
PlaceAtt        ,01        ,00        ,00        ,02

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
  1000

------ END MATRIX -----
```

Appendix 12: Moderation analyses

Independent variable attitude, dependent variable intention and moderating variable education level:

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : Intent
    X  : Attit
    W  : Educat

Sample
Size:  1550

Coding of categorical W variable for analysis:
 Educat     W1     W2     W3     W4
  1,000   ,000   ,000   ,000   ,000
  2,000  1,000   ,000   ,000   ,000
  3,000   ,000  1,000   ,000   ,000
  4,000   ,000   ,000  1,000   ,000
  5,000   ,000   ,000   ,000  1,000

**************************************************************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,42        ,18        ,30      36,61       9,00    1540,00        ,00

Model
              coeff         se          t          p       LLCI       ULCI
constant       3,62        ,28      13,08        ,00       3,08       4,17
Attit           ,21        ,07       2,89        ,00        ,07        ,36
W1             -,24        ,28       -,84        ,40       -,80        ,32
W2             -,21        ,28       -,76        ,45       -,76        ,33
W3             -,12        ,28       -,44        ,66       -,67        ,42
W4             -,03        ,28       -,09        ,92       -,57        ,52
Int_1          -,15        ,08      -1,97        ,05       -,30        ,00
Int_2          -,15        ,07      -1,96        ,05       -,29        ,00
Int_3          -,16        ,07      -2,12        ,03       -,30       -,01
Int_4          -,16        ,07      -2,21        ,03       -,31       -,02


Conditional effects of the focal predictor at values of the moderator(s):

     Educat     Effect         se          t          p       LLCI       ULCI
       1,00        ,21        ,07       2,89        ,00        ,07        ,36
       2,00        ,07        ,01       4,99        ,00        ,04        ,09
       3,00        ,07        ,01       9,07        ,00        ,05        ,08
       4,00        ,06        ,01       9,59        ,00        ,04        ,07
       5,00        ,05        ,01       7,76        ,00        ,04        ,06

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   Attit      Educat     Intent     .
BEGIN DATA.
```

```
      -3,92       1,00       2,79
        ,00       1,00       3,62
       3,92       1,00       4,46
      -3,92       2,00       3,13
        ,00       2,00       3,38
       3,92       2,00       3,64
      -3,92       3,00       3,15
        ,00       3,00       3,41
       3,92       3,00       3,68
      -3,92       4,00       3,28
        ,00       4,00       3,50
       3,92       4,00       3,72
      -3,92       5,00       3,40
        ,00       5,00       3,60
       3,92       5,00       3,79
END DATA.
GRAPH/SCATTERPLOT=
 Attit    WITH     Intent   BY       Educat   .

********** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS ***********

OUTCOME VARIABLE:
 Intent

              Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant       3,62       4,12       1,68       2,87      10,23
Attit           ,21        ,32        ,43       -,01       1,78
W1             -,24       -,73       1,68      -6,87        ,54
W2             -,21       -,70       1,68      -6,82        ,54
W3             -,12       -,61       1,68      -6,69        ,64
W4             -,03       -,52       1,68      -6,61        ,72
Int_1          -,15       -,25        ,43      -1,71        ,09
Int_2          -,15       -,25        ,43      -1,71        ,08
Int_3          -,16       -,26        ,43      -1,72        ,07
Int_4          -,16       -,27        ,43      -1,74        ,07

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for % ile bootstrap confidence intervals:
  1000

NOTE: The following variables were mean centered prior to analysis:
          Attit

NOTE: Due to estimation problems, some bootstrap samples had to be replaced.
      The number of times this happened was: 38

------ END MATRIX -----
```

Independent variable attitude, dependent variable intention and moderating variable member or donator:

```
Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : Intent
    X  : Attit
    W  : Member

Sample
```

```
Size:  1550

**************************************************************************
OUTCOME VARIABLE:
 Intent

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,43        ,18        ,30     115,09       3,00    1546,00        ,00

Model
              coeff         se          t          p       LLCI       ULCI
constant       3,51        ,01     251,64        ,00       3,48       3,53
Attit           ,06        ,00      15,96        ,00        ,05        ,06
Member         -,22        ,03      -6,48        ,00       -,28       -,15
Int_1           ,02        ,01       2,30        ,02        ,00        ,03

Product terms key:
 Int_1    :        Attit    x        Member

Covariance matrix of regression parameter estimates:
          constant      Attit     Member      Int_1
constant        ,00        ,00        ,00        ,00
Attit           ,00        ,00        ,00        ,00
Member          ,00        ,00        ,00        ,00
Int_1           ,00        ,00        ,00        ,00

Test(s) of highest order unconditional interaction(s):
       R2-chng           F        df1        df2          p
X*W        ,00       5,30       1,00    1546,00        ,02
----------
    Focal predict: Attit    (X)
          Mod var: Member   (W)

Conditional effects of the focal predictor at values of the moderator(s):

     Member     Effect         se          t          p       LLCI       ULCI
       -,23        ,05        ,00      12,66        ,00        ,04        ,06
        ,77        ,07        ,01      10,62        ,00        ,06        ,08

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   Attit      Member     Intent     .
BEGIN DATA.
      -3,92       -,23       3,35
        ,00       -,23       3,56
       3,92       -,23       3,76
      -3,92        ,77       3,06
        ,00        ,77       3,34
       3,92        ,77       3,62
END DATA.
GRAPH/SCATTERPLOT=
 Attit    WITH     Intent   BY       Member   .

*********** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS ************

OUTCOME VARIABLE:
 Intent

              Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant       3,51       3,51        ,01       3,48       3,53
Attit           ,06        ,06        ,00        ,05        ,06
Member         -,22       -,22        ,04       -,28       -,14
Int_1           ,02        ,02        ,01        ,00        ,04

********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
```

```
  95,0000

Number of bootstrap samples for % ile bootstrap confidence intervals:
  1000

NOTE: The following variables were mean centered prior to analysis:
          Member   Attit

------ END MATRIX -----
```

Independent variable attitude, dependent variable intention and moderating variable place attachment:

```
*************** PROCESS Procedure for SPSS Version 3.00 *****************

          Written by Andrew F. Hayes, Ph.D.       www.afhayes.com
    Documentation available in Hayes (2018). www.guilford.com/p/hayes3

**************************************************************************
Model  : 1
    Y  : Intentio
    X  : Attitude
    W  : PlaceAtt

Sample
Size:  1550

**************************************************************************
OUTCOME VARIABLE:
 Intentio

Model Summary
          R       R-sq        MSE          F        df1        df2          p
        ,41        ,17        ,30     103,66       3,00    1546,00        ,00

Model
             coeff         se          t          p       LLCI       ULCI
constant      3,50        ,01     249,01        ,00       3,47       3,53
Attitude       ,06        ,00      16,59        ,00        ,05        ,07
PlaceAtt       ,05        ,01       4,21        ,00        ,03        ,08
Int_1          ,01        ,00       2,22        ,03        ,00        ,01

Product terms key:
 Int_1    :        Attitude x        PlaceAtt

Covariance matrix of regression parameter estimates:
          constant   Attitude   PlaceAtt      Int_1
constant        ,00        ,00        ,00        ,00
Attitude        ,00        ,00        ,00        ,00
PlaceAtt        ,00        ,00        ,00        ,00
Int_1           ,00        ,00        ,00        ,00

Test(s) of highest order unconditional interaction(s):
       R2-chng          F        df1        df2          p
X*W        ,00       4,94       1,00    1546,00        ,03
----------
    Focal predict: Attitude (X)
          Mod var: PlaceAtt (W)

Conditional effects of the focal predictor at values of the moderator(s):

   PlaceAtt     Effect         se          t          p       LLCI       ULCI
      -1,08        ,05        ,00      10,49        ,00        ,04        ,06
        ,00        ,06        ,00      16,59        ,00        ,05        ,07
       1,08        ,07        ,01      13,20        ,00        ,06        ,08

Moderator value(s) defining Johnson-Neyman significance region(s):
      Value    % below    % above
      -4,34        ,45      99,55
```

```
Conditional effect of focal predictor at values of the moderator:
   PlaceAtt     Effect         se          t          p       LLCI       ULCI
      -4,42        ,03        ,01       1,89        ,06        ,00        ,06
      -4,34        ,03        ,01       1,96        ,05        ,00        ,06
      -4,12        ,03        ,01       2,18        ,03        ,00        ,06
      -3,82        ,03        ,01       2,50        ,01        ,01        ,06
      -3,52        ,03        ,01       2,88        ,00        ,01        ,06
      -3,22        ,04        ,01       3,32        ,00        ,01        ,06
      -2,92        ,04        ,01       3,84        ,00        ,02        ,06
      -2,62        ,04        ,01       4,46        ,00        ,02        ,06
      -2,32        ,04        ,01       5,20        ,00        ,03        ,06
      -2,02        ,04        ,01       6,10        ,00        ,03        ,06
      -1,72        ,05        ,01       7,21        ,00        ,03        ,06
      -1,42        ,05        ,01       8,58        ,00        ,04        ,06
      -1,12        ,05        ,01      10,24        ,00        ,04        ,06
       -,82        ,05        ,00      12,19        ,00        ,04        ,06
       -,52        ,06        ,00      14,24        ,00        ,05        ,06
       -,22        ,06        ,00      15,93        ,00        ,05        ,07
        ,08        ,06        ,00      16,66        ,00        ,05        ,07
        ,38        ,06        ,00      16,26        ,00        ,05        ,07
        ,68        ,06        ,00      15,09        ,00        ,06        ,07
        ,98        ,07        ,00      13,69        ,00        ,06        ,08
       1,28        ,07        ,01      12,35        ,00        ,06        ,08
       1,58        ,07        ,01      11,18        ,00        ,06        ,08

Data for visualizing the conditional effect of the focal predictor:
Paste text below into a SPSS syntax window and execute to produce plot.

DATA LIST FREE/
   Attitude   PlaceAtt   Intentio   .
BEGIN DATA.
      -3,92      -1,08       3,24
        ,00      -1,08       3,44
       3,92      -1,08       3,64
      -3,92        ,00       3,27
        ,00        ,00       3,50
       3,92        ,00       3,73
      -3,92       1,08       3,30
        ,00       1,08       3,56
       3,92       1,08       3,82
END DATA.
GRAPH/SCATTERPLOT=
 Attitude WITH     Intentio BY       PlaceAtt .

********** BOOTSTRAP RESULTS FOR REGRESSION MODEL PARAMETERS ************

OUTCOME VARIABLE:
 Intentio

             Coeff   BootMean     BootSE   BootLLCI   BootULCI
constant      3,50       3,50        ,01       3,47       3,53
Attitude       ,06        ,06        ,00        ,05        ,07
PlaceAtt       ,05        ,06        ,01        ,03        ,09
Int_1          ,01        ,01        ,00        ,00        ,02

*********************** ANALYSIS NOTES AND ERRORS ************************

Level of confidence for all confidence intervals in output:
  95,0000

Number of bootstrap samples for % ile bootstrap confidence intervals:
  1000
W values in conditional tables are the mean and +/- SD from the mean.
NOTE: The following variables were mean centered prior to analysis:
          PlaceAtt Attitude
NOTE: Variables names longer than eight characters can produce incorrect output.
      Shorter variable names are recommended.

------ END MATRIX -----
```