

**Exploring Youth Perspectives on Factors Influencing their Pro-  
Environmental Behaviour in the Netherlands**

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June 30, 2023

Word count: 9068

## Abstract

**Background:** Young people represent a significant portion of the population and are one of the most vulnerable demographics to experience the consequences of climate change. There are two broad categories of factors that influence behaviour: internal and external. Based on the literature these were the main factors of influence on pro-environmental behaviour (PEB): personal values, socio-cultural, and institutional factors. Young people can bring fresh insights to the fight against climate change and yet most studies conducted on public opinion regarding climate change has mostly focussed on adults. Through a survey of 21 young people in the Netherlands, this paper aims to explore their young people's perceptions on what influences their environmental behaviour.

**Purpose:** To explore what factors young people perceive to influence their pro-environmental behaviour (PEB).

**Research Design:** Qualitative survey

**Method:** Content analysis was conducted on the survey results. A convenience sample of 21 participants was used. The data were analysed with deductive and inductive coding.

**Results:** The results show that young people were predominantly influenced by social media, cultural norms, and infrastructure. Differences arose in topics such as the influence of education, effectiveness of recycling and meat consumption habits.

**Conclusion:** Ultimately, by considering these factors, policymakers can design policies that incentivize PEB, provide supportive infrastructure and address the barriers to participation identified in this study. Taking a holistic approach when considering what factors influence young people's PEB can help to ensure the most effective strategies and ultimately have a much and urgently need positive impact on widespread adoption of PEBs. Shedding light on what young people perceive to influence their behaviour will allow policy makers to strategically target these factors and therefore, promote PEB.

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## **1. Introduction**

As environmental policy rapidly advances worldwide, so does the overlap between these policies and contemporary youth issues. The two are inherently linked; environmental policies generally aim to preserve our environment for the benefit of present and future generations. In recent years, addressing environmental issues has become increasingly prominent on the global agenda (United Nations, n.d.). The urgency of addressing climate change, biodiversity loss and resource depletion requires a comprehensive understanding of the factors that influence pro-environmental behaviour (PEB hereafter). While research has shed light on various determinants, it is crucial to recognize the unique perspectives of young people. The younger generation, with its diversity, innovation, and growing influence, holds the potential to drive transformative change towards a sustainable future, but only if we take their voices into account (Mager and Nowak, 2012). This project aims to explore young people's perspectives on what shapes their pro-environmental behaviour and highlight the underlying factors that inform their choices.

The importance of addressing young people's perspectives is visible in policies at different levels of governance. At the international level the United Nations is committed to encouraging young people to participate in climate action and to take their unique perspectives into account (United Nations, n.d.; Modeer and Otieno, 2022). At the National level, the Dutch government has made it their goal to reduce greenhouse gas emissions by 49% of 1990 levels by 2030 and are ultimately working towards carbon neutrality by 2050 (Ministerie van Economische Zaken, Landbouw en Innovatie, 2020). The policies and measures set out to achieve these goals are laid out in the Climate Plan, the National Energy and Climate Plan (NECP) and the National Climate Agreement (Ministerie van Economische Zaken, Landbouw en Innovatie, 2020). In the latest Climate Change Performance Index (2023), the Netherlands moved up six places from last year to 13th in the world, placing them among high performing countries. Finally, at a local level the municipality of Groningen has an action plan recommended by the OECD to achieve a circular economy through changing peoples' attitudes and behaviours towards environmental initiatives (OECD, 2020). For example, the first objective of the action plan is to trigger behavioural and business change inside and outside the municipality (Gemeente Groningen, n.d.). This research aims to find out what young people perceive to influence their pro-environmental behaviour and ultimately contribute to the achievement of such environmental policy goals, by providing a

more detailed and nuanced understanding of what factors young people perceive to influence their involvement in environmental action.

### **1.1 The Importance of Young People's Perspectives**

Young people constitute a vital demographic to consider when examining PEB for several reasons. Firstly, they represent a significant proportion of the population and will experience the consequences of environmental degradation for a longer time span. Secondly, young people bring fresh insights and innovative ideas to the table, challenging traditional norms and proposing novel solutions (Mager and Nowak, 2012). Their unique perspectives can inspire transformative thinking and catalyse collective action for sustainability. We have seen proof of this with the Fridays for Future movements and how one child sparked an entire generation to take action against climate change (Ingini, 2023). According to Wray-Lake et al. (2010), since the beginning of the environmental movement, studies on public opinion related to the environment have typically focused on adult populations, while the views and insights of young people have been marginalised or disregarded. However, young people around the world are playing an increasingly important role in the environmental movement, with the Fridays for Future movement calling on policymakers to make environmental protection a priority. Therefore, there appears to be a research gap on the perspectives of young people regarding what factors they believe to influence their PEB. Research has shown that young people are deeply concerned about the environment and still believe that it is possible to intervene and repair the damage that has been done (Piscitelli and D'Uggento, 2022). By creating policies with the perspectives of young people in mind, we can include them in the policy making process and help make their voices heard by uncovering what works for them. Understanding young people's perspectives and perceptions of what factors influence their PEB is an important aspect of creating targeted policies and achieving goals such as those of the UN and the municipality of Groningen mentioned earlier.

### **1.2 Definition of Pro-Environmental Behaviour**

Pro-environmental behaviour (PEB) refers to actions and behaviours taken by individuals or groups that have a positive impact on the environment or contribute to environmental sustainability (Kollmuss and Agyeman, 2002; Li et al., 2019). Such behaviour can include actions related to reduction of energy and water consumption, recycling, and waste reduction, using public

transportation or carpooling, choosing more sustainable and eco-friendly products, supporting conservation initiatives, participating in environmental activism or volunteering and so on.

Pro-environmental behaviour can be influenced by two types of factors: internal and external (Li et al., 2019). Internal factors may include individual values and beliefs, knowledge, awareness about environmental issues and the perceived effectiveness of one's actions in making a difference (Li et al., 2019). External factors may include social norms, access to resources, infrastructure and policy (Li et al., 2019). Understanding these factors and their respective likelihood of translating into action can help design interventions and strategies to promote and sustain PEB among young people. These factors will be further explained in the following section.

### **1.3 Internal and External factors**

According to the literature, influencing factors of PEB can be categorised into internal and external factors (Li et al., 2019). Internal and external factors cannot operate independently of each other and oftentimes one influences the other. The external factors that were found to be most influential on the increased adoption of PEB are socio-cultural and institutional (Kollmuss and Agyeman, 2002; Zilahy and Huising, 2009; Vincente-Molina, et al., 2013; Culiberg and Elgaaied-Gambier, 2016; Binder et al., 2019; Wallis and Loy, 2021; Becerra et al., 2023). While demographic variables and personal values, were found to be the most influential internal factors influencing PEB (Becerra et al., 2023; Li et al., 2019; Kollmuss and Agyeman, 2002). Currently, the majority of research focuses on the effects of internal factors on PEB. Therefore, this research would like to primarily focus on external factors while also accounting for the influence of internal factors since the purpose of this research is to explore what factors young people perceive to influence their individual PEB.

#### ***1.3.1 Internal factors***

Initial studies on factors that affect PEB tended to focus on demographic variables such as age, gender, education, marital status, and place of residence (Li et al., 2019). These studies suggested that women, highly educated young people with good income levels, married couples and urban residents tended to exhibit more PEBs (Li et al., 2019). The more education one has, the more likely they are to be aware of environmental degradation and the severity of the state of the current

climate, however, this does not necessarily mean that they will adopt PEBs (Kollmuss and Agyeman, 2002). It was later realised that demographic factors are not very reliable predictors of PEB and that psychological variables were much more successful in predicting PEBs (Li et al., 2019).

One's personal values are a major influence on their PEB (Becerra et al., 2023). Personal values are defined as principles or motivations behind a person's behaviour (De Groot, 2008; Stern, 2000). The Value Belief Norm (VBN) theory of environmentalism suggests that values influence PEB through personal beliefs (Hiratsuka et al., 2018). This theory divides personal values into three sets: social-altruistic, biospheric and egoistic (Becerra et al., 2023). According to this theory, people with social-altruistic values are more likely to perform PEB because they prioritise the collective interests of society over their own individual interests (Becerra et al., 2023). People with biospheric values tend to embrace PEB because they strongly believe that human activity and the environment are intertwined (Becerra et al., 2023). However, biospheric values can also swing the opposite way as people with this value set judge phenomena based on the costs or benefits to the ecosystem (Becerra et al., 2023). Egoistic values are negatively associated with PEBs, as the more one indulges in egoistic and hedonic values, the more reluctant they are to adopt PEBs that are costly, uncomfortable, or effortful as opposed to people with altruistic or biospheric motives which are positively associated with PEBs (Becerra et al., 2023).

According to Blake (1999), there are three barriers to adopting PEB: individual barriers, social responsibility barriers and practicality barriers (Blake, 1999). Individual barriers are related to internal factors and come down to one's attitude and temperament. If one does not have the motivation to go to a recycling facility or reduce meat consumption, then it will result in a lack of PEB. These are especially strong when there is a lack of environmental concern to begin with. Egoistic values constitute an individual barrier to performing PEB which may be overcome through education, accessible facilities and improved infrastructure. The barrier of social responsibility has to do with the perceived effectiveness of one's actions in the grander scheme of things. Biospheric values can constitute a social responsibility barrier if people feel like their actions will not make a difference. Practicality barriers concern institutional and social constraints

that prevent people from adopting PEBs, irrespective of their attitudes (Blake, 1999). This could be a lack of financial capacity, lack of facilities, lack of environmental education and so on.

Personal values tie into other internal factors such as one's knowledge and awareness of environmental issues, one's environmental attitudes and beliefs, one's environmental identity and a perceived effectiveness of one's actions. These ideas and concepts are addressed in the survey (see Appendix A) in order to explore which internal factors young people perceive to influence their PEB.

### ***1.3.2 Socio-cultural factors***

Socio-cultural factors encompass social norms, peer influence, and cultural practices that influence decision-making (Li et al., 2019). The influence of social norms of relevant peers such as family and friends were found to be a significant predictor of PEB (Culiberg and Elgaaied-Gambier, 2016; Wallis and Loy, 2021). Peers can serve as a source of inspiration, support, and validation, reinforcing PEBs or a source of demotivation, deterring PEB. One example of a prominent socio-cultural event are the Fridays for Future (FFF) movements. These movements shifted the narrative of research on PEB of young people from consumers to active citizens (Wallis and Loy, 2021). Suddenly young people all over the world were protesting and exercising their right to be heard in an effort to protect the environment. This shift was able to open up new avenues for investigating drivers of PEB among young people that were overlooked before because of the way they were viewed. For example, Wallis and Loy (2021) found that perceived activism among friends was the strongest predictor of PEB for young people. Additionally, family dynamics play a critical role in shaping young people's pro-environmental behaviour (Culiberg and Elgaaied-Gambier, 2016; Wallis and Loy, 2021). Family members serve as role models and influencers, transmitting values, beliefs, and behaviours related to the environment, both positive and negative. Positive familial support, discussions, and shared environmental practices can foster a sense of responsibility and commitment to sustainability.

The effect that society, friends, and family have on one's PEB is known as "green peer influence". It was found that "green peer influence" affects young adults' green self-identity, i.e., whether one perceives themselves to care about the environment (Becerra et al., 2023). The Social Norms



Theory aims to understand how one's environment and interpersonal influences can change behaviour, the primary focus of which is peer influence on individual decision-making behaviours (Boston University, 2022). The Social Norms Theory posits that young people are influenced by the perceived norms of their peers rather than the actual norms and the gap between the perceived and the actual is a misperception (Boston University, 2022). Therefore, the theory suggests that our behaviour is influenced by these misperceptions of how our peers think and act (Boston University, 2022). Therefore, PEB may depend on the social expectation of what behaviour ought to be and norms of reference (Becerra et al., 2023; Wallis and Loy, 2021).

Furthermore, a country's pro-environmental norms were found to influence social norms (Culliberg and Elgaaied-Gambier, 2016). In a series of experiments conducted between Norway and France, it was found that Norwegians were much more likely to conform than the French and it was concluded that this was due to cultural dissimilarities (Culliberg and Elgaaied-Gambier, 2016). Norwegian society's social cohesiveness differs drastically from the French tradition of dissent and critical argument, which can help explain why awareness of environmental concerns may not necessarily translate into a perception of social pressure from friends and family who demonstrate PEB in French society. Another example of social norms and their dependence on a country's pro-environmental norms can be found in the Netherlands. It is common within the culture to bike everywhere rather than drive and so the majority of the population bikes whenever possible as opposed to their German neighbours who use bikes less frequently as a means of transport (University of Cologne, 2022; Bruntlett and Bruntlett, 2018). Choosing to bike rather than drive is considered a PEB, however, the motivation behind it may not necessarily be to help the environment. This is a clear example of how external factors that do not necessarily relate to personal belief-systems can still cause behavioural changes to the benefit of the environment depending on the type of society one is in. A study by Binder et al. (2019) found similar results in that individuals' PEB was found to improve in areas that were located near generally more environmentally friendly regions.

Another example of social norms influencing PEB is the increasing trend of veganism. An increase in environmental awareness through social innovations has led more people to consider the ethical implications of their meat consumption (Plohl et al., 2020). Social media and social

norms have played a large role in the rise of veganism and vegetarianism globally (Kim, 2022; Pilař et al., 2022; Minassian, 2023). Trends have shown that veganism is not simply a fad and is here to stay, cementing itself as a new social norm (Minassian, 2023). In 2010 the UN warned that a shift towards a vegan diet was necessary to mitigate the effects of climate change (Carus, 2010). Therefore, the present study looks into the barriers that prevent young people from reducing their meat consumption since the meat industry is one of the largest producers of greenhouse gas emissions, pollution, deforestation and biodiversity loss (McClements, 2023). By exploring what barriers and motivators young people face when it comes to lowering their meat consumption policymakers can create targeted programs, social media campaigns, or subsidies to help people lower the meat consumption.

This illustrates the influence social media platforms and digital communities on young people. Social media and digital communities provide a platform for young people to exchange ideas, mobilise environmental campaigns and advocate for change. Social media acts as a powerful tool for amplifying their voices, connecting with like-minded individuals globally and mobilising collective action (Han and Xu, 2020). Han and Xu (2020) found that social media strengthens the effects of interpersonal communication, which has been the focus of many studies on influencing PEB. Young people spend much of their time on social media, during an important developmental time of their growth. Considering the relevance of social media and behaviour the current study explored young peoples' perceptions of social media's influence on their PEB.

It is worth noting that reasons why people do not engage in PEB does not always fall into neat categories and there is often an overlap between barriers to PEB (Blake, 1999). Therefore, practicality barriers as well as individual barriers play a role in the influence socio-cultural factors have on individuals' PEB.

### ***1.3.3 Institutional factors***

Institutional factors derive their name from the fact that the factors are facilitated by institutions and institutional approaches. They refer to the external circumstances, conditions and influences that can shape and affect PEB. These can be infrastructure, educational policies and other green initiatives from the government to promote PEB.

The European Commission defines ‘green infrastructure’ as, “a strategically planned network of natural and semi-natural areas with other environmental features, designed and managed to deliver a wide range of ecosystem services, while also enhancing biodiversity.” (European Commission, n.d.). For example, accessible bicycle lanes, recycling programs, or other green policies (European Commission, n.d.). PEB requires certain conditions to be able to occur. If the necessary infrastructure is lacking, then PEB cannot be conveniently adopted by the population. People can still adopt PEB despite poor infrastructure, but they need to have a higher degree of personal motivation to do so. Hence, it is important to explore what factors may influence people to such a degree of going out of their way to adopt PEB (Kollmuss and Agyeman, 2002). Because changes in infrastructure may not always be feasible (reconstructing a city to make it bicycle-friendly takes years or even decades), policies may instead be focused on the factors that can entice short-term behaviour changes whilst changes to infrastructure can be made on the long-term. Exploring what kinds of infrastructure young people perceive to influence their PEB the most is useful information for governments and municipalities to consider when deciding what to change or improve. This information can help to ensure that the changes being made are reflective of what people actually want.

Additionally, education is a key factor in explaining why people adopt PEB. It plays an important role in the development of PEB and the chances of success for sustainability initiatives (Zilahy and Huisingh, 2009; Vincente-Molina, et al., 2013). Studies have shown that formal education and knowledge of environmental issues significantly influence the likelihood of the adoption of PEB (Vincente-Molina et al., 2013). The more an individual is aware of environmental problems and individual impact thereon, the more likely they are to change their behaviour. This can result in green initiatives, an overarching term for any form of promoting PEB through policy or education. An example of a green initiative is the environmental action plan in the city of Groningen, the Netherlands. Their aim is to become a role model for the rest of the country by following the OECD’s recommendations to transition to a circular economy by changing their citizens and businesses’ behaviour (OECD, 2020). Through such an initiative, more people may become aware of environmental issues environmental issues and educated on (potential) solutions.

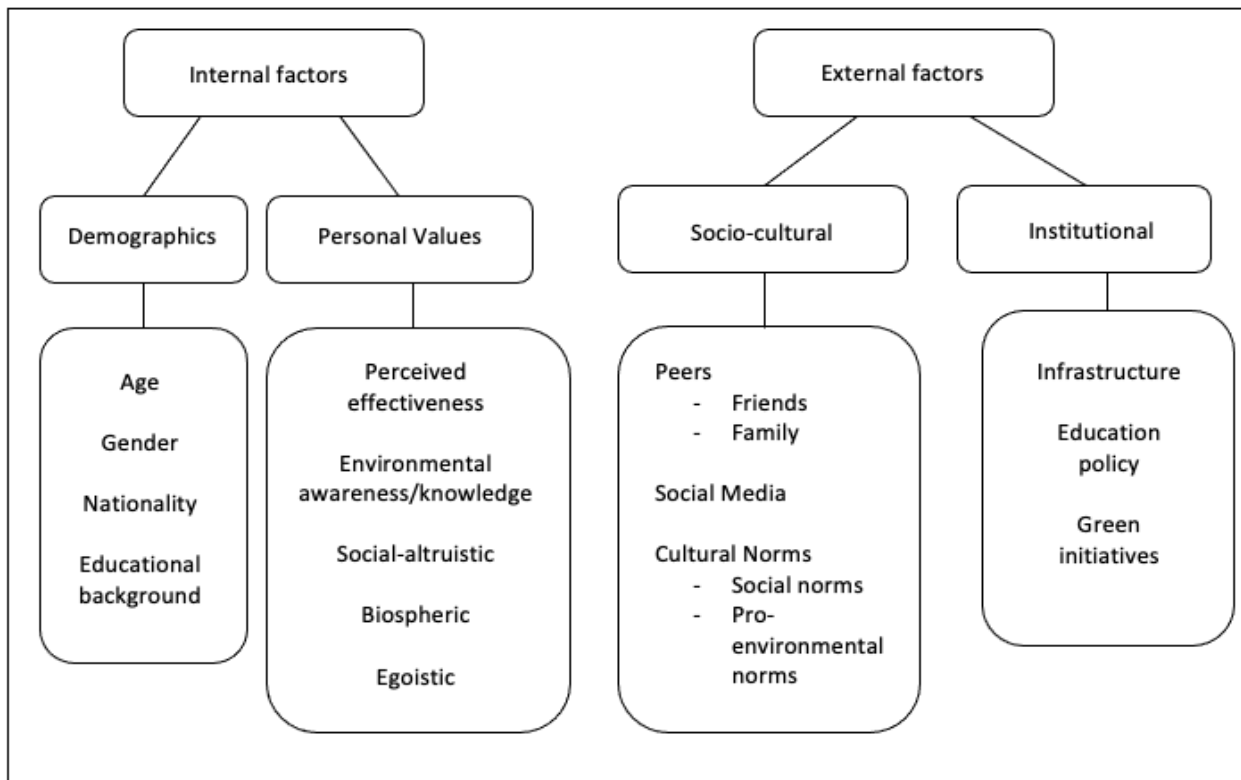
For example, in the Netherlands, the ‘statiegeld’ program, translated to deposit money, is a green initiative started by the Dutch government. When people buy a drink that comes in a plastic or glass bottle, they pay an extra fee at check out that they can get back if they return the bottle to a grocery store. These are known as deposit-refund schemes and are just one example of a green initiative that can help to promote sustainable behaviour (Walls, 2011).

#### **1.4 Conclusion**

Therefore, the objective of this thesis will be to find out what factors young people perceive to influence their PEB. Through such an understanding, researchers and policymakers may be able to better gauge their level of awareness, engagement, and potential impact on future sustainability efforts (Wallis and Loy, 2021). In concrete terms, identifying the factors that young people perceive to motivate them to engage in PEB can help to create tailored education programs, environmental policies, and interventions that address specific external and internal barriers while encouraging sustainable actions (Kollmuss and Agyeman, 2002). By recognizing the key factors that influence PEB and addressing them through educational programs, green infrastructure, and extracurricular activities, young people’s PEB can be encouraged and expanded (Zilahy and Huisingh, 2009). In summary, identifying factors that young people perceive to influence their PEB can help tailor interventions, strengthen youth engagement, and create effective strategies for promoting sustainable actions among young people by considering their unique perspectives. The above literature has identified these factors: demographics, personal values, socio-cultural and institutional, to be most influential in influencing PEB, therefore, these will provide a starting point for the research project. This leads to the research question:

*What factors do young people in the Netherlands perceive to influence their pro-environmental behaviour?*

The following conceptual framework will be used as a starting point for this study:



**Fig. 1** Conceptual framework derived from the literature

### 1.5 Overview of Research Design

A qualitative content analysis is utilised in this research project to uncover insights into what young people perceive to influence their PEB in the Netherlands. This research adds to existing research surrounding factors affecting PEB but with a specific focus on young people. The qualitative content analysis seeks to uncover various patterns that arise from the collected data in order to establish a clearer understanding of what young people are responding to with regards to their PEB. This study aims to explore young people’s attitudes, beliefs, and opinions about what influences their PEB or lack thereof.

This thesis is structured as follows: chapter two will provide a description of the methodology, chapter three contains a complete presentation of the findings of the surveys, chapter four analyses and discusses the research findings in relation to existing research, and lastly, chapter five concludes the thesis and suggests recommendations for further research.

## 2. Method

This research aims to emphasise how young individuals interpret their environment and what factors they perceive to influence their PEB, therefore, a qualitative design was used to investigate this question. Qualitative methods allow for in-depth exploration and understanding of social phenomena, providing rich and detailed insights from smaller but more focused samples (Clark et al., 2021). A qualitative approach allowed the researcher to capture the experiences of the participants in their own words as opposed to a quantitative approach that would limit the findings to statistical interpretations.

The target group was young people living in the Netherlands between the ages of 16 to 25. The decision to include young people over the age of 16 was based on the legal age of consent in the Netherlands. The project aimed to receive 15 to 20 responses and ended up receiving a total of 25 responses, out of which 21 were eligible for the study. The 4 participants that were not included were over the age of 25. The number of participants was suitable for this research to extract a variety of data and opinions about what young people perceive to affect their PEB.

A qualitative survey was used as the instrument to test the objectives of this project which enabled the researcher to gather specific and nuanced information about the participants' behavioural influences. The researcher designed the survey based on the theoretical framework shown in Fig. 1 to include the relevant themes and topics that were intended to explore as well as leave room for insights that may emerge from the participants' responses. The surveys were created using Google Forms. A convenience sampling method was utilised to recruit participants for this research endeavour. Recruitment was primarily conducted through social media platforms, specifically Instagram and LinkedIn. The link to the survey was posted on the researcher's social media pages and was then reshared by peers and acquaintances, resulting in a snowball effect.

The survey began with a brief description on the topic and aim of the study; participants were then asked to give their consent to participate in the survey. Since it was an online survey, participants could exit any time they wanted and there was no obligation to complete the survey. The survey was separated into four sections. The first section was to obtain the participants' age, nationality, place of residence, education level, and living situation. In the second section of the survey

participants were asked questions that assessed the perceived effectiveness, environmental awareness, and knowledge, and the social-altruistic, biospheric or egoistic values of the participants. For example, “Do you believe that your individual actions can make a difference in protecting the environment?”. The third section was about socio-cultural factors and how participants perceive these factors to influence their PEB. The influence of factors such as peers, family, cultural norms and social media were addressed in this section. For example, participants were asked, “To what extent do you feel influenced by friends to engage in pro-environmental behaviour?”. The fourth and final section was to assess how participants perceive institutional factors to influence their PEB. In this section, questions on modes of transportation, recycling habits and their thoughts on the environmental impact of recycling were asked to assess how the accessibility of recycling facilities impacts the participants’ actual recycling habits and views on recycling. For example, “What makes you choose to bike?”. The survey (see Appendix A) was made available to the public for two weeks (May 11, 2023 – May 25, 2023).

Qualitative content analysis was used to analyse the survey responses (Clark et al., 2021). The responses were exported from the Google Form to an excel sheet. Responses to each question were tabulated to allow for deductive and inductive coding. The initial codes were taken from the conceptual framework (see Fig 1) developed from the literature and new codes were added throughout the analysis process that did not fit into these initial codes. For example, in addition to the code of infrastructure, laws and policies were added as a specific factor influencing young people’s PEB. The full list of codes can be found in Appendix B. The data collected will be used and stored in accordance with the ethical guidelines of the Faculty of Behavioural and Social Sciences.

### **3. Results**

In this section data from the survey are presented. The pre-determined codes in the conceptual framework prove to be evident in the participants’ responses and so these codes will structure the presentation of the results derived from the data. Codes were also developed inductively from the analysis process which will be addressed in relation to the pre-determined categories, i.e., demographics, personal values, socio-cultural and institutional factors.

### 3.1 Participant Demographics

In the first section of the survey participants were asked questions about their gender, age, nationality, education level, and living situation in order to obtain the demographics of the sample (see table 1). All the participants live in the Netherlands and are between the ages 16 and 25. There was a preponderance of German participants and bachelor students.

**Table 1**

*Participant demographics (n=21)*

Gender	Age	Nationality	Education Level	Living Situation
F	23	South African	Bachelor's	Student house
M	21	Mauritian	Bachelor's	Student house
F	22	Irish	Master's	Alone
NA	24	German	Master's	Alone
M	25	Indian	Bachelor's	Student house
F	23	German	High school	Student house
M	23	Irish	Bachelor's	Alone
F	25	Pakistani	Master's	Student house
F	21	Belgian	Bachelor's	Student house
F	22	Australian-Serbian	High school	Student house
F	22	German	Bachelor's	Student house
M	23	Portuguese	Bachelor's	Student house
M	24	Dutch	Bachelor's	Student house
F	23	Norwegian	Master's	Alone
F	21	German	High school	Student house
F	20	Irish	Bachelor's	Student house
F	25	Dutch	High school	Family
F	23	Dutch	High school	Student house
F	22	German	Bachelor's	Student house
M	19	Indonesian	Bachelor's	Student house
M	19	Dutch	High school	Family



### 3.2 Personal Values

To assess the participants' personal values, they were asked questions about their environmental awareness, environmental habits, their views on the roles of companies and the government in environmental protection and the perceived effectiveness of their actions as well as companies and government actions (see Appendix A).

First, participants were asked to self-assess how knowledgeable and concerned they consider themselves to be on environmental issues. Over 50% of participants felt they were highly knowledgeable about environmental issues and 57% were concerned about environmental issues. The following questions asked the participants whether they believe that individual actions are important and can make a difference in protecting the environment and the reasons behind their answers. The responses varied between positive and mixed feelings. A common trend was that individual contribution can help but overall companies need to stop using environmentally unfriendly methods of production which in turn create environmentally unfriendly products. The response below sums up what many participants were emulating:

Choosing to be more environmentally conscious on an individual level does make somewhat of a difference, I would think. But it is the large companies, e.g., fast fashion, oil, that have a huge impact on the environment. And in my opinion overpower the individual actions.

On the other hand, many responses were very positive towards individual actions:

It takes about 3% of a population to be in a social movement for it to be successful, therefore every individual matters! Also, it is my responsibility as a citizen of a rich country to apply the principles of climate justice and do my bit. The other option is to sit back and let other people do the work, which is unfair to me. Hope and action is all we have.

These responses also demonstrate the social-altruistic, biospheric and egoistic nature of the responses of the participants. While some participants believed that individual actions were crucial in the fight against climate change, others believed that their individual actions did not carry as much weight compared to the actions of large companies and governments.

Regarding the role of companies, most participants believe that companies should be held accountable for their contributions to climate change. Participants specifically noted that

companies should process waste from their production in a sustainable manner and follow the environmental policies that are in place regarding production and waste management. This demonstrates the participants' environmental knowledge and awareness of the impact companies have on environmental issues as well as the perceived effectiveness of one's individual actions compared to a large-scale company's actions. Participants specifically mentioned the fast fashion sector as a large contributor to climate change, demonstrating a degree of environmental knowledge and awareness. Proper waste management and sustainable production processes were also frequently mentioned.

Furthermore, participants believed that the government should take actions related primarily to implementing strict policies for multinational corporations, recycling, and waste management. Enforcement of environmental policies, investment in renewable energy resources and sustainable materials and adhering to international climate agreements were notable mentions in the responses. This suggests that the participants have a good deal of environmental knowledge and awareness of the impact governmental policies can have on their PEB as well as climate change.

Generally, most participants thought individual actions were important but that companies needed to be held accountable and that systemic solutions were needed to bring about effective change. The participants had a broad knowledge and awareness of pertinent environmental issues which is evident in their responses. The responses revealed that participants can possess social-altruistic, biospheric and egoistic values all at once, depending on the PEB. Again, this shows that all factors of influence are interconnected, one affects the other and vice versa.

### **3.3 Socio-cultural Factors**

In the third section of the survey participants were asked questions about how their peers, social media, and cultural norms influence their PEB. Many participants voted that they do feel influenced by their friends to engage in PEB, however, to a limited extent. The majority, 38%, rated their influence level at 3 out of 5. When it came to the influence of family members the responses were on the lower side, more than 50% rated their family influence to be below 2 out of 5, indicating that the participants did not feel that their family members had much influence over their PEB.

When asked whether the participants think social media can influence one's PEB, the responses were overwhelmingly positive. More than half of the participants rated their social media usage at the highest level (5) and believed that social media does have a positive impact on influencing one's PEB. Participants stated that social media can help spread awareness and information on climate change and other environmental issues as well as shape one's perception of the world and how one acts when it comes to the environment. In the next question some participants stated that while social media is effective in spreading information it is not necessarily effective in making any differences. Participants noted that social media is prone to spreading misinformation and that social media users are exposed to a "constant thread of stimulus and issues that occur in the media" which can derail attention from environmental topics. Yet, there was a general consensus from participants that social media is effective in raising awareness about environmental issues.

Regarding whether social media has impacted their behaviour, it was surprising to see that the majority of participants did in fact report changing their behaviour due to social media. The Fridays for Future movement was mentioned numerous times; its popularity online inspired many participants to join the movement or take more environmental action in other ways. Avoiding fast fashion brands was also mentioned a few times; the unsustainable and inhumane working conditions of the factories that produce fast fashion was brought to light through social media platforms like Instagram.

In the survey around 50% of the participants indicated that they use a bike as their main form of daily transport. Although this question was placed in the infrastructure section of the survey, the socio-cultural influence of the biking culture in the Netherlands may also be considered a factor of influence on the participants' biking habits. Participants acknowledged cultural and social norms like returning glass and plastic bottles (statiegeld) to be reused or recycled in the Netherlands as well as cultural norms in their own countries for example, a participant from Germany said that in traditional German cuisine seasonal cooking is encouraged. One participant gave an apt example of how cultural norms can influence social norms; they wrote that it is part of their culture to eat meat alternatives which has now become a popular social norm for many young people as a form of PEB:

Indonesia has been consuming tempeh/tofu and other vegan food which now everyone says seem to be healthier and pro environment than meat.

Many of the responses about cultural norms that discourage PEBs had to do with institutional barriers such as a lack of public transportation, poverty, and legal regulations. Even more participants stated that cultural traditions and mindsets were being used as excuses to act in non-environmentally friendly ways. For example, there were a few responses that regarded capitalistic mindsets and consumerism as part of their culture:

Individualism, capitalism, and desire for status mandates that everyone has their own (big) car, house, a perfect lawn in their garden (green concrete) and shows off their wealth by consuming more. Also animal products consumption that started as a status symbol is engrained and people call it “tradition” and use it as an excuse to continue their overconsumption. Christianity is also use as an excuse, as some argue that God gave this planet for humans to consume. Some with holidays... everybody has to fly somewhere so they can say they have been a place (all inclusive holidays and all) whilst living in bliss and never facing the consequences of their actions.

This response highlighted various ‘cultural norms’ that discourage people from adopting PEB because they are viewed as part of tradition or as the norm. General overconsumption was the main theme that arose from the topic of cultural norms that discourage PEB. This further proves how personal values, socio-cultural factors, and institutional factors are all interconnected. Without the proper infrastructure and regulations certain PEBs may not considered the social or cultural norm unless people are willing to put in the effort to perform certain PEBs.

### **3.4 Institutional Factors**

This section of the survey contained questions pertaining to the participants’ daily transportation habits, recycling habits, meat consumption, green initiatives and incentives, and environmental education. In the survey, over 50% of participants reported using a bike as their main form of daily transportation because it is convenient, accessible, and safe to use. While this can also be attributed

as a cultural norm, this cultural norm would only be possible with the appropriate infrastructure. Participants were asked how often they use each specific form of transport and the reasons why. When asked why participants choose to use/drive cars the responses were mostly because public transport or bike lanes were unavailable or too expensive, overall, around 71% of participants rarely or never use a car. Around 62% of participants indicated that they always or often use public transport and the reasons were because it is easily accessible, pro-environmental and affordable. This indicates that the biking infrastructure in the Netherlands may have played a role in influencing people to use bikes instead of cars or public transport. Walking also scored very highly with around 90% of participants indicating that they walk very frequently. This was because the city they lived in was very walkable, it was convenient, and they simply enjoyed it. This is an indication of infrastructure that encourages people to walk, bike or use public transport.

Participants were generally positive about the impact recycling can have on the environment. Approximately 48% believed that recycling had a large impact on the environment, 38% felt neutral about recycling's impact on the environment and 14% believed that recycling has little to no impact on the environment. However, all the participants indicated that they recycle either always, often, or sometimes, with the majority recycling often (~62%). None of the participants stated that they did not recycle at all. Returning glass and plastic jars to grocery stores, dropping off paper and glass to the appropriate bins and waste management were also frequently alluded to. The high recycling rates may be attributed to the ease and accessibility of recycling facilities in the Netherlands. Recycling is widely promoted throughout the country and recycling facilities are available on nearly every street.

The main obstacles that prevented participants from recycling were that facilities can be very far sometimes or that it is inconvenient to separate garbage. However, despite these obstacles, as mentioned earlier, all participants still recycle. This suggests that the availability of recycling facilities and recycling programs combined with environmental awareness, knowledge and perceived effectiveness may impact young people's willingness and ability to perform PEB. This further demonstrates the interconnectedness of all the factors in influencing a person's PEB.

Furthermore, participants were also asked about their meat consumption habits. Meat consumption is influenced by personal values, socio-cultural, and institutional factors, which is why it was placed towards the end of the survey. The results showed that only one participant eats meat with every meal (4.76%), while 4 eat meat once a day (19%), 8 eat meat every other day (38%), 3 eat meat once a week (14%), 2 eat meat rarely (9.5%), and 3 never eat meat (14%). The main obstacles preventing the participants from reducing their meat consumption were that vegan alternatives can be quite expensive or that it is a cultural norm to consume meat. It was also mentioned that switching to a more vegetarian/vegan lifestyle was inconvenient and hard to find good alternatives. Additionally, animal welfare, environmental concerns, social pressure, influences of social circles, and human rights were listed as reasons why participants never or rarely consume meat. While the people who do eat meat claimed that meat was more affordable, necessary for dietary concerns, were influenced by their social circles, and enjoyed the taste.

Moreover, participants were asked whether financial incentives and rewards would motivate them to engage in PEB and the majority said yes, ~67%. Many participants mentioned cheaper food prices, challenges that they can share with friends, more initiatives like the “statiegeld” in the Netherlands and subsidies for environmentally friendly products. For example,

“Subsidies on plant based products, public transport, local holidays. But I think punishing e.g. taxing anti-environmental behaviour would make more sense”

Lastly, participants were asked whether they learned about climate change in school and whether that helped shape their attitude towards the environment. The majority of participants (81%) did learn about climate change in school and also believed that it helped to raise awareness and allowed for peaceful dialogue and discussion to take place. Others believed that they were too young when they were taught about climate change or that the curriculum glossed over important aspects about climate change.

#### **4. Discussion**

The results affirm the existing literature pertaining to the significance of personal values, socio-cultural, institutional factors in influencing PEB. Each of these factors will be further discussed in

relation to the participants' responses and the literature. Influences from different factors may be discussed in their non-respective section to highlight their interconnectedness. The outcomes of this research were based on a sample that were predominantly young, highly educated, female participants. This sample bias can be explained by the fact that the surveys were distributed through the researcher's social media platforms which mostly encompass people of such characteristics, therefore, encouraging a high degree of participation from people with such characteristics. However, these characteristics are consistent with previous studies conducted on the PEB of individuals (Li et al., 2019).

#### **4.1 Personal Values**

The participants' responses demonstrate how these categories are all interconnected. Social-altruistic and biospheric values were the most prominent among the participants' responses. However, egoistic values presented themselves as well, depending on the PEB. This was evident from the fact that every participant stated that they recycled in one form or another despite feeling neutral or negatively towards recycling's impact on the environment. It was also found that the influence of social norms and peer influence were additional factors of influence on the participants' recycling habits. For example, numerous participants noted having feelings of guilt for not recycling.

Participants were unsure about the effects of their individual actions in making a difference to protect the environment when compared to the impact of large companies. According to the Value Belief Norm theory, this also falls in line with social-altruistic or biospheric values (Becerra et al., 2023). This suggests that although these participants tend to embrace PEBs individually, they believe that companies and the government need to cooperate and/or collaborate with them and each other to make the largest impact. Furthermore, they believe that companies and the government need to be held accountable and that systemic solutions were needed to bring about effective change. Clearly, there was a consensus among the participants that institutional changes were necessary to bring about effective changes in environmental protection efforts. The participants demonstrated that they had a broad knowledge and awareness of pertinent environmental issues which is evident in their responses. This further shows how all factors of influence are interconnected, one affects the other and vice versa. Therefore, personal values were

found to play a key role in influencing the participants' PEB. Egoistic values indicated in the survey regarding recycling and reducing meat consumption may be overcome by providing more recycling facilities and better quality meat alternatives. More education on recycling procedures and the effects of going vegan may also help to promote these PEBs.

#### **4.2 Socio-cultural Factors**

As per the literature, many participants voted that they do feel influenced by their friends to engage in PEB, although to a limited extent (Culiberg and Elgaaied-Gambier, 2016; Wallis and Loy, 2021). Surprisingly, the participants felt that their families did not have much of an influence over their PEB, which contrasts the literature on the subject. Perhaps the participants were not self-aware enough to recognise the impact their families had on their PEB as we know that family dynamics play a critical role in shaping a young person's PEB (Culiberg and Elgaaied-Gambier, 2016; Wallis and Loy, 2021). Although the responses to family influence were on the lower end, many participants responded to questions such as, "What makes you choose to recycle?", with answers like, "I was told to do it and it makes sense to me" or "It has always been done in my family growing up so it is normal to me". This clearly indicates that family does play a role and have influence over young people's PEB, whether they acknowledge it or not. Alternatively, family dynamics may be counter-productive if family members are not aware of the current climate crisis or do not perform suitable PEBs.

The strengthening of interpersonal communication that was found in Han and Xu's (2020) study was also evident in this study's survey responses. The participants were avid users of social media and stated that they felt like social media can help to spread awareness on various environmental issues. Interestingly, many participants said that they were influenced to change some of their behaviours as a result of social media content. This elucidates the phenomenon that social media can act as a powerful tool for amplifying young people's voices and connecting like-minded individuals globally to mobilise collective action (Han and Xu, 2020). It further demonstrates how social media can provide young people with a sense of community, encouraging them to continue with their PEBs. Social media provides young people with a plethora of information on climate change and how to adjust their behaviours accordingly. For example, many participants became



involved in the Fridays for Future movements because of the social media attention it was receiving.

As expected, the majority of participants used biking as their main form of daily transportation, this may be due to the influence of the biking culture of the Netherlands. However, it was interesting to see how many participants felt that culture was being used as an excuse to perpetuate environmentally unfriendly traditions and lifestyles. This indicates that culture can have both positive and negative effects on people's PEB but nonetheless it does have influence and this knowledge can be leveraged to create a more environmentally friendly society by aiming to change cultural norms. For example, municipalities or governments can focus on reducing air travel by promoting local touristic attractions or promoting seasonal fruits and vegetables by creating limitations on the amount of non-seasonal produce that can be sold.

#### **4.3 Institutional Factors**

Generally, the responses from the participants indicated that infrastructure did affect their PEB. The fact that bikes were the main form of daily transportation for around 50% of the participants after which walking was the second most used form of transportation, speaks to the infrastructure of the Netherlands and how biking and walking are made easy and accessible for its inhabitants. This has allowed the creation of a biking culture in the Netherlands where it is the social norm and even the preferred mode of transport (Bruntlett and Bruntlett, 2018).

Secondly, the practice of recycling was common for all the participants despite some participants feeling that recycling makes no impact on the environment. The overall recycling rate for municipal waste in the Netherlands is one of the best in the European Union, speaking to the effectiveness of their recycling facilities and programs (AZoCleantech.com, 2019). Obstacles that prevented participants from recycling were inconvenience and laziness showcasing how egoistic values can prevent people from performing PEBs, however, in this case egoistic values did not play a significant role in deterring certain PEB since all participants stated that they recycle in one way or another, perhaps some more than others. This may stipulate that, for the PEB of recycling, social norms have greater influence than egoistic values. Similar, egoistic values were identified

regarding reducing meat consumption suggesting that egoistic values can have varying effects on depending on the type of PEB.

The results indicate that participants with higher social-altruistic and biospheric values are more likely to go out of their way to perform certain PEBs like reducing meat consumption or consistently recycling. Culture and social media were also found to be significant factors of influence concurring with Han and Xu's (2020) study and Culliberg and Elgaaied-Gambier's (2016) study. This suggests that governments and municipalities should focus on changing the cultural narratives of their countries to adopt more sustainable lifestyles.

#### **4.4 Limitations**

The overall contribution of this study can be put into perspective, while there are few studies that focus on the views of young people regarding their PEB, much of the results from this study were similar to the established literature. Some of the participants mentioned that the survey was too long. Towards the end of the survey responses were shorter and less elaborate indicating that the length of the survey may have influenced the quality of answers provided towards the end of the survey as participants became fatigued. This would then have a negative effect on the reliability of the survey. However, it may also be argued that striking a balance between acquiring the necessary information from participants while creating an engaging survey was a necessary compromise for the purposes of this research. An interview style approach may have provided more detailed insight into the perspectives of young people as well as a more focussed geographic area. Future research focussing on a single city and interviewing fewer participants may provide more reliable results.

The research question could have also been refined to focus on one specific factor such as education policy. For example, a policy analysis on the Netherlands' requirements for environmental education would have been more focussed and may have revealed valuable insights into how to improve the curriculum in schools. Many participants mentioned that the education they received in school on climate change and environment related topics was insufficient. Environmental education should be implemented throughout the school years as a critical part of the curriculum and should include a variety of aspects on the issue to address the many different

topics of climate change (UNESCO, 2023; Walsh, 2022). For example, relevant issues such as the impact of the meat industry and the fast fashion industry is important for young people to learn about not only from social media but also from educational institutions.

## **5. Conclusion and Recommendations for Further Research**

Overall, this research was able to provide an account of young people's thoughts and beliefs about what factors they perceive to be most influential over their Pro-Environmental Behaviour. To that end, this research affirmed the existing literature that was discussed in this study, while simultaneously providing new insights on how to use young people's opinions and perceptions to promote their PEB. For example, we know from the survey results that many of the participants have changed their behaviour towards more PEB as a result of social media campaigns.

Research on the impact of social media on behaviour change is still in early stages (Evans et al., 2022), but the results of this study have sought to contribute to further research in the areas of social media and its impact on PEB. The provided information has the potential to be used by municipalities, such as that of Groningen, to help achieve the targets set out in their action plan, as described in the beginning of this paper. Participants in the study revealed that social media platforms are a great way to spread information and awareness while leading to real behavioural change. According to the Social Norms Theory, social norms interventions can be used to spread correct information about peer group norms in an effort to correct misperceptions and thereby make the adaptation of PEBs more widespread (Boston University, 2022). Social media campaigns may be considered a sort of social norms intervention that are currently being used by many government agencies to influence behaviour change (Boston University, 2022). Since the majority participants themselves said that they changed their behaviours due to social media trends and campaigns, this is an avenue worth exploring more in the future for further research. Government and non-government agencies alike would benefit to take advantage of this information and use these platforms to help spread their environmental programs and achieve their environmental goals. Cultural norms may also be influenced in a similar manner as it is known that social media strengthens the interpersonal effects of young people (Han and Xu, 2020). These effects are seen in the way that participants have stopped using fast fashion brands and started being more conscious about their consumption because of information spread on social media platforms.

Infrastructure was found to play a major role in the PEB of the participants. Easily accessible public transport, recycling facilities, and bike lanes made it possible for the majority of participants to adopt the associated PEBs, ultimately leading to environmentally friendly cultural and social norms. Therefore, it is worth improving such services further for the purpose of promoting and enabling PEBs. Due to the widespread success of these services in influencing PEB among young people in the Netherlands, other governments ought to take note of this as an example of what to improve in their own constituencies. Additionally, government incentives to subsidise meat alternatives or social campaigns to change the cultural mindset around meat consumption may help to counteract the egoistic values behind reducing meat consumption. A cultural change can be prompted using social media and improvements or changes in infrastructure.

Furthermore, as per the Social Norms Theory, proper education can also help address misperceptions about climate change which can help influence young people's behaviour (Boston University, 2022). Therefore, a study on the climate education curriculum would be beneficial when creating strategies to encourage PEB. According to this study's survey, 81% of participants learned about climate change in school. Education has been recognised as a major influence on PEBs in the literature (Zilahy and Huising, 2009; Vincente-Molina et al., 2013) and while the majority of participants did feel that education helped shape their attitude towards environmental protection, many participants believed they were too young, that they did not practice what they were taught in school and that the curriculum glossed over the important things about climate change. This information can be used help create effective environmental education by tailoring educational materials and strategies to address these specific issues. Combining specific influencing factors identified in this study with environmental education may also help increase the chances of positive behavioural change.

Ultimately, by considering these factors, policymakers can design policies that incentivize PEB, provide supportive infrastructure and address the barriers to participation identified in this study. This study has elucidated how each of these factors of influence are interconnected. When we influence one factor it has the potential to stimulate change in another. Taking a holistic approach in considering what factors influence young people's PEB can help to ensure the effectiveness of

interventions and ultimately have an urgently needed positive impact on the widespread adoption of PEBs. Achieving a synergy between personal values, socio-cultural and institutional factors when promoting PEB may possibly be the most effective way to create widespread behavioural change.

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## Appendix A

### Survey Instrument

#### PEB Survey

This project is about exploring what factors young people believe affect their behaviour towards the environment, whether good, bad, or neutral. The aim of this project is help policy makers tailor effective strategies for environmental policy.

For further questions or inquiries about the project please contact [s.manohar@student.rug.nl](mailto:s.manohar@student.rug.nl)

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\* Indicates required question

#### Personal info

1. Do you consent to participating in this survey and to have your responses and information used for research purposes? \*

*Mark only one oval.*

Yes

No

2. Gender \*

*Mark only one oval.*

Female

Male

Prefer not to say

Other: \_\_\_\_\_

3. Education level \*

*Mark only one oval.*

High school diploma or lower

University Bachelor's degree

University Master's degree

PhD

4. What is your living situation? \*

I live with my family

I live in a student house

I live alone

## Section 2 – Environmental Awareness

This section is to assess your knowledge and attitude towards the environment

5. How knowledgeable do you consider yourself about environmental issues? \*

*Mark only one oval.*

Not at all

0

1

2

3

4

5

Very Knowledgeable

6. How concerned are you about environmental issues? \*

*Mark only one oval.*

Not at all

1

2

3

4

5

Very concerned

7. How important do you think it is for individuals to take action to protect the environment? \*

*Mark only one oval.*

Not important

1

2

3

4

5

Very important

8. What kinds of actions do you take to protect the environment? \*

9. How important do you think it is for companies to take action to protect the environment?

\*

*Mark only one oval.*

Not important

1

2

3

4

5

Very important

10. What kind of actions do you think companies should take to protect the environment? \*

11. How important do you think it is for the government to take action to protect the environment? \*

*Mark only one oval.*

Not important

1

2

3

4

5

Very important

12. What kind of actions do you think the government should take to protect the environment?

\*

13. Do you believe that your individual actions can make a difference in protecting the environment?

*Mark only one oval.*

Yes

No

Maybe

14. Can you briefly explain your reason for your answer? \*

### Section 3 – Socio-cultural influences

This section is to assess how family, friends and social media influence pro-environmental behaviour.

15. To what extent do your friends engage in pro-environmental behaviour? \*

*Mark only one oval.*

Not at all

0

1

2

3

4

5

All the time

16. To what extent does your family engage in pro-environmental behaviour? \*

*Mark only one oval.*

Not at all

0

1

2

3

4

5

All the time

17. To what extent do you feel influenced by friends to engage in pro-environmental behaviour? \*

*Mark only one oval.*

Not at all

0

1

2

3

4

5

A lot

18. To what extent do you feel influenced by family to engage in pro-environmental behaviour? \*

*Mark only one oval.*

Not at all

0

1

2

3

4

5

A lot

19. How often do you use social media platforms? (E.g. facebook, twitter, instagram, etc.)

*\*Mark only one oval.*

Not at all

0

1

2

3

4

5

Frequently

20. Do you think social media can influence pro-environmental behaviour and why? \*

21. How often do you engage with pro-environmental content on social media? (E.g. liking, sharing, commenting) \*

*Mark only one oval.*

Not at all



0

1

2

3

4

5

Frequently

22. In your opinion, how effective is social media in raising awareness about environmental issues? \*

23. Have you ever changed your behaviour or taken action for the environment as a result of social media content? If yes, please provide an example. \*

24. What types of pro-environmental content do you find more engaging or appealing on social media? (E.g. informative articles, visuals, personal stories) \*

25. Have you participated in any pro-environmental campaigns or challenges on social media? If yes, please provide details. \*

26. Would you be interested in participating in pro-environmental initiatives or campaigns organized through social media? \*

Yes

No

Maybe

27. Can you describe any specific cultural norms in your society that encourage pro-environmental behaviour? \*

---

28. Can you describe any specific cultural norms in your society that discourage pro-environmental behaviour? \*

---

#### Section 4 – Institutional influences

This section assesses how institutional factors influence pro-environmental behaviour.

29. What is your main form of daily transportation? \*

Car

Public Transportation

Bike

Walk

30. How often do you travel by car? \*

*Mark only one oval.*

Always

Often

Sometimes

Rarely

Never

31. What makes you choose to travel by car? \*

32. How often do you use public transport? \*

*Mark only one oval.*

Always

Often

Sometimes

Rarely

Never

33. What makes you choose public transport? \*

34. How often do you bike? \*

*Mark only one oval.*

Always

Often

Sometimes

Rarely

Never

35. What makes you choose to bike? \*

36. How often do you walk? \*

*Mark only one oval.*

Always

Often

Sometimes

Rarely

Never

37. What makes you choose to walk? \*

38. How much How much of an impact do you feel recycling has on the environment? \*

*Mark only one oval.*

Insignificant

1

2

3

4

5

Significant

39. How often do you recycle? \*

*Mark only one oval.*

Always

Often

Sometimes

Rarely

Never

40. How do you recycle? E.g. Do you go to facility? Do you reuse materials at home? \*

41. What makes you choose to recycle? \*

42. What are the main obstacles or challenges that prevent you from recycling? \*

43. How often do you eat meat? \*

*Mark only one oval.*

- Every meal
- Once a day
- Every other day
- Once a week
- Rarely
- Never

44. What are the reasons for your (non)- meat consumption? \*

*Check all that apply.*

- Taste
- Affordability
- Environmental concerns
- Animal welfare
- Dietary concerns
- Social pressure
- Influences of social circles (e.g. family, housemates, significant others)
- Other: \_\_\_\_\_

45. What are the main obstacles or challenges that prevent you from reducing your meat consumption? (For non-vegetarians/vegans, please write NA if vegetarian/vegan) \*

---

46. Would you be more likely to engage in pro-environmental behaviour if there were financial incentives or rewards? \*

---

Yes

No

Maybe

47. What type of incentives or rewards would motivate you? \*

48. Did you learn about climate change in school? \*

Yes

No

Can't remember

49. Do you think that helped shape your attitude towards environmental protection?

## Appendix B

### Code List

#### Personal Values

- Perceived Effectiveness
- Environmental awareness/knowledge
- Social-altruistic
- Biospheric
  - *Conscious consumption*
- Egoistic
  - *Laziness*
  - *Convenience*

#### Socio-cultural

- Peers and Family
- Social Media
- Cultural norms
  - Social norms
    - *Capitalism*
    - *Overconsumption*
  - Pro-environmental norms

#### Institutional

- Infrastructure
  - *Laws/policies*
  - *Recycling facilities*
  - *Accessibility*
- Education policy
- Green initiatives
  - *Incentives/rewards*