



DUTCH REPORT ON  
**55+ ENVIRONMENT AND  
CLIMATE LITERACY**



Greener Age



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## DOCUMENT INFORMATION

This report summarises the results of the research activities carried out in The Netherlands within the Erasmus+ project GreenerAge – Climate Change and Environmental Literacy for Urban Citizens 55+ (cooperation partnership in adult education, project number: 2021-1-FI01-KA220-ADU-000033502). More information is available at <https://greenerage.eu/>.

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## 1. Introduction

We are facing an environmental and climate crisis, affecting health and well-being and the quality of life of EU citizens. Our lifestyles and consuming behaviours impact communities thousands of kilometres away. Hence climate and environmental action are key priorities in Europe and other regions, with a green transition towards carbon neutral societies by 2050 or earlier. We cannot achieve these ambitious green targets unless citizens are also brought on board. While people 55+ are concerned about climate change, they often do not feel they will be directly affected, nor that they can personally take action to stop it. Hence GreenerAge specifically focuses on mature and older adults and aims to positively inform, engage, and empower them to take positive action towards climate change and reduced environmental impact in their everyday lives, as part of the green transition.

Since 1968, the definition of environmental literacy has been broadly reviewed, and the most widely used meaning is that it comprises an awareness of and concern about the environment and its associated problems, as well as the knowledge, skills, and motivations to work towards solutions of current problems and the prevention of new ones<sup>1</sup>. Increased climate and environmental literacy, combined with improved digital skills, will empower older citizens to adopt healthier behaviours for themselves and the planet, promote more active citizenship with other citizens in other EU countries and their intergenerational cooperation, influencing their family members, neighbours, and friends.

Sensitising learners to environmental and climate-friendly practices and impacts requires knowledge, tools and drivers for change that may lead to a better understanding of the problems and support people to change their behaviour, improve their daily habits and influence others.

Towards this aim, the GreenerAge partners in each country made an investigation on personal habits and knowledge of the 55+ adult target group, as well as on strategies to increase environmental and climate literacy and change behaviours. This report documents the results of the research in regard to the Dutch situation.

## 2. Methodology

This section explains the two main methods used for the data collection: desktop research and workshop and narrative interviews.

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<sup>1</sup> McBride, B B, Brewer, C A, Berkowitz, A R and Borrie, W T (2013) Environmental literacy, ecological literacy, ecoliteracy: What do we mean and how did we get here? *Ecosphere*, (4) 5. DOI: <https://doi.org/10.1890/ES13-00075.1>

## 2.1. Desktop Research

The GreenerAge learning platform is based on existing knowledge, platforms, tool, etc. Thus, desktop research, i.e., review of existing data (secondary data), was conducted. To guarantee consistency during the research project, a workshop on systematic desktop research was organised with partners in which research objective, criteria and scope were defined.

The desktop research was conducted at the Dutch and EU level. Language was limited to English and Dutch (each partner covers its local language), and no year limitation was set to obtain a comprehensive understanding of the phenomena. Regarding the data synthesis, descriptive statistics were used to analyse main source characteristics. Qualitative data were analysed using qualitative content analysis as this method is suitable for inductive qualitative analysis and where interpretation of latent content is required. Briefly, it can be said that the studies and documents collected in the desktop research provide evidence on the topic of households and consumers in general, meaning that the topic remains narrow regarding older age groups.

## 2.2. Workshop and narrative interviews

To collect feedback from our target groups and implement a co-creation approach, a workshop and narrative interviews were organised in The Netherlands. More in detail, in The Netherlands no separate workshop was held but the researcher responsible for this project joined a workshop organised by a local sustainability initiative. In addition, narrative interviews were held with adults 55+. Participants for the workshop were recruited by the local initiative. The participants for the interviews were recruited through the researchers' own networks.

Participants of the narrative interviews were aged between 55 and 62 with three females and four males. Regarding education level, most participants were higher educated. Two participants had a lower level of education (5 or lower). Because of the informal nature of the workshop no age or education level was asked. There were three participants at the workshop.

The main aims of the workshop and narrative interviews was to:

1. Explore, refine, and get feedback of PR1's content and understand older adults' needs related to environmental and climate literacy (PR1/A2);
2. Define their personal habits regarding environmental behaviours, their needs in terms of knowledge and level of digital skills, as well as possible intervention strategies, and the kinds of digital platforms that they are drawn towards (based on the earlier mapping) (PR2/A2).

Narrative interviews were performed to collect more in-depth information to better understand people's experiences, needs, and behaviours. Note that narrative interviews provide an opportunity to prioritise the interviewee's perspective rather than imposing a

more specific agenda. Narrative interviews lasted between 30 min and 1 hour each. In the appendices the questions that were asked in the workshop and interviews can be found.

### 3. Results

In the next sections we will discuss the results of both the desktop research and the narrative interviews and workshops from The Netherlands. The results will be discussed according to the predetermined themes concerning knowledge and behaviour, existing practices/initiatives/projects, skills, training, policy. We will then discuss the needs and gaps and challenges and barriers regarding these themes.

#### 3.1. Knowledge and behaviour

##### 3.1.1. Environmental literacy

###### *Desk research*

When looking at Dutch research concerning knowledge among the public on environmental issues and climate change 94 percent of people believe the climate is changing. Of these 94 percent, 60 percent believes that climate change is caused by humans. In addition, most people seem to worry about climate change for themselves and future generations (Kloosterman et al., 2021, Ettema, 2007). Although these numbers relate to the Netherlands as a whole, this study also states that mostly highly educated, young people, women and urban citizens worry most about climate change (Kloosterman et al., 2021). In that sense, citizens 55+ seem to be less engaged concerning environmental issues and climate change. This notion is also confirmed by another study performed in the Netherlands in 2019 in which they showed that the most climate sceptic people were more often older and had lower education and/or income (van der Grient et al., 2019).

Concerning seniors (65+) our desk research indicates that they worry more about the costs of combating climate change in comparison to other groups (Kloosterman et al., 2021). This conclusion is confirmed by a study among the biggest senior organisation in The Netherlands who in 2019 studied the attitudes among their members regarding climate change. They showed that more than 90 percent of the seniors thought sustainability was important, but that they also worried about the costs (KBO-PCOB, 2019).

Even though most of the reviewed research showed that Dutch citizens have knowledge about climate change some studies have shown that they do not always have ideas about what the consequences are of climate change on their personal lives. The study from (Roest et al., 2021) for example, shows that citizens of the Netherlands do not know what the consequences are of extreme weather or what they can do to mitigate these consequences. In addition, this study showed that citizens often have very different ideas about how big the consequences of climate change will be on their personal lives.

### *Narrative interviews and workshops*

From our narrative interviews it became clear that most of our participants think climate change and environmental issues are important topics for our future. All participants seemed to have general knowledge about climate change and believed that climate change is caused by human behaviour. Although participants had general knowledge about climate change and environmental issues it did become clear that some of the participants, if not all, had less knowledge about what climate change means for their personal lives. In addition, our participants indicated that they sometimes felt that they did not have enough knowledge about what actual green choices are or when we can speak of greenwashing. In summary, the workshop and interviews confirm the idea that citizens (55+) in general have knowledge about environmental issues, but do not always know the consequences of these issues on their personal lives. Moreover, older citizens seem, although potentially less than their younger peers, engaged with the topic.

### *Needs and gaps*

In general, it seems that people have knowledge about climate change and what they can do to mitigate the effects of climate change. However, they do not always know what the consequences of climate change are for their personal lives or the natural environment. This might also be one of the causes why they are not yet acting. Research also indicates that older adults are less likely to believe that the climate crisis is a big issue and are more often inclined to believe that resolving the climate crisis will cost a lot of money (KBO-PCOB, 2019). In addition, our participants have indicated that they feel like they cannot always distinguish what actual green choices are or when it is a case of greenwashing. From this we can conclude that more personalized and clear information about what climate change is specifically targeting citizens 55+ and the consequences of climate change in people's personal lives is needed to support people in acting sustainably. Besides, more unbiased information is needed about what actual green choices are and how people can recognize green washing.

## **3.1.2. Environmental habits**

### *Desk research*

In general, it seems that a lot of Dutch citizens already perform or are willing to perform several climate-friendly behaviours. Among these behaviours are the use of LED- lights, water saving showerheads, draft strips and windows made from isolation glass (van der Grient et al., 2019). Another study also indicates that most of the population (96 percent) stated that they always or often turn off the lights in rooms that are empty. And 69 percent say they always or often opt for a warm sweater or blanket in cold weather instead of turning up the heating. Half of the population claims to shower always or often for less than 5 minutes. Wearing second-hand clothes is still not very popular. When it comes to environmentally unfriendly behaviours such as taking the car for short trips and drying the laundry in a tumble dryer, 27 percent and 34 percent respectively say they never do this.



### *Narrative interviews and workshops*

Our interviewees most often mentioned trying to consume less, buying second hand, or only replacing something when it is really broken. In addition, buying products with less packaging and recycling as much as possible was also often mentioned. Some participants indicated that they did not use a clothing drying and installed solar panels. One participant even stated that he had invested in a water pump, a green roof, and a rain barrel. Another participant drove an electric car. However, most participants still used the car on a regular basis. For example, to get to and from work. Most of our participants also still consumed meat on a regular basis but did indicate that they know that consuming meat is not good for the environment.

### *Needs and gaps*

From the studies analysed and the narrative interviews, we can conclude that our platform could focus on dietary options, as most of our participants did not follow a vegetarian diet. Other aspects that can be improved include access to and use of renewable energy sources for people with fewer economic resources, as well as mobility choices, i.e., what actions can be taken at the individual level, both in terms of internalised habits (e.g. diet) and consumer- and climate-friendly choices related to mobility and housing.

### **3.1.3. Environmental footprints**

#### *Desk research*

The amount of carbon dioxide emitted globally for consumption purposes in the Netherlands, is the so-called carbon footprint. In 2021 the CO<sub>2</sub> emission was about 8 tonnes per capita (Ritchie, 2020). See also Figure 1.





### Per capita CO<sub>2</sub> emissions

Carbon dioxide (CO<sub>2</sub>) emissions from fossil fuels and industry<sup>1</sup>. Land use change is not included.



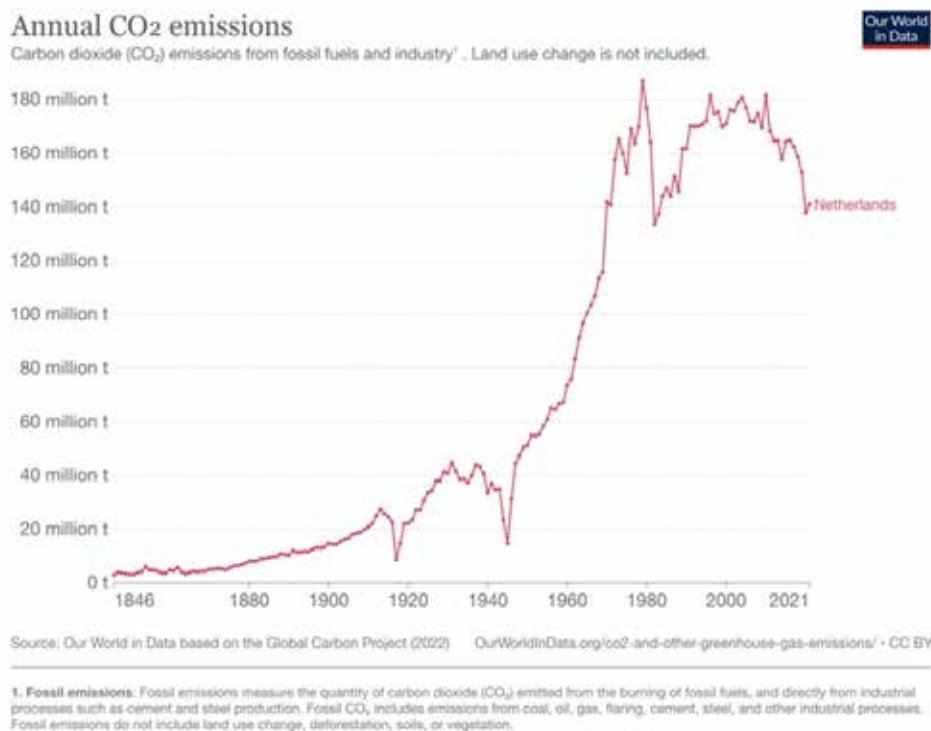
Source: Our World in Data based on the Global Carbon Project (2022) [OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/](https://OurWorldInData.org/co2-and-other-greenhouse-gas-emissions/) • CC BY

**1. Fossil emissions:** Fossil emissions measure the quantity of carbon dioxide (CO<sub>2</sub>) emitted from the burning of fossil fuels, and directly from industrial processes such as cement and steel production. Fossil CO<sub>2</sub> includes emissions from coal, oil, gas, flaring, cement, steel, and other industrial processes. Fossil emissions do not include land use change, deforestation, soils, or vegetation.

Figure 1: CO<sub>2</sub> emissions per capita in The Netherlands



The total CO<sub>2</sub> emissions were around 140 million tonnes in 2021 (see Figure 2). CO<sub>2</sub>, although one of the most influential, is not the only greenhouse gas that gets emitted in The Netherlands.

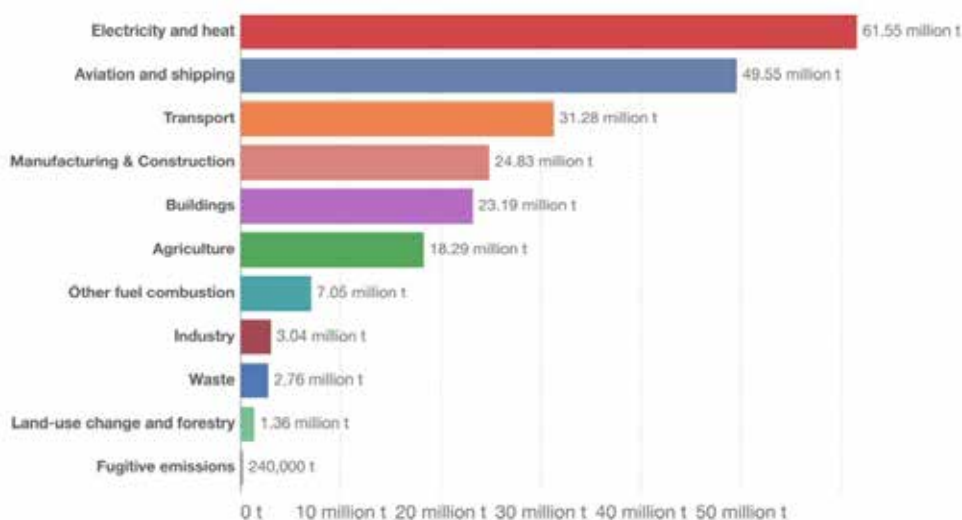


*Figure 2: Annual CO<sub>2</sub> emissions in the Netherlands*

In Figure 3 all gas emissions were measured by sector and from this it becomes clear that in The Netherlands the most emissions are due to electricity and heating. Aviation, shipping, and transport are the second and third most important sectors contributing to greenhouse gas emissions. Also influential are manufacturing & construction and agriculture, respectively responsible for 24.83 and 18.29 million tonnes of greenhouse gas emissions (Ritchie, 2020).

### Greenhouse gas emissions by sector, Netherlands, 2019

Emissions are measured in carbon dioxide equivalents (CO<sub>2</sub>eq). This means non-CO<sub>2</sub> gases are weighted by the amount of warming they cause over a 100-year timescale.



Source: Our World in Data based on Climate Analysis Indicators Tool (CAIT).  
OurWorldinData.org/oo2-and-other-greenhouse-gas-emissions • CC BY

Figure 3: Greenhouse gas emissions per sector

#### *Narrative interviews and workshops*

None of our participants were familiar with their own environmental footprint. Therefore, not much information was gathered on this topic.

#### *Needs and gaps*

There is a need to provide more information about which behaviours have a big impact on environmental footprint as well as introducing people to tools that can aid in calculating your own environmental footprint.

#### **3.1.4. Environmental and climate impacts**

See previous paragraphs about environmental footprint and environmental literacy. No other information could be found on the specific environmental and climate impacts of our target population.

#### **3.1.5. Habits and behaviour change**

##### *Desk research*

Concerning habits and behaviour change there are various studies that investigated the motivations and intentions of Dutch citizens to change their behaviours to be more environmentally friendly. One study showed that about one third of citizens (34 percent) indicate that they are (highly) motivated to make choices within their capabilities that help to combat climate change. This motivation is most closely related to three factors: the conviction that one's own contribution has an effect, that he or she is (partly) the cause of the problem,



and that the Netherlands (also) gets something in return for taking climate measures (van der Grient et al., 2019). However, for most people it seems that the environment is often not the most important motivation of Dutch citizens to live more sustainably. Instead, financial motives often play the biggest role as either a motivating factor or a barrier to live and behave in a sustainable way (van der Grient et al., 2019). Another big factor in motivating people to behave sustainably is increased comfort and the ease with which they can be implemented in their daily lives. For example, if something is easy to do and provides citizens with little hassle but does provide comfort, the threshold for carrying it out is lower.

#### *Narrative interviews and workshop*

From our workshop and interviews we can conclude that our participants also found finances, and comfort (or the lack thereof) two of the most important motivators to act sustainably or not. For example, some of our participants indicated not having the financial means to buy solar panels or insulate their house. Regarding mobility people that we interviewed often choose the comfort of their car. Mostly because the train and public transport are still more expensive than taking the car and driving is experienced as more comfortable and easier. Concerning food most of our participants ate meat, although most told us that they eat less meat because they know it is not good for the environment. In addition, not everyone seemed to have the right knowledge about basic behavioural changes that they can do for very little money such as applying radiator foil or turning off appliances that use energy all day. In these cases, lack of knowledge was the barrier for not behaving climate friendly. Lastly, an important barrier to acting sustainably was that changing your behaviour can be very difficult to do on your own and that having a community that supports you is important to have long lasting effects.

#### *Needs and gaps*

From our research we can conclude that most important facilitators and barriers for implementing climate-friendly behaviours consist of knowledge, finances, comfort, ease of use and opportunity. In addition, sense of community may have an impact on implementing climate-friendly behaviours in the long term. People thus need to have the right opportunity, facilitated by for example the municipality, to implement climate-friendly behaviours. This is especially true for behaviours regarding recycling. Citizens then need to know what to do and feel like what they are doing is useful in supporting the environment. They will also need to have financial means, or at least feel like they have the right financial support to implement the behaviours. Furthermore, the behaviours need to be easily implemented, fit in to their daily lives and increase their comfort to some degree. Lastly, people need to feel like they are not the only ones contributing to the climate issue, but rather want to feel a sense of community with like-minded people who are also contributing to the environment.

For our project to enact real behaviour change we should thus focus on giving practical tips and advice on sustainable behaviours that everyone can implement without too much effort. We should make clear what people are already doing to be sustainable such as recycling or only buying second hand so that they become more motivated. In addition, we should include tools that help people gain credible insights in how sustainable they are to help them see that often they are also not as sustainable as they think. The platform could then use a tailored and personalized feedback approach to provide easy to use options that would promote more sustainable behaviour.

Lastly, our platform and project should also support the creation of community and community action so that people have the idea that they have influence in their personal environment and that they can make an actual impact. In addition, behaviour change could be easier to achieve when you have other people doing it with you.

### **3.2. Existing practices/initiatives/projects**

There are various initiatives and projects in The Netherlands focused on promoting sustainability and behaviour change. In this section we will highlight four different types of such initiatives (more can be found in appendix A). Regarding digital skills there are various training offers, workshops, initiatives, and best practices. Some best practices regarding digital skills and sustainability and behaviour change can be found in appendix A.

[www.milieucentraal.nl](http://www.milieucentraal.nl)

The first initiative is milieucentraal.nl . This online platform comprises of a practical guide for sustainable tips and advice for people living in the Netherlands. They give information on a broad selection of topics such as insulating, flying or meat consumption. In general, they try to give mostly information about what you as a citizen can do to combat climate change and act in a more sustainable matter.

[www.ivn.nl](http://www.ivn.nl)

IVN Nature Education connects people and nature. The organisation aims to let young and old experience how fun, healthy, and important nature is. They do this with nature activities, courses, projects, and campaigns. IVN also has a course about climate change in which they teach people about climate change, the impacts and what you as a person can do to combat climate change .

[www.klimaatgesprekken.nl](http://www.klimaatgesprekken.nl)

Climate Conversations is a service provider in the field of climate coaching. The core product is a six-part workshop series, delivered by an in-house trained climate coach. They also offer an e-course and organize inspiration sessions. Climate Conversations coach groups of people and gives them tools to live within the boundaries of a planet, and shows participants how to have a good, effective, and positive climate conversation with others. They base the course

on insights from climate psychology and specifically the question: how is it possible that we have known what climate change is for decades, but that we have not yet acted? .

[www.gagoed.nl](http://www.gagoed.nl)

Besides projects initiated by organisations or citizens most municipalities also have campaigns to promote behaviour change amongst their population. Municipality Leiden for example has the GaGoed campaign. The GaGoed campaign promotes sustainable behaviour through information, subsidies, and activities.

#### *Needs and gaps*

As it is important for our platform and project to create a sense of community, we should work with existing initiatives so that we can connect the future users of the platforms to them. Additionally, we could gather more lessons learned from these initiatives and practical tips that could be used to motivate other citizens to act as well.

### **3.3. Existing (digital) skills**

#### 3.3.1. Older adults

##### *Desk research*

The Netherlands is one of the highest-ranking European countries regarding digital literacy, with only Iceland ranking higher and both Norway and Finland at the same level (see Figure 2). According to data gathered by the European statistical office Eurostat, 79% of the Dutch population between the ages of 16 to 74 was determined to have basic or above basic digital skills in the year 2021 (Eurostat, 2022a). This percentage has remained constant over the last five years with data from 2017 and 2019 indicating the same percentage (Eurostat, 2022b). The Netherlands is therefore very close to achieving the European target in digital proficiency which is set at 80% by 2030 (European Commission).

Other research however indicates that 25% of over 55+ indicate that they personally feel like they do not possess enough digital skills (ouderenfonds, 2019). This study also showed that older adults most often use a smart phone, tablet, or laptop to enter the digital world. They mostly use these devices to e-mail, go on the world wide web, use social media, have contact with other, or organise their finances (ouderenfonds, 2019).

##### *Narrative interviews and workshops*

We only discussed digital skills with participants of our interviews. In terms of digital skills our interviewees were all digitally literate to a certain extent. They could use the computer and smartphone easily and used several social media apps as well.





### *Needs and gaps*

Even though Dutch citizens seem to have very well-developed digital skills for our target group it is still very important that the platform is easy to use and promotes and explains the use of other digital tools that can help you change your behaviour in a more sustainable way. In addition, using a gamified approach can also help users of our platform learn digital skills as well.

### 3.3.2. Trainers

Almost no information was found concerning the (digital) skills of trainers. However, the previous paragraphs show that the digital literacy levels are very high in The Netherlands. We can therefore assume that trainers will possess at least basic digital skills.

## **3.4. Existing training**

### *Desk research*

See 3.2 existing practices/initiatives/projects for more information. In The Netherlands we could find several existing training programmes provided by for example IVN natuureducatie and Climate Conversations. Concerning digital skills there are various training offers available (see below).

<https://www.allemaal-digitaal.nl/>

Allemaal Digitaal (everyone digital) collects second-hand laptops, tablets, smartphones, desktops, and monitors from industries and donates them to Dutch citizens that cannot afford digital devices. Businesses can contact the website if they have something to donate.

<https://www.digisterker.nl/>

Foundation Digisterker (Digi stronger) offers educational programmes for both young people and adults to increase their knowledge and understanding of the digital data-society and digital competences. Their programmes are made from a social perspective and aim to teach people the independence, safety, and confidence to work with digital services of social organisations, those from the government.

<https://digitaalsamenleven.nl/>

Alliantie Digitaal Samenleven (alliance living together digitally) is an initiative of the Ministry of Internal Affairs and Kingdom Relations, the Number 5 Foundation and VodafoneZiggo to make the Dutch society more digitally inclusive by using a multiyear action- and learning programme. Their website offers information and news to increase awareness on the topic, and links to projects and events.

<https://www.digivaardigindezorg.nl/>



The coalition Digivaardig in de zorg (digitally proficient in healthcare) is committed to improve the digital skills in the healthcare sector. They offer a platform with self-tests and learning material for healthcare professionals to improve their knowledge on digital technologies in their sector.

<https://digivitaler.nl/>

DigiVitaler is part of Digisterker (see above) and offers learning programmes in digital healthcare on topics like medical websites, health applications, online health portals, and video consulting.

<https://oefenen.nl>

Oefenen.nl (practicing.nl) is an online platform where people can practice and improve their language, calculating, computer, and internet skills, but also learn about things like how to have a healthy lifestyle, make sustainable choices, and make sensible financial decisions.

<https://www.steffie.nl/>

Steffie is a cartoon personage that explains complicated topics in an easy-to-understand way. The range of topics is very diverse and includes visiting the GP, using DigiD (the Dutch digital identification system), video calling, using a mobile phone, getting health insurance, and much more. Even though the style may seem childish at times, Steffie is targeted to adults of all ages and is a very popular platform, with more than a million visitors per year.

#### *Needs and gaps*

In the Netherlands there are trainings and platforms available. However, these platforms are either too complex to use for people with lower digital literacy or they do not focus holistically on climate change and sustainability (but focus on the current energy crisis or other specific topics related to sustainability). Our platform should therefore focus holistically on behaviours that can aid in combating climate change (including behaviours such as making your garden greener or joining climate actions). Since there are not many trainings or workshops known to us, our platform can fill this gap by providing a holistic and playful approach to climate issues and supporting climate-friendly behaviour. Regarding digital skills there are various training offers available. However, none of these offers, to our knowledge, use a gamified approach to teach older adults digital skills.

### **3.5. Existing policy**

#### *Desk research*

The Dutch government wants to combat climate change and has therefore set the goal that the Netherlands in 2030 produces 49% less CO<sub>2</sub> emissions compared to 1990. To achieve this target, the cabinet has adopted a package of measures called the Climate Agreement (2019). The Dutch Climate Agreement contains different goals and actions are formulated for 5

different sectors: built environment, mobility, industry, agriculture & land use, and electricity. Any industry has its own goals, but they can strengthen each other as well. The Climate Agreement concerns measures taken in the whole country. Of course, there is a big role for municipalities and other local actors to support the national government in implementing these measures and develop their own policy based on this agreement (VNG).

- For the built environment the agreement in the Climate Agreement is that 7 million in 2050 homes and 1 million buildings are off natural gas.
- For mobility it has been agreed in the Climate Agreement that public transport must be a good alternative to the car in all parts of the Netherlands. The interests of the travellers come first. They must be able to travel quickly, comfortably, and safely from A to B. This requires reliable and up-to-date travel information, good connections to bicycles, taxis and cars, and a safe and easy payment system. To achieve this goal the government is already investing heavily in further improving the rail network in the Netherlands.
- For industry the climate agreement states that industry will be circular and emit virtually no greenhouse gas.
- For agriculture and land use the climate agreement states that this must be climate neutral in 2050
- For Electricity in 2050 70% of all electricity will come from renewable sources.

Besides agreements made on big topics such as sustainable energies the Climate Agreement also includes measures that support citizens in making more sustainable choices. Most of these measures include subsidies to provide targeted support to households in financing the sustainability of their homes in for example buying solar panels or insulation. Additionally, there are initiatives for people who are not homeowners or have a suitable roof to apply solar panels to also participate in the energy transition and get financial benefits from it. Lastly, it is important to point out that the Climate Agreement describes the importance of citizen participation and engagement in the design and implementation of measures.

Although various policies are in place to combat climate change there is not much research on the effects of policy to enact behaviour change. One study indicates for example that the effects of policy in The Netherlands need further investigation based on relevant theories or models prior (Brunsting et al., 2013). Additionally, researchers indicate that national policy for behavioural interventions motivating sustainable behaviours could be improved or extended with more scientific instruments.

### *Needs and gaps*

There are extensive policy measures on national and local level developed to combat climate change in The Netherlands. However, policies do sometimes focus too much on 'richer' people concerning subsidies and tax reductions for example for buying solar panels or an electric car. We should focus on advising policy makers to make sure that everyone in society can use subsidies and other support measures to adapt their own house. In addition, policies

often do not specifically address citizens 55 years or older. We could then advise policy makers to define policies specifically addressing this target group, since studies show that older adults are less likely to be concerned about the climate.

Furthermore, policy interventions aimed at changing behaviours should base their interventions on theoretical strategies as well as assessing the effect of their policies. In terms of supporting community action, we should advise policy makers to focus on working together with and supporting local initiatives and citizens by remaining in regular contact them as well as providing financial or other types of support. Lastly, policy should focus on facilitating the exchange of knowledge and expertise and connecting initiatives at different levels.

## **4. Discussion of results: challenges and barriers**

In this section, based on the results explained in section 3, main barriers, and challenges to address the main needs and gaps identified are discussed, as well as implications for the four main project results: Compendium, Platform, Trainer Manual and Policy Booklet.

### **4.1 Compendium**

For the compendium it is important to make sure that we provide practical tips and support based on lessons learned from good initiatives throughout Europe. The challenge in doing so is that all countries have different needs and wishes, and the compendium should address these needs and wishes holistically.

### **4.2 Platform**

For the platform the most significant challenge is how to reach the right people and motivate people to keep coming back to the platform and change their behaviour. This is very complex and there is no current literature on how to exactly motivate people to adapt more climate-friendly behaviours. In addition, it will be very challenging to engage different groups of people. We cannot provide a one size fits all for our online platform. People with less financial means have different needs, than people who can afford a car for example. To tackle this challenge one of our participants mentioned that we could engage people through other organizations and clubs such as nature organisations, local platforms, the ANWB, and the Homeowners Association or energy coaches for a more personalized approach. This suggests that to engage people and make them use our platform we must work together with local initiatives and make the platform reliable, credible, and easily accessible.

### **4.3 Trainer Manual**

The purpose of the trainer manual is to provide the trainers guidance on how to put theoretical training methods into practice by considering the needs of older adults. It provides the needed hand-on approach to being able to work with the training materials.

From our results it seems clear that the trainer manual should be suitable for a wide range of trainers in the field of adult education as we currently have a limited amount of (formal) offers available for people 55+ who specifically want to learn about sustainability and climate change. Therefore, it will be likely that the trainers, who are experienced in working with older adults, will be from different backgrounds and will not always have specific knowledge or expertise about climate change issues. It is essential that our trainer manual will thus be easy to use and provide concrete examples for training content. Furthermore, the trainer manual should have different sections so that trainers can either focus on promoting personal actions or actions focused on making the community more sustainable and environmentally friendly.

### **4.4 Policy booklet**

The main challenge of the policy booklet is to get our recommendations to the right people that have enough power and influence to enact policy change. In the Netherlands it would be most feasible to contact municipalities through our own network to share our policy booklet. Through these first contacts we may be able to get the policy booklet presented to a wider audience of policy advisors.

## 5. Synthesis – Visual map of key findings

### Appendix A – Platform, resources, and best practices

<https://www.allemaal-digitaal.nl/>

Allemaal Digitaal (everyone digital) collects second-hand laptops, tablets, smartphones, desktops, and monitors from industries and donates them to Dutch citizens that cannot afford digital devices. Businesses can contact the website if they have something to donate.

<https://www.digisterker.nl/>

Foundation Digisterker (Digi stronger) offers educational programmes for both young people and adults to increase their knowledge and understanding of the digital data-society and digital competences. Their programmes are made from a social perspective and aim to teach people the independence, safety, and confidence to work with digital services of social organisations, those from the government.

<https://digitaalsamenleven.nl/>

Alliantie Digitaal Samenleven (alliance living together digitally) is an initiative of the Ministry of Internal Affairs and Kingdom Relations, the Number 5 Foundation and VodafoneZiggo to make the Dutch society more digitally inclusive by using a multiyear action- and learning programme. Their website offers information and news to increase awareness on the topic, and links to projects and events.

<https://www.digivaardigindezorg.nl/>

The coalition Digivaardig in de zorg (digitally proficient in healthcare) is committed to improve the digital skills in the healthcare sector. They offer a platform with self-tests and learning material for healthcare professionals to improve their knowledge on digital technologies in their sector.

<https://digivitaler.nl/>

DigiVitaler is part of Digisterker (see above) and offers learning programmes in digital healthcare on topics like medical websites, health applications, online health portals, and video consulting.

<https://oefenen.nl>

Oefenen.nl (practicing.nl) is an online platform where people can practice and improve their language, calculating, computer, and internet skills, but also learn about things like how to have a healthy lifestyle, make sustainable choices, and make sensible financial decisions.

<https://www.steffie.nl/>

Steffie is a cartoon personage that explains complicated topics in an easy-to-understand way. The range of topics is very diverse and includes visiting the GP, using DigiD (the Dutch digital

identification system), video calling, using a mobile phone, getting health insurance, and much more. Even though the style may seem childish at times, Steffie is targeted to adults of all ages and is a very popular platform, with more than a million visitors per year.

[www.milieucentraal.nl](http://www.milieucentraal.nl)

The first initiative is milieucentraal.nl . This online platform comprises of a practical guide for sustainable tips and advice for people living in the Netherlands. They give information on a broad selection of topics such as insulating, flying or meat consumption. In general, they try to give mostly information about what you as a citizen can do to combat climate change and act in a more sustainable matter.

[www.ivn.nl](http://www.ivn.nl)

IVN Nature Education connects people and nature. The organisations aim to let young and old experience how fun, healthy, and important nature is. They do this with nature activities, courses, projects, and campaigns. IVN also has a course about climate change in which they teach people about climate change, the impacts and what you as a person can do to combat climate change .

[www.klimaatgesprekken.nl](http://www.klimaatgesprekken.nl)

The Climate Talks Foundation is a service provider in the field of climate coaching. The core product is a six-part workshop series, delivered by an in-house trained climate coach. They also offer an e-course and organize inspiration sessions. Climate Conversations coaches' groups of people and gives them tools to live within the boundaries of a planet, and shows participants how to have a good, effective, and positive climate conversation with others. They base the course on insights from climate psychology and specifically the question: how is it possible that we have known what climate change is for decades, but that we have not yet acted? By enlarging the handprint of our participants, Climate Conversations want to contribute to triggering the behavioural change that is needed in society .

[www.gagoed.nl](http://www.gagoed.nl)

In addition to projects initiated by organisations or citizens most municipalities also have campaigns to promote behaviour change amongst their population. Municipality Leiden for example has the GaGoed campaign. The GaGoed campaign promotes sustainable behaviour through information, subsidies, and activities .

[www.duurzaamdenhaag.nl](http://www.duurzaamdenhaag.nl)

Duurzaam Den Haag works towards a The Hague without natural gas and without electricity from fossil, polluting fuels. Their vision is to create a sustainable city where life is good for all residents of The Hague and in which everyone in The Hague naturally does what they can in the field of ecological and social challenges. They work towards this vision by supporting energy coaches, doing projects and supporting citizen initiatives.

[www.grootoudersvoorhetklimaat.nl](http://www.grootoudersvoorhetklimaat.nl)

The Grandparents for Climate started in the autumn of 2016. Any senior can join the movement. Their mission is to keep the earth habitable for future generations and accelerate towards a 100% sustainable energy supply. That transition is already underway and the Grandparents for the Climate are committed to this and stand up for all children and grandchildren. In the Netherlands, the Grandparents for the Climate are active with meetings, reading campaigns, lectures/webinars, local campaigns and of course by signing and presenting a Manifesto.

<https://liternatuur.sites.uu.nl/>

Students of University of Utrecht have started a website about climate literacy in the Dutch literature. They are interested in the ways climate change is discussed in Dutch literature.

[www.milieudefensie.nl](http://www.milieudefensie.nl)

Milieudefensie ("environmental defense" in Dutch) is a Dutch environmental organization, founded on January 6, 1971 by a group of scientists in response to a report by the Club of Rome. Milieudefensie conducts research and publishes its own reports. (sometimes requested by the government). Furthermore it has become an action group, often operating alongside other organisations, such as the political party GroenLinks. Milieudefensie is part of the 30 national organizations that Friends of the Earth Europe represents and unites at the European level.



## Appendix B – questions addressed during the workshop and narrative interviews.

Main questions/topics addressed during the workshop were:

First,

1. How do you understand environmental and climate impacts, environmental literacy, green behaviours, environmental footprint, environmental skills?

Secondly,

1. Do you think environment is important?
2. Why do you think environment is important?
3. Is there a difference in importance for older people or younger people? And for poor or rich people? And for educated or not so educated people?

Thirdly,

1. What is your experience thus far in environmental green behaviour?
2. What did you do yourself to improve the environment?
3. What do you see that others do?
4. What do you think works well and what doesn't?

Fourthly,

1. What do you need to improve your environment? And the environment of others?
2. What do you need to improve your green behaviour?
3. Could you exactly tell us what works well and what doesn't?

To collect feedback from the workshop participants, a feedback form was developed (see below)

The interviews can be divided into:

First, introduction and explanation of GreenerAge, including the practical information about data protection information. Second, the interviewee began telling their story. Main questions/topics addressed during the interview were:

1. What does “having green behaviour” mean to you?
2. What “green” behaviours do you think you have in your daily life?
3. Do you know what to do to be more friendly to the environment? Why (or why not)?
4. What would make a difference in adopting greener behaviours?
5. Do you think that the information to understand what is better for the environment is easily available? Where?

6. What factors make you choose environmentally friendly options?
7. What factors do not allow you to choose environmentally friendly options?
  - a. Lack of information
  - b. Lack of skills
  - c. Lack of tools
  - d. Difficulties to access the information as online
  - e. If others, please add here \_\_\_\_\_
8. Would you like to change your habits and behaviours, but you cannot do it? If yes, please tell us why and what resources/knowledge/training you need.
9. Do you usually use the internet and digital apps?
10. If so, what kind of digital platforms would you prefer to use to improve your environmental skills and habits? If not, would you be open to use one if you received training for it?
11. What kind of policies do you think that are needed for a greener behaviour?
12. What are the challenges and barriers to engage people over 55 years of age? How could we overcome these challenges?
13. In your opinion, how can we promote environmental and climate literacy?

Finally, the interview concluded the interview explaining the next steps, and providing contact details to the participants in case they would like to add further input or ask any questions. To collect feedback from the narrative interviews, a feedback form was developed (see below).

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