



# ECOVILLAGES AND THEIR SURROUNDING COMMUNITY

Exploring the extent to which the interaction can  
solve urgent sustainability issues

Master thesis by Thalina Siebert



## Colophon

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## Preface

Dear reader,

I am proud to present my master's thesis: *Ecovillages and their surrounding communities: Exploring the extent to which the interaction can solve urgent sustainability issues*. Completing this thesis was the final step in finishing my master's study Society, Sustainability and Planning at the University of Groningen.

First, I would like to express my gratitude to my supervisor Dr. E.M. Trell-Zuidema for her guidance and constant encouragement throughout my master's thesis. The many feedback moments and her patience with all my questions helped me immensely in writing my thesis.

I want to express my sincere appreciation to all Woldwijk and Ten Boer participants, who generously contributed their time and willingness to share their experiences with this research.

Lastly, I would like to thank my partner, family and friends for their constant support in the thesis process and throughout the master's programme.

I hope you will enjoy reading my thesis,

Thalina Siebert

*Groningen, July 2023*

## Abstract

Researchers have recently emphasized the need for changes in lifestyles and consumption patterns due to economic, social, and environmental challenges. Overconsumption and unsustainable practices have led to consequences such as biodiversity loss, deforestation, and climate change. Addressing these issues requires changing individual behaviours and transforming society as a whole. Citizens' initiatives have emerged, including ecovillages, which are seen as frontrunners in sustainable solutions across various domains due to their holistic approach. Ecovillages are consciously designed communities that aim to regenerate their social and natural environments through sustainable practices. They often collaborate with local governments, engage with the broader public, and work towards a more sustainable future. Due to the knowledge gap in understanding the interactions between ecovillages and the wider public, this research aims to explore how this interaction can solve urgent sustainability issues. The eco-cooperative Woldwijk in Ten Boer in the Netherlands was chosen as a case study, and 10 interviews were held with residents of Woldwijk and Ten Boer. Additionally, observations and content analysis were conducted to gain deeper insights into the context of the interactions. The main findings of this study demonstrate that the interaction between the ecovillage Woldwijk and Ten Boer is crucial for gaining local support and ensuring the long-term sustainability of the ecovillage. The activities organized by Woldwijk, such as workshops and events, have brought locals and ecovillagers together. Still, there is potential to enhance and diversify these activities. The interactions between Woldwijk and the local community have improved over time. However, there are still existing preconceptions that can hinder interactions. Woldwijk has influenced sustainability awareness among locals, but the impact on sustainable behaviour may depend on individual interests and external influences. Based on the findings, recommendations for future research include conducting an evaluation study to assess the robustness of the interaction between Woldwijk and Ten Boer, exploring the impact of ecovillages on the sustainable behaviour of the wider community, and investigating the spillover effects of sustainable practices learned through participation in ecovillage activities. For Woldwijk, recommendations include developing a guideline with sustainability goals to create a shared understanding of their objectives, implementing an evaluation form for activities to gather feedback and improve future events, and actively participating in sustainability activities organized by Dorpsbelangen Ten Boer to strengthen collaboration and demonstrate their commitment to the local community.

**Keywords:** Ecovillages, surrounding community, interaction, sustainability challenges

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## 1. Introduction

In the past decades, various researchers have shown that the current lifestyles and consumption patterns in the Global North need to change as the world is facing many economic, social and environmental challenges (Seyfang *et al.*, 2012; Gernert *et al.*, 2018). The strive for unlimited economic growth and consumerism tremendously impacts the earth since the available resources are limited (Singh *et al.*, 2019). Human activities have maximised the use of natural resources, which have various consequences such as biodiversity loss, deforestation and climate change (Bellard *et al.*, 2012; Ojha *et al.*, 2018; Golub *et al.*, 2022). Dealing with the consequences of overconsumption and unsustainable lifestyles in the Global North is seen by many as a complex and vague task as it interlinks various issues (Pisters *et al.*, 2020; Ardoin *et al.*, 2022). As some of these consequences, such as loss of biodiversity, have already become irreversible, many people around the world have started to argue that more emphasis needs to be put on sustainability to ensure that future generations can also enjoy and survive on planet Earth (Bellard *et al.*, 2012). Therefore, the aim should not just focus on changing the current practices of individuals, communities, businesses and governments, but also society as a whole has to change (Hölscher *et al.*, 2018). As Silva (2018) argues, there is a great need 'to shift from the current state of affairs to a re-imagined, renewed society in harmony with itself and its natural surroundings' (p. 60). However, current regulations, institutional and organisational structures are often difficult to adapt quickly towards addressing global sustainability issues, and a societal shift in practices and mindsets takes time (Gernert *et al.*, 2018). As a response, many individuals and communities have started to experiment with possible sustainability-related solutions in recent years (Lorenz *et al.*, 2018; Do Amaral Junior *et al.*, 2020). Frequently individuals form initiatives with other like-minded people to strive towards a common goal, such as a more sustainable lifestyle, rather than waiting for the government to change regulations and policies that focus on sustainability (Igalla *et al.*, 2019; Ardoin *et al.*, 2022). Such citizens' initiatives engaging in sustainability issues can take various forms, such as community gardens, ecovillages, local energy groups or residents that set up a recycling initiative (Ardoin *et al.*, 2022). This research focuses on ecovillages as these communities are often seen as 'frontrunners' for innovating sustainable solutions across different domains (energy, food, waste, housing, etc.) due to their experimental and holistic approach (Singh *et al.*, 2019; Ulug *et al.*, 2021a). The Global Ecovillage Network (GEN) defines an *ecovillage* as 'a rural or urban community that is consciously designed through locally owned, participatory processes in all four dimensions of sustainability (social, culture, ecology and economy) to regenerate their social and natural environments' (GEN, n.d.). The people that live in ecovillages have similar ideals and values around sustainable living and experiment with how to live with only a tiny ecological impact (Hendriks *et al.*, 2022; Ulug *et al.*, 2021a).

Ecovillages generally set their vision, aims and projects (Igalla *et al.*, 2019), but must engage with other actors like the local governments for funding or relevant permits (Ergas, 2010; Hendriks *et al.*, 2022). Additionally, many of them need to involve the broader public in their activities to attract new members and mobilise support for initiatives goals and have an impact beyond the immediate context of the initiative (Hendriks *et al.*, 2022). Lockyer *et al.* (2013) discuss that in recent years ecovillages have shifted from being 'relatively isolated countercultural experiments offering a profoundly alternative vision and lifestyle to the cultural mainstream to increasingly working in formal and informal alliance with the more progressive elements in today's society' (p. 217). The authors further argue that this shift does not come from changes in how ecovillages reach out to others but can be linked to a broader change in attitudes and beliefs of mainstream society (Lockyer *et al.*, 2013).



Ecovillages exist in many countries, such as the United States, Spain, Germany and Australia (Ergas, 2010; Lockyer *et al.*, 2013; Renau, 2018). Also in the Netherlands, some ecovillages have been established to experiment with local sustainability solutions. The first ecovillage in the Netherlands is De Hobbitstee which was started in 1969, and since then, many initiatives have come to life (Bosch, 2017). In 2013 some individuals started the Ecodorpen Netwerk Nederland, which currently displays 44 ecovillages around the country, to exchange knowledge, work together and strengthen their position as a social movement (Ecodorpen Netwerk Nederland, n.d.). The Netherlands has Europe's second-highest population density and agricultural land prices (Eurostat, 2021, n. d.). Additionally, due to the high competition in land use, the country faces a scarcity of available land (Janssen *et al.*, 2020). The scarcity of land and the high prices for arable land can be a potential constraint for individuals to start an ecovillage in the Netherlands. However, the Dutch government has emphasised promoting alternative housing options developed by citizens (Rijksoverheid, 2021). Moreover, the national government is aiming to create a circular economy until 2050 by reducing the use of raw materials by replacing them with sustainable materials such as wood, reusing and repairing existing materials and products and closing the loop of circularity through recycling processes (Rijksoverheid, 2023). To achieve circularity, it is necessary to facilitate the collaboration between different stakeholders to mitigate sustainability challenges such as climate change or overconsumption on a local, regional and national level (Bowen *et al.*, 2017; Yi *et al.*, 2018).

In the Dutch context, some research exists about the internal organisation of ecovillages, the external relationships with the local government and other organisations, and the relationships between ecovillagers (Bosch, 2017; Kommeren *et al.*, 2021; Tijhuis, 2021). Bosch (2017) identified six ecovillages in the Netherlands in her research which all had partnerships with the municipality, contractors, architects and housing cooperations. This is primarily due to the support of financial resources, the addition of social housing to the ecovillage or having experts in building sustainable housing (Bosch, 2017).

### 1.1. Problem statement and research questions

In ecovillages, members live together to reduce their environmental footprint through various sustainable practices such as alternative energy generation, growing seasonal food or building with reclaimed materials (Christian, 2007; Singh *et al.*, 2019; Hendriks *et al.*, 2022). Nevertheless, ecovillages are embedded in their wider surroundings as they depend on governmental permits, earning money outside the community and providing educational knowledge for visitors (Ergas, 2010; Ulug *et al.*, 2021a). Some researchers have argued that little research has been conducted into the interactions between ecovillages and their surrounding communities and how they can be relevant to solving urgent sustainability issues (Esteves, 2017; Renau, 2018; Nogueira *et al.*, 2019; Schelly *et al.*, 2023). The Netherlands provides excellent advantages to research the interactions between ecovillages and their surrounding community due to its high population density and the current governmental emphasis on promoting locations to experiment with alternative housing. To further explore the interaction (potential) between ecovillages and the surrounding community, this research will zoom in on the ecovillage Woldwijk in the Northern Netherlands. The ecovillage Woldwijk was started in 2015 and is located on the outskirts of the village of Ten Boer in the Province of Groningen. Woldwijk's aim is to be a space where people can live and work in alternative ways and experiment with innovative solutions for a sustainable lifestyle (Woldwijk, n.d. i). The ecovillage has several members that are part of three residential areas, Tiny House Woldwijk, StaatjeVrij and Landjegoed, the Ten Boer Energy-cooperative and two farmers who lease the agricultural part of the property (Woldwijk, n.d. i). Currently, more than 50 adults and more than ten children live in Woldwijk

consciously and communally to reduce their environmental footprint (Woldwijk, n.d. i). Woldwijk is an interesting case to investigate as it is located at the edge of the village Ten Boer and a biking distance from the city of Groningen, potentially providing a fertile ground for various interactions between the residents.

For this research, the following main research question was formulated:

*What is the relevance for ecovillages to involve and actively interact with the broader community they reside in, and how can the ecovillage Woldwijk in the Netherlands more effectively involve the community of Ten Boer in their activities in order to tackle some urgent sustainability issues?*

In order to answer the main research question, multiple sub-questions have been formulated. These sub-questions were divided based on their theoretical and empirical nature. The theoretical sub-questions are:

- a) What are ecovillages, and what are their aims and goals concerning sustainability?
- b) How are ecovillages related to, interacting with and influenced by the surrounding communities and why is it relevant for ecovillages to have networks beyond the community?
- c) What influences citizens' willingness to participate and be involved in ecovillages?

The empirical sub-questions are closely connected to the case of Woldwijk and explore the interactions between the local community of Ten Boer and ecovillage Woldwijk. The empirical sub-questions were formulated as follows:

- a) What motivates the ecovillage Woldwijk to involve the local community in their activities and how does Woldwijk perceive the current level of interaction?
- b) What are the current activities that bring together locals and the ecovillage Woldwijk and what are the potentials to enhance or extend these activities?
- c) How do the locals perceive and interact with the ecovillage Woldwijk and has Woldwijk had any influence on the local's perception of sustainability?

## 1.2. Academic and societal relevance

Ecovillages have been extensively researched in the past years and investigating the internal organisation, such as community building and conflict management, but also the external relations with governments and other local actors (Ergas, 2010; Dias *et al.*, 2017; Lennon *et al.*, 2022). The primary objective of this thesis is to explore the intricacies of establishing successful connections between ecovillages and the wider community. In order to achieve this, it is crucial to understand the underlying processes that facilitate the formation of such bonds and the mutual benefits they can yield for both ecovillages and the surrounding community. In addition to understanding these processes, it is essential to delve into the potential of this collaboration between ecovillages and the general public to address pressing sustainability concerns (Meijering *et al.*, 2007; Lockyer *et al.*, 2013; Ulug *et al.*, 2021a).

This research aims to contribute new insights into the dynamics of interaction between ecovillages and their surrounding communities, specifically focusing on how this interaction can effectively address sustainability issues such as biodiversity loss, climate change, and overconsumption. By gaining a deeper understanding of this interaction, valuable perspectives can be gained regarding the surrounding community's adoption of sustainable practices from ecovillages. Moreover, this understanding can also show how such practices can enhance local resilience in the face of climate change and other urgent sustainability

challenges (Lockyer *et al.*, 2013; Dias *et al.*, 2017). According to Schelly *et al.* (2023), ecovillages have the potential to 'provide a structural support system that can reduce barriers to collective action', and therefore, it is relevant to investigate whether the interaction with the broader community can lead to increased participation to solve urgent sustainability issues (p. 4). Additionally, the 'local laws, economy, and prevailing ideologies within the dominant society affect ecovillagers, and vice versa' (Ergas, 2010, p. 33). It is further argued by Ulug *et al.* (2021b) that even though ecovillages try to detach from the mainstream through their sustainable activities, they are rooted in their wider physical and social environment. Research on Spanish ecovillages by Renau (2018) concluded that many local ecovillages face conflicts with their surrounding communities and urges that these interactions be further investigated by academia to understand these interactions better. Esteves (2017) and Nogueira *et al.* (2019) came to a similar conclusion. They recommend investigating the interactions with other actors to understand how ecovillages distribute their knowledge and innovation to broader society. On the other hand, Schelly *et al.* (2023) claim that future research should focus not only on how ecovillages interact with other communities but also on how people who interact with ecovillages perceive the interactions. Lastly, Lennon and Berg (2022) 'factual representations of people living more sustainably in an ecovillage that fosters sustainable lifestyles have the potential to shape how others engage with sustainable living' (p. 312) and therefore, it is relevant for governments, planners and society to gain insights how the interrelations between the ecovillages and their surrounding communities can mitigate urgent sustainability issues (Hügel *et al.*, 2020).

### 1.3. Outline and structure of the thesis

This thesis is structured into multiple chapters to answer the primary and secondary research questions. Chapter 2 discusses the current academic theories necessary to understand and to apply the research to the case study of Woldwijk. In Chapter 3, the methodological approaches are elaborated on, and Chapter 4 describes the research locations of Woldwijk and Ten Boer. The results are described in Chapter 5, while Chapter 6 discusses the results, conclusions are drawn and recommendations are made. Additionally, the relevance for planning theory and practice is depicted. The final chapter reflects on the research process and research outcomes.

## 2. Theoretical framework

This chapter describes the existing theories about ecovillages, interactions and the willingness to participate in ecovillages. The first section describes the ideals, values and organisational structure of ecovillages and the potential online and in-person interactions with the surrounding communities that follow it. Moreover, the importance of location and visibility are discussed. The third section elaborates on the factors influencing the willingness to participate in ecovillages. Each section is concluded by answering the related theoretical secondary research question. The end of the chapter visualises the identified concepts in a conceptual model.

### 2.1. Ecovillages

#### 2.1.1. Ideals and values

Ecovillages generally have various aims and goals to address global sustainability challenges like overconsumption, biodiversity loss, and climate change (Casey *et al.*, 2020; Schwab *et al.*, 2022). To combat overconsumption, ecovillages engage in food production, employing permaculture principles, minimizing food waste, and transitioning towards plant-based diets (Carragher *et al.*, 2018; Sherry, 2019; Wiest *et al.*, 2022). Furthermore, ecovillagers promote sustainable practices by repairing and repurchasing appliances instead of constantly acquiring new ones, thus reducing overconsumption (Ergas, 2010). Research done at the Dancing Rabbit ecovillage (Scotland County, Missouri) by Boyer (2016) concluded that through the sustainable lifestyle of an individual of the community, the energy and material consumption is 10% less than the average American resident. These savings in consumption are achieved through collective actions such as vehicle-sharing, waste recycling, the use of alternative materials and competency development (Boyer, 2016). The research on the eco-community in Ithaca in the state of New York by Kirby (2003) describes similar results. Here, the environmentally-friendly construction of eco-houses has led to the energy consumption of about one-third of the average American household (Kirby, 2003).

In addition to addressing overconsumption, ecovillages prioritize the protection of local flora and fauna. They contribute to this cause by restoring ecological habitats and providing space for native wildlife (Tao *et al.*, 2022). Another significant aspect of their sustainability efforts involves reducing car dependency and consequent CO<sub>2</sub> emissions (Dias *et al.*, 2019). Ecovillagers employ strategies like car sharing with fellow community members and promoting self-sufficiency to reduce CO<sub>2</sub> emissions (Wiest *et al.*, 2022). Through these combined efforts, ecovillages actively work towards fostering a sustainable lifestyle that curtails overconsumption, safeguards local ecosystems, and minimizes their carbon footprint.

While ecovillage residents hold different ideologies than mainstream society, most communities still maintain connections with mainstream society, relying on services such as employment, hospitals, insurance, and banks (Meijering *et al.*, 2007; Ergas, 2010). Moreover, some ecovillages try to change mainstream society by demonstrating examples of sustainable lifestyles (Dias *et al.*, 2017). It has been observed that ecovillages created solely for self-sufficiency face challenges in sustaining themselves over an extended period, as they depend on financial resources, maintenance, regulations, and interpersonal differences among members (Kunze, 2012; Boyer, 2015). However, if they overcome these initial struggles, ecovillages can serve as valuable learning and experimentation spaces for sustainable practices (Boyer, 2015). Kunze (2012) observed that some ecovillages have been places for experimentation for more than thirty years and are still run by the consensus of the members. Building and strengthening relationships between members is crucial for fostering the values of the ecovillage, with activities such as community dinners, gardening, and social gatherings playing a significant role in creating a sense of community (Meijering,

Huigen, *et al.*, 2007; Rubin, 2021). Some already well-established ecovillages might form a network with other ecovillages around the world, in which they share new ideas and solutions for global issues (Avelino *et al.*, 2009).

Despite their sustainable aspirations, ecovillages often face constraints such as local zoning, housing laws, and bureaucratic processes (Ergas, 2010). Residents of ecovillages often need to work outside the community to sustain themselves financially, which can limit the time they can dedicate to pursuing sustainability goals of their community (Ergas, 2010). On the contrary, Escribano *et al.* (2017) found in their research on ecovillages in Catalonia, Spain, that some members reduced their working hours to spend more time within the community, emphasizing their commitment to communal living and sustainability.

There has also been some critique on the impact of ecovillages on changing broader societal patterns and behaviour. Fotopoulos (2000) argues that the impact of an ecovillage is limited as it is mainly focused on individuals who have the means to solve sustainability issues. This also came to light in the research on ecovillages in Catalonia, Spain, by Escribano *et al.* (2017), that the people who decided to move to an ecovillage are generally highly educated with the means to make a change in their lifestyles and the necessary technical skills (Soderholm, 2010). To add to this, Katie Gilbert (2014, cited in Esteves, 2017, p. 974) argues that 'intentional communities are rarely started, or even sought out, by those in extreme poverty, by immigrants or by a population with much racial diversity. Instead, well-educated, middle-class whites are disproportionately the demographic that forms and lives in these groups'. Another critique by Fotopoulos (2000) is whether eco communities impact 'the billions of the underprivileged people struggling to survive in the North or the South' (p.307).

### 2.1.2. Organisation and structure

Ecovillages can be located in urban or rural settings and are either fully self-sufficient or partly connected to the surrounding community (Meijering *et al.*, 2007). According to Nogueira *et al.* (2019), ecovillages are generally based on 'specific social contracts or social management plans' that all community members agree on (p. 5). Mychajluk (2017) reports that many ecovillages and other intentional communities have a cooperative culture with relationships, sharing and interactions as the primary focus. In many cases, ecovillages can be seen as a form of cooperative as they adopt (some of) the following cooperative principles: 'voluntary and open membership; democratic member control; autonomy and independence; education, training and information; cooperation among cooperatives and concern for community' (Kaswan, 2014, p. 181).<sup>1</sup> Moreover, a cooperative culture emphasises 'participatory decision-making that values all perspectives, the peaceful resolution of conflict, and a 'we' (rather than 'me') mentality' (Mychajluk, 2017, p. 183). Some ecovillages have internal committees that are responsible for the development of policy proposals, the organisation of internal and external activities as well as making operational decisions (Mychajluk, 2017). At the ecovillage Sieben Linden in Germany, the residents can join one of the various committees with a particular responsibility like construction or food preparation (Würfel, 2012). These committees make the decisions within their specific responsibility, but every community member can veto the decisions a committee proposes (Würfel, 2012).

People can join a community through various means, and the membership period can also vary depending on the size of the ecovillage (Christian, 2007). Ecovillages also often charge an annual fee and monthly rent, while in others, one needs to buy a part of the property to

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<sup>1</sup> Due to these similarities, this thesis uses the term 'ecovillage' and 'eco-cooperative' interchangeably.

become a member (Christian, 2007; Baker, 2013). Consequently, this money is often reinvested in the ecovillage to maintain the buildings or to buy new equipment (Christian, 2007). Most ecovillages organise a visitor program where curious individuals can join to learn about the daily activities, but also the agreements, internal processes and the local culture (Christian, 2007). These visitor programs can also vary in length, with some ending after a year. Other communities require in-depth interviews and screenings for potential members to be accepted (Christian, 2007). For some ecovillages, such as the Dancing Rabbit Ecovillage, joining the community is difficult (Rubin, 2021). Interested individuals need to first sign up for the visitor programme that features various intense workshops and rules (e.g. no cars to go to the nearby town) and then be sponsored by an established member of the ecovillage. This intentional barrier is created to select only people who are very eager to join the Dancing Rabbit Ecovillage (Rubin, 2021).

Once individuals have gone through the membership process at a particular ecovillage, it is generally asked to sign membership contracts which describe the rules and commitments of the ecovillage (Christian, 2007). At the eco-community Whole Village in Canada, newcomers receive a copy of the ecovillage's policies and bylaws. This document describes what is expected about the participation and a guidance document with the community obligations (Mychajluk, 2017).

### 2.1.3. Synthesis: Ecovillages and sustainability

To conclude this section and to answer the first research question *What are ecovillages, and what are their aims and goals concerning sustainability?*, ecovillages often operate based on their ideologies centred around community, sustainability, resource conservation and alternative lifestyles (Kirby, 2003; Avelino *et al.*, 2009; Ergas, 2010; Boyer, 2016). Furthermore, the organisational structures within ecovillages often incorporate cooperative principles, emphasising participatory decision-making, conflict resolution, and a collective mindset (Mychajluk, 2017). Ecovillage residents hold different ideologies than mainstream society but many maintain connections for employment, healthcare, and finances (Meijering *et al.*, 2007; Ergas, 2010).

Regarding sustainability challenges, ecovillages strive to reduce overconsumption by utilising earth materials in their construction and implementing practices such as gardening for food production, recycling or vehicle-sharing (Kirby, 2003; Ergas, 2010; Boyer, 2016). Through these sustainable practices, significant reductions in energy and material consumption can be achieved, potentially mitigating the consequences of the sustainability challenges such as climate change or overconsumption that the world is facing. Therefore, some ecovillages aim to influence society through their sustainable lifestyles (Dias *et al.*, 2017). Nevertheless, ecovillages face constraints such as local zoning and housing laws or bureaucratic hurdles that influence how members pursue sustainable practices (Ergas, 2010).

## 2.2. Interactions with the surrounding community

The Cambridge Dictionary defines interaction as 'an occasion when two or more people or things communicate with or react to each other' (Cambridge University Press & Assessment, 2023). Interactions can be either in person (face-to-face) or online and are essential for information sharing (Carr *et al.*, 2007). Face-to-face interactions are relevant to establish good personal relationships between individuals (Hunt, 2007). However, in recent decades interactions through digital information tools have also become popular (Carr *et al.*, 2007). Examples are email, social media, websites and other online platforms accessed through cell phones or laptops (Carr *et al.*, 2007). Online interactions have become an everyday practice that shapes the opinions and perceptions of many. This is also true regarding how

individuals perceive sustainability and how they frame the term depending on their everyday context (Tao *et al.*, 2023). Perceptions of sustainability can be shaped through (online) and social media since individuals can connect to others to discuss sustainability issues and learn more about sustainability practices (Craig, 2019). One example Mankoff *et al.* (2007) described are online tools that calculate a person's environmental footprint, potentially leading to changes in their perception of sustainability. As another example, some websites have become open-source platforms where individuals can learn how to build sustainable projects without the necessary expertise (Tao *et al.*, 2023). Important to note is that both online and face-to-face interactions can reinforce a person's opinion about sustainability (Craig, 2019).

### 2.2.1. Ecovillages and interactions

Ecovillages tend to interact with their surrounding community with the aim to bring a change towards a more sustainable lifestyle (Dias *et al.*, 2017). Ecovillages can be crucial in empowering citizens as they provide experimental space, access to resources and can teach new skills and strategies to tackle sustainability issues (Avelino *et al.*, 2009). Thus, members of an ecovillage need to 'recognise the importance of their daily sustainability practices for creating impact outside their community' (Ulug *et al.*, 2021b, p. 10).

Ergas (2010) studied the interactions between urban ecovillages and mainstream society in the United States in her research. On the one hand, the interactions with the broader (mainstream) society gave new opportunities to create new networks, and the ecovillages provided a safe space for curious residents to experiment with new innovative technologies. However, these opportunities were possible since the town strongly emphasised sustainability and supported ecovillages (Ergas, 2010). Other researchers have described that to reach mainstream society, ecovillages generally have to adjust their goals, practices and values to make them more accessible to the broader community (Boyer, 2015; Westskog *et al.*, 2018). Schelly *et al.* (2023) give the example that the Dancing Rabbit Ecovillage interacts with a religious community that lives in the surrounding area by offering midwifery services and borrowing machinery from the religious community. However, ecovillagers have to change the way they dress whenever they receive visits from religious members or when they visit this religious community (Schelly *et al.*, 2023).

Consequently, ecovillages must 'reach a balance between opening up to mainstream society and preserving their community identity' (Ulug *et al.*, 2021a, p. 14). The struggle to keep this balance was described by Rubin (2021) during his study of the Dancing Rabbit Ecovillage in Missouri. The members of Dancing Rabbit Ecovillage want to be an example of alternative living and receive visitors all year, but this also brings tension with strengthening the interpersonal connections between members and redefining their values. Therefore, people curious about Dancing Rabbit Ecovillage can visit if they have signed up for one of the activities this community offers (Rubin, 2021).

### 2.2.2. Online interactions

According to Pisters *et al.* (2023), eco-communities use various channels to share their visions, goals and innovations with the broader society. Many ecovillages have a website on which they share updates, current developments, and upcoming events (Cerratto-Pargman *et al.*, 2016). The use of the internet helps to increase the visibility of ecovillages towards mainstream society and can be used as a platform to attract potential volunteers and people that want to physically visit the initiative (Dias *et al.*, 2017; Pisters *et al.*, 2023). Moreover, the websites are a fundraising platform to receive financial donations (Fois *et al.*, 2014). Magnusson (2018) found in his research on Swedish eco-communities that most of them rely on the internet and social media to spread their ideas nationally and internationally while

attracting funding from (inter)national organisations. This information sharing via the internet is not just relevant for ecovillages to connect with potential members but also helps create more robust networks with other ecovillages. In these networks, ecovillages share their knowledge, values and ideas to create sustainable innovations (Magnusson, 2018).

### 2.2.3. In-person interactions

Next to online interactions, members of ecovillages also engage in in-person interactions with mainstream society. Various ecovillages offer educational courses, workshops and visitor days for people who are curious about ecovillages and their innovations (Christian, 2007; Schelly *et al.*, 2023). Moreover, ecovillages organise these events independently but can collaborate with schools, universities, research institutes or other communities (Christian, 2007). Tamera, an ecovillage in Alentejo, Portugal, receives up to 500 international visitors during the summer, from which many participate in ecological training and educational courses that last between ten days and one month (Esteves, 2017). However, to participate in this training, individuals are asked to pay a daily fee of 20€ (Esteves, 2017). In his ethnographic research on the Whole Village in Ontario, Canada, Baker (2013) outlines that this ecovillage holds a monthly event called 'Work Bee'. Here, people curious about ecovillages can sign-up to participate for one day in the work activities (Baker, 2013).

The eco-community ZEGG, located close to Berlin, Germany, has started to diffuse their technological innovations, such as organic food production or a biological system for wastewater treatment, into the surrounding communities by setting up visitor days, workshops, seminars and articles in the local newspapers (Lockyer *et al.*, 2013). Furthermore, they have set up, together with others 'a free school in the neighbouring town of Belzig, an info-café that acts as a centre for tolerance in the face of extremism and violence, projects with refugees and asylum seekers, a community currency system, a nature-based kindergarten, campaigns to promote fair-trade products, community supported agriculture, and many types of cultural activities, including music nights, art exhibitions, and theatre productions' (Lockyer *et al.*, 2013, p. 224).

Some ecovillages connect with the broader communities through food practices. Ulug *et al.* (2021b) describe that the Los Angeles Ecovillage uses one of their spaces for their project Food Lobby, a weekly vegetable box. Local farmers provide the vegetables, while the volunteers prepare the vegetable boxes. While sorting the vegetables together, volunteers and farmers share their experiences and knowledge on preparing the produce. The vegetable boxes are often picked up by residents of the Los Angeles Ecovillage and surrounding areas, which can lead to interactions at the Food Lobby space (Ulug *et al.*, 2021b). Other strategies of the Los Angeles Ecovillage to involve the neighbourhood include art practices (e.g., painting murals together) and providing a meeting space for other local initiatives (Ulug *et al.*, 2021b).

Another example is the Yarrow Ecovillage in Chilliwack, Canada, which set up a deli to sell homegrown produce to the public. Furthermore, the ecovillage sells its produce at the Chilliwack Farmers Market and thereby offering locally grown fruits and vegetables within a short travel distance (Newman *et al.*, 2014). In her research about Italian ecovillages, Brombin (2015) describes food as a 'contact zone' for ecovillagers and the surrounding communities (p. 474). Guests that come to visit learn about the local products of the ecovillage, help in the preparation of meals, and can also participate in communal meals. These activities give guests valuable insights into the ecovillage practices while learning more about sustainable practices that guests can replicate at home (Brombin, 2015).

Another path through which ecovillages can interact with their surrounding community is through sustainable building practices. In their research on three Australian ecovillages, Tao



*et al.* (2023) explore how these communities shape their identity through sustainable-making practices. In workshops offered by some ecovillagers, participants learn how to build tiny houses or eco-domes and the skills they acquired, which they can use to replicate the constructions in their environment. These workshops give access to individuals to design and build their own sustainable projects while reshaping their sustainable identity (Tao *et al.*, 2023).

Most ecovillages must interact with the local or regional government as they must follow local zoning rules and ask for permits (Boyer, 2015; Renau, 2018). In some cases, collaboration with local governments can lead to the negotiation of current zoning regulations and push permits for alternative construction practices such as tiny housing (Boyer, 2015). Christian (2007) elaborates in her book about finding a community that the O.U.R. eco-community located in Shawnigan Lake, Canada, negotiated local zoning codes with the local government and was able to add a new category that approves sustainable and natural buildings. Another example of collaborating with higher governmental institutions is the Findhorn ecovillage in Scotland which has set up a UN CIFAL (Centre International pour la Formation d'Acteurs Locales) centre to train local actors such as the government in sustainability-related topics (Lockyer *et al.*, 2013). The ecovillage receives financial and political support from the local and national Scottish governments to give this training (Lockyer *et al.*, 2013).

#### 2.2.4. Location and visibility

Their geographical location can impact the degree of interactions between ecovillages and their surrounding communities (Dias *et al.*, 2017). In the U.S., many ecovillages are located in rural areas as the land is generally cheaper, and zoning regulations are less strict than in urban areas (Ergas, 2010; Dias *et al.*, 2017). Additionally, ecovillages can purchase bigger plots of land as there is more physical space than in urban areas (Dias *et al.*, 2017; Schelly *et al.*, 2023). Nevertheless, ecovillage in rural areas might have fewer options for interactions with their surrounding communities as the physical distances are larger than in urban areas, and they could be seen as 'Utopian islands' as Andreas (2013) described. Some ecovillages, such as the L.A. Ecovillage, are located in an urban area which can potentially lead to more interactions with the surrounding community as they are more visible and accessible compared to their rural counterparts (Ergas, 2010; Dias *et al.*, 2017).

The Netherlands, on the other hand, has no remote rural areas. This is due to its high population density of 512.8 people per km<sup>2</sup> which is the second highest density in Europe after Malta (Eurostat, 2023). This high population density makes the country very accessible, and thus, the 'rural' areas are close to urban centres (Meijering, Van Hoven, *et al.*, 2007). Therefore, individuals can make use of the elements of both the urban (e.g. housing, infrastructure, leisure) and the rural areas (e.g. nature, agriculture) (Jansma *et al.*, 2022). Dias *et al.* (2017) describe that the proximity of urban and rural areas can bring potentials for ecovillages as the 'agricultural elements in these areas can function as experiments with innovative models for land use, typically favouring the activity of small-scale farming in cost prohibitive areas and helping to reduce tensions between urban and rural zones' (p.85). Van Dorst (2012) argues that the ecovillages in the Netherlands are not independent but relate to the socio-spatially and ecological context of the town or village where they are located. Therefore, the ecovillages are, in that sense, not a literal village but more a neighbourhood of a village or town (van Dorst, 2012). Located in a highly dense country like the Netherlands can influence the visibility of an ecovillage as they are closer to the urban areas and thus can potentially interact more with surrounding communities than remote rural ecovillages (Boyer, 2015). However, it can also lead to visitors coming unannounced and exploring the ecovillage freely. In the Dutch ecovillage Zuiderveld, this started a conflict as curious visitors

from the surrounding areas would walk through the gardens of the ecovillagers and the communal garden (Tijhuis, 2021). The residents of the ecovillage described that the unannounced visits felt like an invasion of their privacy, but to mitigate this challenge, they decided to put up an information board at the entrance of the communal garden for curious neighbours (Tijhuis, 2021).

### 2.2.5. Synthesis: Relevance of interactions and networks

This section aimed to answer the second research question *How are ecovillages related to, interacting with and influenced by the surrounding communities and why is it relevant for ecovillages to have networks beyond the community?*. Based on the research described above, ecovillages interact to connect with their surrounding communities and promote sustainable living practices. Depending on an ecovillage's location and visibility, the potential for interactions can vary (Ergas, 2010; Andreas, 2013). Online interactions are one means to interact with others through the internet and social media. This type of interaction can help increase visibility and attract potential volunteers and visitors, as well as financial funding (Fois *et al.*, 2014; Schelly *et al.*, 2023). It also enables the sharing of knowledge, values, and ideas among ecovillages, fostering collaboration and the development of sustainable innovations. In-person interactions take the form of educational courses, workshops, visitor days, and collaborative projects with schools, universities, and other communities. Through these activities, ecovillages offer opportunities for learning, skill-building, and first-hand experiences of sustainable practices (Brombin, 2015; Tao *et al.*, 2023). Some ecovillages also sell produce to the public and use food practices to connect with the surrounding community. Nevertheless, some research about ecovillages discusses that interactions require adapting goals and practices to make them more accessible to the broader community (Boyer, 2015). Finding a balance between opening up to mainstream society and preserving community identity can be a challenge for ecovillages.

Overall, the interactions with the broader community play a crucial role in empowering and inspiring citizens to adopt a sustainable lifestyle, fostering learning about sustainable practices, and driving positive change beyond the boundaries of the ecovillage.

## 2.3. Willingness to participate in ecovillages

In the previous section, the interactions with the surrounding community from the side of an ecovillage were discussed. Nevertheless, it is also essential to understand the motivations of individuals to participate in ecovillage practices (Schelly *et al.*, 2023). Hgel *et al.* (2020) define participation 'as an umbrella term incorporating various forms of interaction with people, from informing and listening through dialogue, debate, and analysis, to implementing jointly agreed solutions' (p. 2). Generally, the willingness to participate in sustainability-related initiatives such as ecovillages is influenced by various factors (Bamberg *et al.*, 2015) that can be categorised into social and personal categories (Kirby, 2003; Van Schyndel Kasper, 2008).

### 2.3.1. Social factors

Smith *et al.* (2021) describe that social factors such as social norms or community identity can influence the willingness of individuals to participate in a project. Social norms are accepted or disapproved by society, and they can influence an individual's behaviour (Keizer *et al.*, 2018). Additionally, (pro-environmental) behaviour can also be impacted by the visible behaviour of other people (Culiberg *et al.*, 2016). Therefore, if societal pressure exists for a particular behaviour, such as being sustainable, or others engage in sustainable behaviour (e.g. taking a bicycle instead of a car), one might also adopt more sustainable practices (Kalkbrenner *et al.*, 2016). Community identity is another important factor that impacts the participation of individuals in ecovillages. According to Kalkbrenner *et al.* (2016), individuals

that identify with the community also tend to participate more in community-oriented practices such as collective action. Therefore, if an individual identifies with an ecovillage's sustainability-related goals and vision, they might be more likely to participate in activities (Kirby, 2003).

### 2.3.2. Personal factors

Next to social factors, the willingness to participate in ecovillages is also determined by an individual's personal factors. Similar to social norms, individuals also have personal norms that influence the moral extent to which they participate in a specific behaviour (Keizer *et al.*, 2018). Miller *et al.* (2012) describe that people with personal experiences with behaviour that harms the environment, were triggered to switch to a more sustainable lifestyle. This has also triggered a moral responsibility to make sustainable choices in daily life (Miller *et al.*, 2012).

Friends and family have a significant role in whether a person participates in collective sustainable action (Culiberg *et al.*, 2016; Smith *et al.*, 2021). Previous research has shown that children are generally more likely to have pro-environmental behaviour when it is part of the upbringing by the parents (Smith *et al.*, 2021). Furthermore, if close contacts such as family members or friends participate in sustainability-related projects such as activities by ecovillages, an individual's motivation to participate is often higher. It is argued that this is due to more trust and intimacy between close contacts (Smith *et al.*, 2021). This was also highlighted by Kirby's research (2003) on the ecovillage Ithaca which evaluated that personal experiences with environmental and social activism have influenced the participation and even the membership in ecovillages.

Further personal factors influencing the decision to participate in sustainability-related activities are time, costs and benefits. Stevinson *et al.* (2015) argue that the perceived accessibility of an event or activity determines the willingness of individuals to participate. Thus, the location and time of activities in ecovillages need to be convenient for the participants. Next to the location, it is also vital that there are sufficient facilities to park vehicles but also to have good connections to public transport to reach an ecovillage (van Zyl, 2006). The money one has to spend to participate in ecovillage activities can also influence who can participate (Jepson *et al.*, 2014). Participation in ecovillages can also be impacted by the accessibility for disabled people, such as individuals sitting in wheelchairs or elderly who are dependent on walking support devices (Bhakta *et al.*, 2016).

### 2.3.3. Perceptions of the broader public about ecovillages

The wider public often misunderstands ecovillages and other intentional communities; therefore, it is relevant to understand how the surrounding communities perceive these communities and how this perception influences the interactions (Snyder *et al.*, 1978; Metcalf, 2012). Lennon *et al.* (2022) argue that the image of ecovillages is formed by how the experiences of ecovillagers are portrayed in the media. Therefore, these 'representations of an ecovillage can, therefore, potentially construct or remove barriers to engaging with sustainable lifestyles' (Lennon *et al.*, 2022, p. 303). Until recently, ecovillages have been illustrated in movies, books and newspapers as hippie communities, which caused stereotyping, othering and misconceptions in the broader public (Metcalf, 2012). In his paper, Metcalf (2012) writes that society has many preconceptions about ecovillages. The most prominent ones are that ecovillage residents engage in 'free love', are exploited by cult leaders, and live impoverished lives due to their lower consumption patterns (Metcalf, 2012).

Renau (2018) describes in his research on rural ecovillages in Spain that the local inhabitants often see ecovillagers as hippies and are suspicious about their lifestyles. Moreover, the locals perceive the ecovillage residents as different and sometimes even as

tourist attractions by taking many pictures (Renau, 2018). Esteves' (2017) research on the Tamera ecovillage in Alentejo (Portugal) gave similar insights that many residents of the surrounding villages who have lived there for most of their lives often had never heard of the ecovillage. If interactions occurred, there was often a culture shock due to the social and cultural differences between the ecovillagers and the residents. It was argued to be due to the conservative and traditional lifestyles of the surrounding villages (Esteves, 2017). In the Dutch context, Kommeren *et al.* (2021) discuss that many residents do not accept the Ecodorp Boekel as they distrust changes that they are not familiar with ('Wat de boer niet kent, dat vreet hij niet', p. 62).

However, there has also been research that shows that residents of the local communities become increasingly interested in the life of ecovillages. Lockyer *et al.* (2013) explain that many individuals in the surrounding communities have turned to ecovillages to learn about sustainability-related innovations. This is mainly because sustainability is becoming more mainstream in governmental policies and everyday life (Lennon *et al.*, 2022).

#### 2.3.4. Synthesis: Willingness to participate in ecovillages

To conclude the final theoretical sub-question *What influences citizens' willingness to participate and be involved in ecovillages?*, the literature finds that the motivations for individuals to participate in ecovillage practices are influenced by a range of social and personal factors. Social norms, community identity, and identification with the goals and vision of an ecovillage play a significant role in shaping individuals' willingness to participate in the activities (Culiberg *et al.*, 2016; Kalkbrenner *et al.*, 2016). Additionally, the influence of friends and family is essential, as individuals are more likely to participate in collective action if they see close contacts engaging in sustainability projects (Miller *et al.*, 2012; Keizer *et al.*, 2018). The willingness to participate in ecovillages is further impacted by the accessibility of ecovillage activities in terms of location and facilities, but time and cost are also crucial for attracting participants (van Zyl, 2006; Jepson *et al.*, 2014; Stevinson *et al.*, 2015).

It is essential to recognise the perceptions of the broader public about ecovillages, as these perceptions can shape interactions between ecovillage members and the surrounding community. Misunderstandings and stereotypes often exist about ecovillages and surrounding communities (Metcalf, 2012; Esteves, 2017; Kommeren *et al.*, 2021). These preconceptions can create barriers to engaging with sustainable lifestyles. However, there is evidence that local communities are becoming increasingly interested in ecovillages, driven by the growing mainstream acceptance of sustainability-related practices and innovations (Lockyer *et al.*, 2013; Lennon *et al.*, 2022).

#### 2.4. Conceptual model

A conceptual model has been drawn to visualise the relationships between the previous chapter's various concepts and facilitate the data analysis (Figure 1). Ecovillages are communities that experiment with their sustainable innovations. However, these communities are embedded in the surrounding community through regulations (e.g. building permits), resources (e.g. finances) or services (e.g. insurance). Moreover, ecovillages often have a website or social media to attract people of the surrounding community for visits and volunteering. These online channels allow ecovillages to share updates about their innovations and set up fundraising to extend them. The website and social media also help the surrounding community to learn about an ecovillage which can increase the visibility of the ecovillage and potentially have an influence on the social acceptance of ecovillages. Depending on the physical location of an ecovillage, curious visitors can participate in educational workshops, visitor days or food practices. However, the willingness of 'regular citizens' to participate is influenced by various factors such as social norms, personal

reasons, and the perception of ecovillages. If the surrounding community and the ecovillage interact in person or online, it can create greater awareness for sustainability issues and inspire others to live more sustainably. Moreover, ecovillages can expand their interactions by creating networks with local organisations, the local government and other ecovillages, which can support the aim to solve urgent sustainability issues.

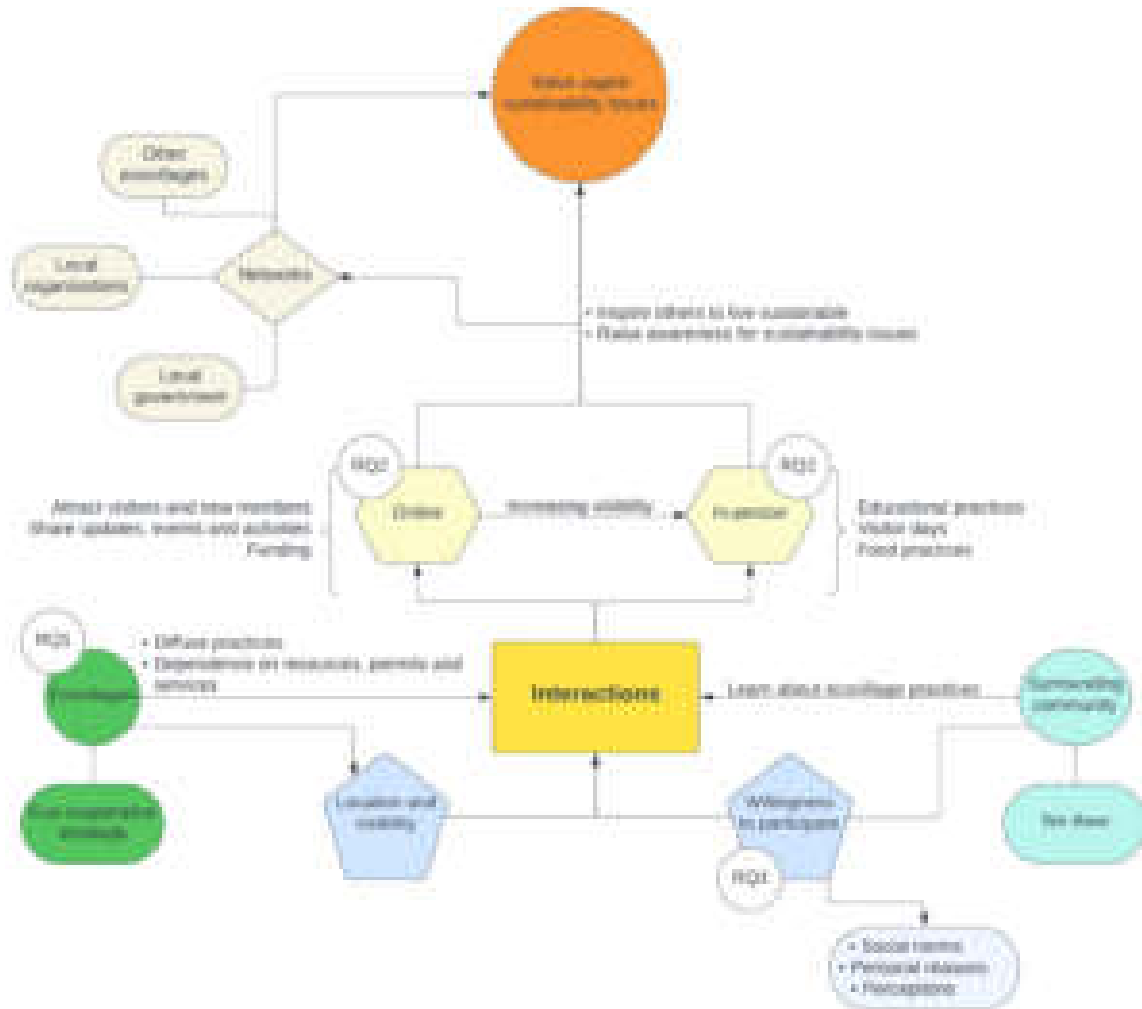


Figure 1: Conceptual model developed by the author

### 3. Methodology

This chapter outlines the research design chosen for the thesis. First, the choice for triangulation of research methods is described. Afterwards, a short introduction to the case study is given, which is followed by a description of the data collection methods. Lastly, ethical considerations and the positionality of the researcher are described.

#### 3.1. Research design

Every researcher aims to collect valuable data that can be used to conclude the specific study he or she is conducting (Leavy, 2017). Therefore, it is necessary to create a well-rounded research design. This research *explores* the interaction between ecovillages and their surrounding community ('what') and *describes* how surrounding communities can be more effectively included in an ecovillage sustainability activities ('how'). Due to the exploratory and descriptive research aim 'to build a depth of understanding about some dimension of social life', it is appropriate to apply qualitative research methods (Leavy, 2017, p. 9). Moreover, qualitative research methods are valuable for investigating community development as the researcher can 'explore emerging themes' and advance 'dialogue about pressing social problems' (Silverman and Patterson, 2021, p. 3). In social sciences, qualitative methods have a long history of studying phenomena/entities such as social movements, neighbourhoods or urban life (Silverman *et al.*, 2021). It was chosen to use triangulation of multiple qualitative methods to answer the last three sub-research questions and the main research question (semi-structured interviews, observations and media analysis) (Flick, 2018). The triangulation of qualitative data collection methods brings the advantage that the research gains credibility, and one gets more rounded insights into the research problem (Hesse-Biber, 2010). The triangulation approach was chosen for this study to gain a holistic understanding of the current efforts of Woldwijk to involve the residents of Ten Boer in their activities, but also the extent that the residents of Ten Boer want to be involved in the activities of Woldwijk. Using a single method for this research would not have been suitable as it would have only given limited insight into the research problem (Silverman *et al.*, 2021).

Figure 2 provides an overview of the methods used in this research. Each research question is linked to one or more methods to investigate the research problem. Research question 3 was explored and answered through semi-structured interviews with the residents of the ecovillage Woldwijk to understand the ecovillage better. The combination of semi-structured interviews with the residents of Ten Boer and with the residents of Woldwijk answered research question 4. Additionally, for the data collection in Woldwijk, observational and visual data was collected during several visits and the author's stay of 3 days at the ecovillage in the Tiny Houses community. The answers to research question 5 were collected via semi-structured interviews with the residents of Ten Boer. Additionally, media analysis was used to understand better the online interactions between the ecovillage Woldwijk and the residents of Ten Boer.

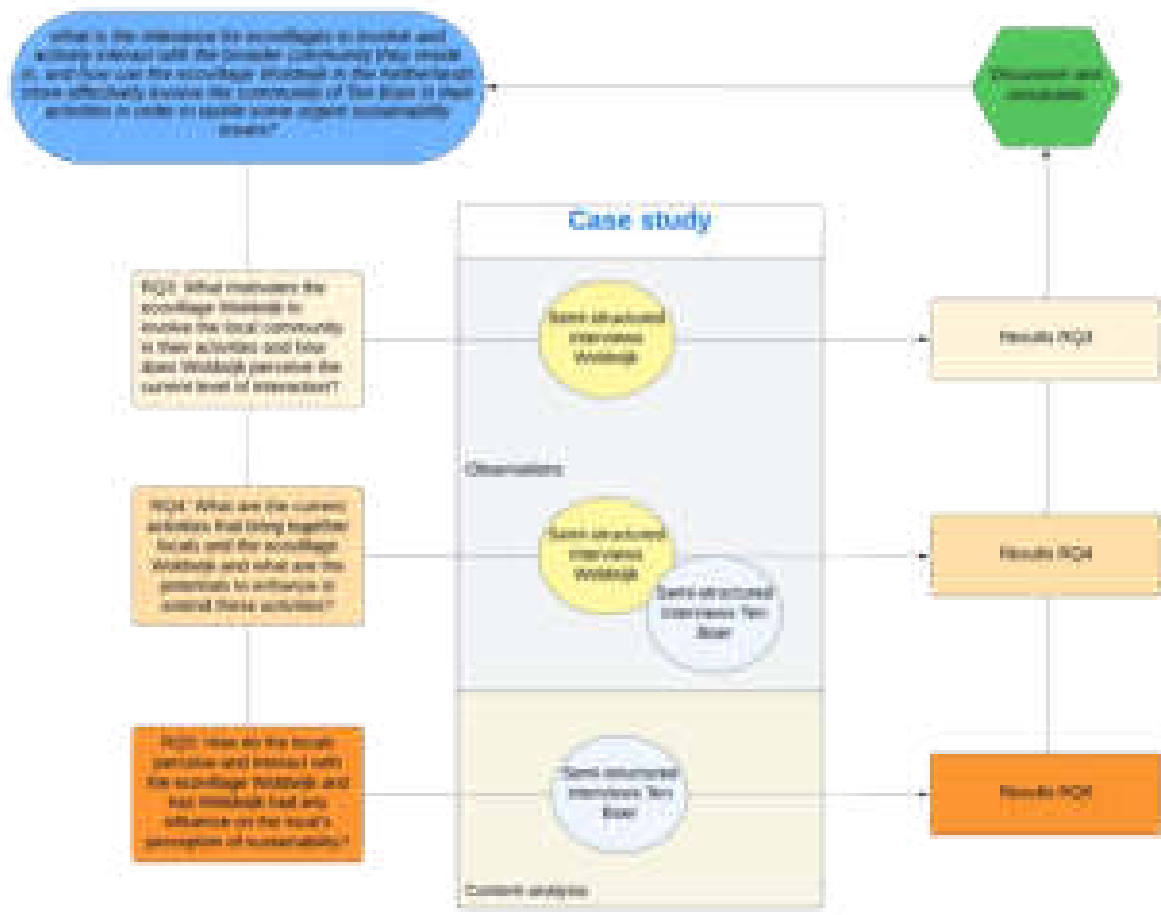


Figure 2: Outline of the triangulation approach

### 3.2. Case study of Woldwijk

This research makes use of a case study for investigation. Flyvbjerg (2006) argues that investigating single case studies through different research methods gives insights into a real-life example and generates context-dependent knowledge from which can be learned. Additionally, case studies are often used in community research as the data collection is conducted in a fixed location (Silverman *et al.*, 2021). Therefore, the collected data depends on the local context and can give researchers and practitioners more significant insights into a community's unique challenges and characteristics (Silverman *et al.*, 2021). The case study of the eco-cooperative Woldwijk was chosen as it is located at the periphery of the village Ten Boer in the province of Groningen. Due to the close spatial connection between the village of Ten Boer and Woldwijk, it can give valuable insights into the potential interaction between the residents and the ecovillagers.

Moreover, the eco-cooperative Woldwijk was chosen since the community was visited previously in another course. Therefore, a relationship was established, which made contact with the board of the ecovillage more accessible. In order to investigate the interaction between the eco-cooperative Woldwijk and Ten Boer, multiple data collection methods were chosen. The primary data was collected by conducting semi-structured interviews with residents of Woldwijk and Ten Boer. Additionally, observations were made during a multi-day stay at the eco-cooperative and during the visit to a local event. The combination of semi-structured interviews and observations proved to be the appropriate data collection method, as information from the interviews was used as a starting point for the observations.

### 3.3. Data collection methods

#### 3.3.1. Semi-structured interviews

One method to gain qualitative data is through interviews ranging from fully structured to fully unstructured (Guthrie, 2010; Walliman, 2011). Depending on the focus and aim of the research, researchers can choose which type of interview they think is the most suitable (Guthrie, 2010). Fully structured interviews contain standardised questions, which are asked in the same order to every respondent (Leavy, 2017). The advantage of this interview method is that generalisations about the respondents can be made. However, it also limits the freedom of the researcher to ask follow-up questions or to go deeper into specific topics (Yin, 2016). Unstructured interviews are the opposite of full-structured interviews and give both interviewer and interviewee great freedom to explore topics. Here, open questions are common to gain a deep understanding of the respondents' beliefs, values and motivations. The disadvantage of this type of interview is that it can be easy to gain data irrelevant to the focus of the research (Ruane, 2016). Semi-structured interviews are a mix of closed and open questions that bring some standardised information but also give the flexibility to gain more insights into specific topics that the respondent mentions (Walliman, 2011). The advantage of this type of interview is that it is easier for the researcher to stick to a basic structure and stir the respondents back to the initial themes if necessary (Leavy, 2017). Based on the advantages and disadvantages of the different interviewing methods, semi-structured interviews are the most suitable method for this research as it allows for comparing the respondents' answers regarding overlaps and variation. However, it also gives the flexibility to ask additional questions during the interviews (Guthrie, 2010). Purposeful and snowball sampling methods were used to find relevant participants for the research (Taylor *et al.*, 2016; Schreier, 2018). Purposeful sampling was applied for the interviews in Woldwijk as respondents were selected based on their residence in Woldwijk and, therefore, their expertise in the ecovillage (Schreier, 2018). In the interviews with the residents of Woldwijk, they were asked whether they knew other people who live in Ten Boer for interviews. This snowball sampling method helped recruit respondents from Ten Boer (Taylor *et al.*, 2016).

Seven semi-structured interviews were held in person at Woldwijk with members of the ecovillage and proved helpful in better understanding the community's current activities and potential for the future. Furthermore, it gave insights into the motivations of the ecovillage Woldwijk to interact with the surrounding village of Ten Boer and how the ecovillagers perceive the current level of interaction with the residents of Ten Boer. Next, three semi-structured interviews were conducted with residents of Ten Boer, from which two were physically held at the library and at one resident's home. The third interview was via the telephone (Table 1, in yellow Woldwijk interviews, in blue/grey Ten Boer interviews). All ten interviews lasted, on average, around 45 minutes and were conducted in Dutch. One interview guide for Woldwijk and one for Ten Boer were created using the funnel method to gain relevant information (Leavy, 2017) (Appendix 1 & 2). Here, the interview starts with general questions about the respondents and then moves to more specific questions related to the research. This method helps to build rapport with the respondents as they feel more comfortable (Leavy, 2017). Yin (2016) adds that a good rapport means the interviewer does not harm or anger the interviewee through words or hateful comments.

Next to the interviews that the researcher conducted, it was possible to use interview data from other researcher who was conducting a study at Woldwijk during the same time period (Table 2). It was discussed with the other researcher beforehand to share relevant interview data and to ensure that the anonymity of the participants is safeguarded. Therefore, the interviewees names have also been changed into pseudonyms.



Name (Pseudonym)	Role	Interview date
Bram	Resident Tiny House	21/05/2023
David	Resident Landgoed, organiser Lufjefest	21/05/2023
Nick	Resident Tiny House	26/05/2023
Nicolas	Founder Landgoed	31/05/2023
Thijs	Resident Tiny House	31/05/2023
Natale	Resident Tiny House, communication group	02/06/2023
Nienke	Resident Landgoed, communication group, organiser Lufjefest	09/06/2023
Annal	Resident of Ten Boer	31/05/2023
Ewout	Organisation Dorpsbelangen Ten Boer, old neighbourhood agent	05/06/2023
Tom	Resident Ten Boer	08/06/2023

Table 1: Overview of interviews in Woldwijk (yellow) and Ten Boer (blue/grey)

Name (Pseudonym)	Role
Nate	Resident Staatsvein

Table 2: Overview of interviews from other researcher

Leavy (2017) describes that once the researcher has conducted the necessary interviews, various steps should be followed to ensure an organised analysis and interpretation of the collected data (Figure 3). Thus, the following steps for the data analysis were taken: ' (1) data preparation and organisation, (2) initial immersion, (3) coding, (4) categorising and theming, and (5) interpretation' (p. 150). Each interview is transcribed and sorted by date during the data preparation and organisation. In the phase of initial immersion, the interviews are read through, and the first ideas are noted down. The coding is about assigning phases or words to segments of the interview transcripts. This research applied a combination of inductive and deductive coding (Appendix 5). Inductive coding has the aim to 'identify a pattern from which to make a general statement' and to 'reveal new understandings of existing knowledge and conclusions' (Kennedy, 2018, p. 51).

On the other hand, deductive coding analyses codes based on the theory established in the theoretical framework (Kennedy, 2018). Therefore, some codes were taken from the conceptual model that was developed based on the existing literature (see Chapter 2). After the coding, the data were categorised and themed to find similarities and establish relationships between codes (Leavy, 2017). The last step included the interpretation of the meaning of the codes and themes and how they can help answer the research questions (Leavy, 2017). The semi-structured interviews were recorded, transcribed, coded and analysed in the software Atlas.ti.

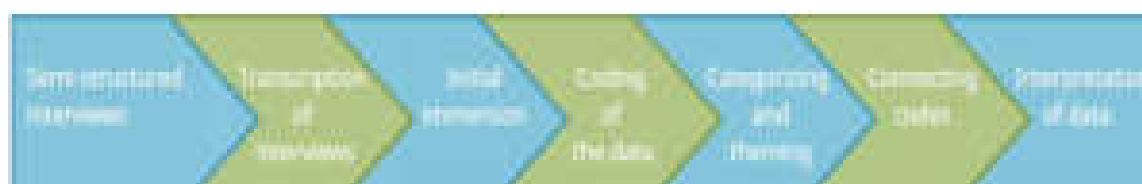


Figure 3: Interview data process as described by Leavy (2017)

### 3.3.2. Observations

One method of ethnographic research is observing individuals, the setting and the relationships between individuals (Silverman *et al.*, 2021). Observations as a research

method bring the advantage that the researcher obtains insights into 'the context within which activities and events occur' (Clark *et al.*, 2009, p. 348). The observations are often passive, but the researcher can interact with the individuals through conversations and participate in everyday activities (Silverman *et al.*, 2021). Between May 29<sup>th</sup> and May 31<sup>st</sup> 2023, the researcher stayed two nights at one of the tiny houses in the eco-cooperative Woldwijk. The stay gave more profound insights into the day-to-day life at the ecovillage and also to understand the context in which interactions between residents of Woldwijk and Ten Boer occur (Appendix 4, Clark *et al.*, 2009). The researcher walked along the walking path in Woldwijk and took pictures of potential meeting spaces for interactions between the residents of Woldwijk and Ten Boer. Furthermore, the researcher went to the event 'Cultuur versterkt' on May 30<sup>th</sup> 2023, with Natalie and Nicolas, organised by the municipality of Groningen. At this event, local initiatives pitched their activities and connected with other initiatives. The researcher also gave a short pitch about the study about Woldwijk and conversed with some participants. On the day of the last interview with Nienke, she gave a tour around Woldwijk in which the self-harvesting garden and the farmhouse were visited. Moreover, some of the Landjegoed residents working on the new community space held a lunch which the researcher joined. All observations were recorded through field notes, and the information helped to learn more background information about Woldwijk.

### 3.3.3. Content analysis

Content analysis is 'a research technique for making replicable and valid inferences from texts (or other meaningful matter) to the contexts of their use' (Krippendorff, 2019). Next to texts, researchers can collect and analyse data from artworks, videos, text messages and since the emergence of the internet also social media platforms such as Facebook, Twitter or Instagram (Krippendorff, 2019; Riffe *et al.*, 2019). Content analysis is a relevant research method for this thesis to investigate the online interactions between different people, communities and organisations (Riffe *et al.*, 2019). Since this study investigates the interaction around sustainability between the eco-cooperative Woldwijk and Ten Boer, it is necessary to understand the online interaction between the residents better. Therefore, relevant data was collected from the Facebook groups 'Ten Boersters voor elkaar'; 'Ten Boersters voor elkaar 2.0' and 'Ten Boerster buurtproat'. Within these groups, the term 'Woldwijk' was searched to see all the posts related to Woldwijk and sustainability. Additionally, the website of Woldwijk provided information related to interactions and activities. In the result section, screenshots display examples of sustainability-related posts of Woldwijk and residents of Ten Boer. To protect the identity of individuals, names and profile pictures have been erased.

### 3.4. Ethical considerations and positionality

For every research, it is vital to consider the ethical implications and how the researcher can ensure that the collected data is treated with sensitivity (Silverman *et al.*, 2021). For the data collection through interviews, all participants received an information sheet about the research and a consent form that the researcher signed for the participants (Appendix 3). The information sheet provides an overview of the aim and background of the research. The consent form provides information about the confidential treatment of the interview data. Additionally, each interviewee was thoroughly informed about the purpose of this research at the beginning of the interview. Lastly, the interviewees had to agree to the audio recording of the conversation. The names of all the respondents have been changed to pseudonyms to protect the privacy and confidentiality of each individual (Taylor *et al.*, 2016). All the collected data was stored in a secure place and is only accessible by the researcher.

Next to the ethics concerning the confidentiality and privacy of the respondents, ethnographical research comes with specific ethical questions that a researcher has to

reflect on (Iphofen *et al.*, 2018). When conducting fieldwork, the researcher is personally involved in the research, which can lead 'to close, even intimate, relationships with her or his hosts, often involving the development of close ties over an extended period of time' (Iphofen *et al.* 2018, p. 120). Therefore, a researcher has to be aware that their values are influenced through the fieldwork, which can create dilemmas about how the knowledge is presented, especially when it concerns information that can reflect poorly on the hosts/ research setting (Hammersley *et al.*, 2019). During this research, I stayed at Woldwijk for two nights and was in contact with some ecovillagers. The close contact helped me to establish good relationships with the interviewees of Woldwijk and for them to be more trusting and comfortable participating in the interviews (Iphofen *et al.*, 2018). Nevertheless, this influenced my position as a researcher since the close connections made it challenging to present the results of this thesis entirely neutral and value-free (Gobo, 2008).

Conducting fieldwork in a specific location is influenced by power dynamics as the researcher depends on the community for cooperation to receive access to the research location (Hammersley *et al.*, 2019). This research involved specific power dynamics between Woldwijk and me as a researcher. Woldwijk wants to receive a permanent rental contract for the property, and research about the interactions with the surrounding community can help them achieve this (Hammersley *et al.*, 2019). Furthermore, some ecovillagers also tried influencing how the interview participants were approached. However, I hold specific power as a researcher since I can decide what information is included or excluded in this thesis depending on my research questions (Madden, 2017).

## 4. Research locations

This chapter presents the research locations by introducing some background information about the eco-cooperative Woldwijk and the village of Ten Boer. The background information is relevant to give context to the analysis of the results in Chapter 5.

### 4.1. Eco-cooperative Woldwijk

The eco-cooperative Woldwijk is located at the northern edge of the village of Ten Boer in Groningen, the Netherlands (Figure 4).

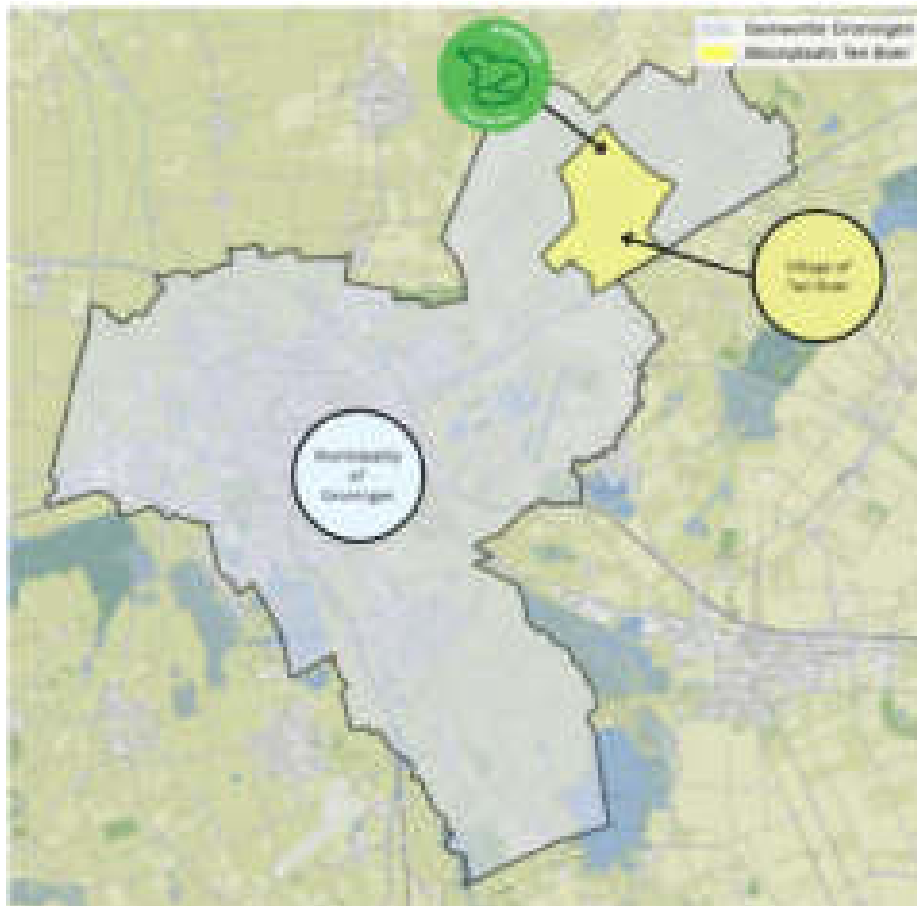


Figure 4: Ten Boer and the eco-cooperative Woldwijk are located in the municipality of Groningen (Map from *Allecijfers.nl*, 2023, adjusted by the author)

The property includes 40 hectares of land and was bought by the municipality of Ten Boer (now part of Groningen) in 2007 to expand Ten Boer with new housing (Woldwijk, n.d. b). With the economic crisis in 2008, the plan for constructing large-scale housing stopped, and the municipality had to come up with an alternative plan to make use of the land and, at the same time, reduce the resulting debts from the purchase. Thus, the land was leased for agricultural use and became a temporary location for the care centre Innersdijk (Woldwijk, n.d. b). In 2014, the municipality drew up a proposal to develop the area around the Innersdijk care centre for temporary usage with three conditions:

1. The projects have to be valuable to the residents of Ten Boer by 'giving something back' to the community.
2. It must be economically viable to reduce the debts of the municipality.
3. It has to encourage sustainability (Woldwijk, n.d. b).

The alderman of the former municipality Ten Boer discussed potential ideas to find a suitable use for the property. Afterwards, two open evenings were held in which the residents of Ten Boer could get more information about the potential plans and discuss how they could contribute to the temporary use of Woldwijk. In the end, more than 25 initiatives were proposed, of which six already had a concrete plan for the area (Woldwijk, n.d. b). In 2015, the Cooperative Association Woldwijk (Coöperatieve Vereniging Woldwijk, hereafter CV Woldwijk) was established and got the approval of the municipality to use the land to experiment with alternative models to generate energy, live, work and farm (CV Woldwijk, 2022; Woldwijk, n.d. b). In 2016, the CV Woldwijk signed a lease for the property of Woldwijk. For the area around the care centre Innersdijk, the CV Woldwijk has a permit to stay and make use of the property until 2027, and for the rest of the area, the contract is ending in 2036 (Figure 5) (CV Woldwijk, 2022). Currently, the CV Woldwijk has five sustainability-oriented initiatives as members: the energy-cooperative Ten Boer, StaatjeVrij, Tiny House Noord-Nederland, Stichting Landjegoed and two farmers (agricultural nature management) (Woldwijk, n.d. d). Next to the various initiatives and the care centre Innersdijk, the old farmhouse Hove Dijkshorn is also located on the property. Since 2022, some temporary houses (wisselwoningen) have been built to host residents of Ten Boer who have to temporarily leave their homes to make them more earthquake-resistant (CV Woldwijk, 2022).

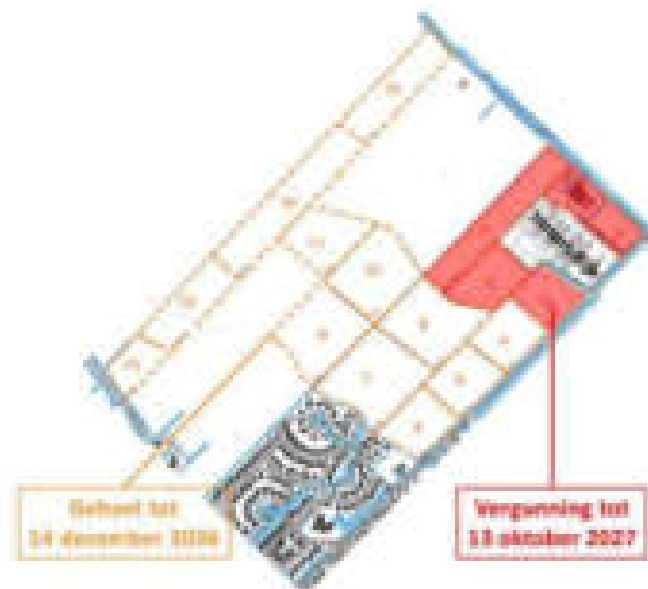


Figure 5: Map of the two areas with their respective rental permits (CV Woldwijk, 2022)

On the property of the CV Woldwijk, more than 50 adults and ten children in the three residential initiatives StaatjeVrij, Tiny House Noord Nederland and Landjegoed (Woldwijk, n.d. i).<sup>2</sup> Based on the interviews conducted in Woldwijk, many residents come from the province of Groningen, while a few come from other parts of the Netherlands, such as Friesland or the Randstad.

#### 4.1.1. The initiatives

There are currently five initiatives members of Woldwijk, and each is concerned with sustainability issues, which are presented below.

<sup>2</sup> Even though the CV Woldwijk and its initiatives are not homogenous, for the sake of simplicity, the overarching name Woldwijk is used in the rest of the thesis to describe the eco-cooperative.

### *StaatjeVrij*

StaatjeVrij is the initiative that has resided the longest in Woldwijk, and it is mainly focused on ecological construction and shared living (Woldwijk, n.d. e). The residents of StaatjeVrij live in traditional Mongolian yurts in Woldwijk, and this initiative has also set up the Self-harvest garden (Zelfoogsttuin). Additionally, the group has created an outdoor area beside the old farmhouse and constructed a pizza oven from clay that is regularly used for pizza evenings (CV Woldwijk, n.d.). StaatjeVrij is associated with the building collective Mas con Menos with a passion for creating ecological constructions made with recycled and natural materials (Woldwijk, n.d. e). The projects that are worked on are in the Netherlands but also internationally, and the collective also offers workshops for people who want to learn more about sustainable building practices (CV Woldwijk, n.d.). An example in Woldwijk is the Wereldhuiskamer (World Living Room), constructed with local hemp and straw and clay from the province of Drenthe (CV Woldwijk, n.d.). This community space is used for different activities such as readings, communal meals and workshops.

### *Tiny House Noord-Nederland*

The tiny house initiative was the second one established in Woldwijk; there are 14 tiny houses on separate lots (Woldwijk, n.d. g). Some tiny houses are built almost entirely from recycled materials, and some residents also build tiny houses (CV Tiny House Woldwijk, 2021). Additionally, many tiny houses have compost toilets installed to reduce the water used (CV Tiny House Woldwijk, 2021). This initiative aims to live on a small ecological footprint and to live in harmony with nature and the rest of the community (CV Tiny House Woldwijk, 2021). Figure 6 gives some impressions of the tiny houses.



*Figure 6: Impressions of the tiny houses (Source: author)*

### *Landjegoed*

Landjegoed is the most recent housing project established in 2020 (Woldwijk, n.d. f). Thirteen households with 23 residents live in tiny houses constructed mainly from recycled materials (Interview Nicolas). Landjegoed is focused on circularity and community by sharing tools, having communal washing machines and a shared bathroom with a shower for tiny houses without a bathroom (Interview Nicolas). All residents of Landjegoed also have a subscription to the Self-harvest garden, where they can pick fresh fruits and vegetables (Woldwijk, n.d. f). Recently, Landjegoed built a new community space (Huiskamer) in collaboration with Mas con Menos. This new 'Living Room' was constructed with straw, clay and recycled wood in one week (Woldwijk, n.d. f).

### *Energy-cooperative Ten Boer*

The energy-cooperative Ten Boer is another member of Woldwijk to provide information about generating sustainable wind and solar energy and conservation (Woldwijk, n.d. c). In 2018, the initiative installed 177 solar panels on the roof of the old farmhouse, and residents of Ten Boer can receive generated energy through a membership (CV Woldwijk, n.d.). In the future, the goal is to make Woldwijk self-sufficient by using the energy provided by the energy cooperative and to invest in more research on how to make the municipality of Groningen energy-neutral (CV Woldwijk, n.d.).

### *Agricultural nature management*

The last initiative is set up by two farmers who have their fields beside the property of Woldwijk. The aim is to reduce the distance between the farmer and the consumer by educating the broader public about the goals of the farm and the processes (Woldwijk, n.d. a). Additionally, the two farmers aim to show how agricultural practices can be more sustainable by protecting the local flora and fauna (Woldwijk, n.d. a). Therefore, the fields are not worked intensively, but it is considered when birds and other animals nest to mow the grass only a few times yearly (Woldwijk, n.d. a). The harvested straw and other materials are given to the other initiatives of Woldwijk to reuse for projects (Woldwijk, n.d. a).

#### 4.1.2. Online presentation

To present themselves to the outside world, Woldwijk has set up a website ([www.woldwijk.nl](http://www.woldwijk.nl)) on which the history of the eco-cooperative and the various initiatives are presented and also created their logo (Figure 7). Furthermore, updates and developments are shared on the website, and visitors can become 'friends of Woldwijk' in which they can financially support the ecovillage (Woldwijk, n.d. h). Next to the website, Woldwijk also has its own Facebook page (Figure 8), a YouTube channel and an account on Twitter on which updates and activities are shared. Furthermore, a communication group was established, responsible for all internal and external communication to keep the various communication channels updated (Interview Natalie, interview Nienke).



Figure 7: Logo of CV Woldwijk (CV Woldwijk, n.d. a)

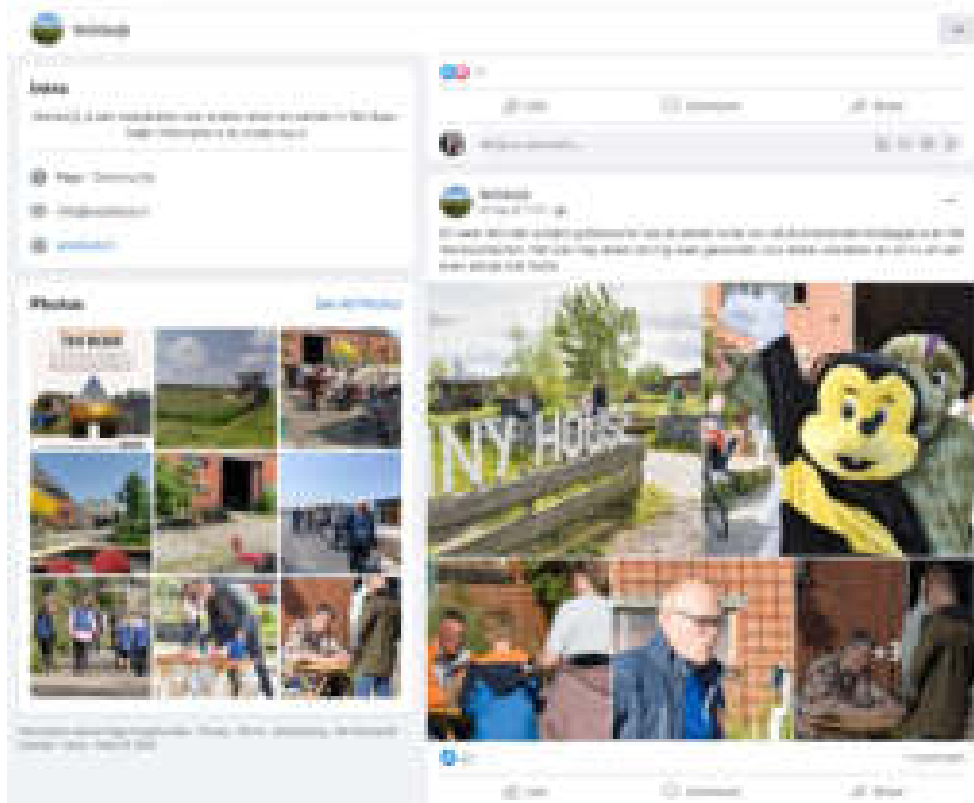


Figure 8: Facebook page of Woldwijk (Woldwijk, 2015)

Besides the general communication channels of Woldwijk, each initiative has its website, and StaatjeVrij and Landjegoed also have their own Facebook page for communication.

#### 4.2. The village of Ten Boer

Ten Boer is a small village in the municipality of Groningen (Gemeente Groningen, 2023b). Until merging with the municipality of Groningen in 2019, Ten Boer was an independent municipality in the province of Groningen (Plaatsengids.nl, 2020). In 2022, Ten Boer had a population of 4660, of which 46.6% are aged above 50 (Gemeente Groningen, 2023b). Additionally, within the municipal borders, 565 people moved to Ten Boer, while 514 left the village in 2022 (Gemeente Groningen, 2023b). Ten Boer is often described as a commuter village due to its close location to the city of Groningen, as many residents of Ten Boer work in Groningen (Groningen.nl, n.d., Interview Ewout).

In 2022, 36% of Ten Boer residents visited a church or other religious institutions more than once (Gemeente Groningen, 2023b). When comparing it to the national average, only 12% of Dutch nationals visited a religious institution more than once in 2022 (CBS, 2023). During the municipal elections in 2022, the two parties that received the highest votes in Ten Boer were the ChristenUnie (Christian Union) and the Christen-Democratisch Appèl (Christian Democratic Appeal), with 487 and 439 votes (Allecijfers.nl, 2023). However, both parties made up only place 9 and 10 in the overall polling of the municipality (Allecijfers.nl, 2022). In comparison, the party GroenLinks (Green Left) only received 193 votes in Ten Boer, while this political party won the overall elections of the municipality (Allecijfers.nl, 2022, 2023). Therefore, it shows that Ten Boer voted more conservative when related to the more liberal votes of the municipality. The residents of Woldwijk have also described the conservativeness of Ten Boer, that there is still a strong influence by the church within the village. Ten Boer resident Tom gave the example that the local supermarket used to be closed on Sundays as this day is to go to church (Interview Tom).



#### 4.2.1. Facilities in Ten Boer

There are various facilities that locals can make use of in Ten Boer. In the village centre, there are facilities for daily needs, such as a supermarket, a drug store, a bicycle shop and a flower shop. Next to these shops, residents can also visit the local library, the swimming pool and the sports centre. In Ten Boer, a municipal office also helps local residents with all administrative questions related to living in the municipality of Groningen (Gemeente Groningen, 2023a). Moreover, a community centre hosts various activities for children and adults (Dorpshuis Ten Boer, 2023). Various social services organisations such as WIJ Ten Boer (<https://wij.groningen.nl/wij-teams/wij-ten-boer/>) and Dorpsbelangen Ten Boer (<https://www.dorpsbelangentenboer.com/>) support residents in diverse aspects such as wellbeing, participation in the village, income, work and matters related to earthquakes (Dorpsbelangen Ten Boer, 2023; WIJ Groningen, n.d.).

Additionally, both organisations work with volunteers and organise local activities throughout the year in Ten Boer. Lastly, there are giveaway and second-hand shops in Ten Boer where locals can drop off and buy low-cost items (Interview Ewout). Even though Ten Boer has some facilities that locals can use, some residents of Woldwijk describe Ten Boer as boring and where little is happening compared to other villages in the region (Interview Natalie, interview Nicolas).

## 5. Results

This chapter analyses the findings of the empirical data collection and discusses the findings concerning the existing theories about ecovillages and their interactions with the surrounding communities.

### 5.1. Motivations for interactions

The semi-structured interviews conducted with residents of Woldwijk showed that the ecovillage has multiple motivations to include the residents of Ten Boer in their activities. The two dominant themes that emerged were practical motivation and being a role model for sustainable practices.

#### 5.1.1. Practical motivation

Since Woldwijk can be viewed as a neighbourhood in Ten Boer but not a separate island, it is essential to integrate Woldwijk into it slowly (Interview Nick, interview Ewout). This aligns with the arguments of Van Dorst (2012) that due to the density of the Netherlands, the local ecovillages are more of a neighbourhood than a complete village and relate to the socio-spatial and ecological context where they are located.

Woldwijk still has a temporary contract for the property they are located on and depends on the municipality for the necessary permits (Boyer, 2015; Renau, 2018). Additionally, based on the three conditions set by the municipality, Woldwijk has to contribute to the local community by 'giving something back' (see chapter 4.1.) (Woldwijk, n.d. b). Therefore, it is necessary to enhance the interactions between the residents of Ten Boer and Woldwijk and to have the support of most village residents to extend the rental contract. As Natalie argues, it is crucial to have a good connection with Ten Boer:

*'Yes, it does matter because if we don't have a connection, then I don't think we can stay. Then they [residents of Ten Boer] will want us to leave and have regular big houses here. So it's also important that people in the village start seeing hey, but this is really special, and this adds something, and they have to stay either for another ten years or permanently.'*

Thijs further describes that if the residents of Ten Boer believe that Woldwijk is valuable for the village, it will also be communicated to the municipality (Interview Thijs). This also increases the chances of receiving an extended rental permit for the ground. Therefore, the residents of Woldwijk want to have a good relationship with Ten Boer, especially with the immediate neighbourhood across the street (Interview Thijs). Whenever a new project is planned in Woldwijk, the residents ensure it is not a visual intrusion to the immediate neighbourhood (Interview Thijs). Additionally, if the neighbours from across have complaints, Thijs describes that Woldwijk is very open to finding a solution that works for both. Nevertheless, there have been some conflicts with the neighbourhood as people had complaints about the construction materials laying around in Woldwijk (Interview Nienke). Moreover, some neighbours have called the police multiple times with complaints about Woldwijk. When the police comes to Woldwijk to check the complaints, they find that nothing is wrong and just have a short chat with the ecovillagers (Interview Nate).

#### 5.1.2. Role model for sustainability practices

Next to the practical motivations to involve the residents in their activities, Woldwijk also wants to be a role model for sustainable practices and provide an experimental space to think out of the box (Interview Natalie). Moreover, some ecovillagers hope that Woldwijk can be a space where people see practical examples of how to live more sustainably (Interview Nick) but also a space for people from Ten Boer to come and ask for help with sustainable solutions if they do not know how to continue:

*'What I very much hope is that in the confusion that now exists of okay, what we have always done no longer works, so for example, our overconsumption and so on. If people no longer know how things should be done, we can say, for example, well, I'm thinking about this, or maybe you can do the same so that we can also give people a bit of room to act if they no longer know.'* (Interview Nienke)

What Nienke described is an essential aspect for ecovillages to provide a space in which people can come together to experiment with alternative practices such as energy, reuse of materials or food practices but also to diffuse their knowledge into wider society (Avelino *et al.*, 2009). Providing information that is accessible and practical to the surrounding community can support the transition towards daily practices that are more sustainable (Litfin, 2009; Miller *et al.*, 2012).

In contrast to the perception of Nienke, it was also argued by other residents that the uncertainty of being able to stay on the property creates a barrier to investing much effort into new sustainable practices:

*'And to me, that [the uncertainty of staying] is a constraint on sustainability in the sense that we can not decide to build facilities like solar energy or windmill or a helophyte filter, for example. For that short time, that is all either too much work, time or especially too expensive and not everything can be removed again, and the condition of the municipality is that everything has to be removable.'* (Interview Nicolas)

The dependency on the local government, as described by the example Nicolas, is also faced by other ecovillages, and these structural barriers can influence the sustainable practices that ecovillages can implement (Ergas *et al.*, 2016; Hong *et al.*, 2016).

### 5.1.3. Sustainable practices at Woldwijk

The ecovillage Woldwijk has various sustainable practices that could also be spread into the broader society. The practices are categorised into biodiversity and nature, sharing economy, reuse of materials and energy and water management.

#### *Biodiversity and nature*

At the beginning of the development of Woldwijk, the property was wide open grassland with few trees. Nick describes that he has planted many trees and shrubs in Woldwijk that he mostly found in Ten Boer and mainly were thrown away by other people. Through planting many trees and other plants, Bram hopes that more insects, birds and other animals will be attracted (Interview Bram). Moreover, the residents of Woldwijk are not allowed to use any chemicals or pesticides that harm the environment (Interview Natalie). Nicolas adds that the farmer, who collaborates with Woldwijk, only cuts the grass on his field three to four times per year, while the conventional farmer, on the other hand, cuts the grass at least twice at much. Leaving the grass to grow brings various advantages, according to Nicolas. It does not just provide protection and a home to deer, their offspring or native birds, but it binds more CO<sub>2</sub>. Moreover, the farmer does not use pesticides on his field, which is also healthier for the cows that eat the grass (Interview Nicolas).

In Woldwijk, some ecovillagers collect rainwater, a sustainable practice discussed in the literature (Lockyer, 2017; Renau, 2018). Nick has built a small pond with a helophyte filter in his backyard to clean rainwater. The rainwater is guided from the roof of the tiny house to the pond, which is used to water their plants to reduce the amount of freshwater used (Interview Bram, interview Nick).

### *Sharing economy*

Many items in Woldwijk are shared, which is central to the cooperative culture of an ecovillage (Mychajluk, 2017). In Landjegoed, the washing machines and dryers are shared between residents of the initiative, and there is also a shared bathroom for the residents that do not have a bathroom in their tiny house (Interview Nicolas). Landjegoed also owns an electric bike and a shared lawn mower (Interview Nicolas). Another example is the construction and gardening tools but also leftover construction materials shared between the inhabitants of Woldwijk (Interview Bram, Interview Nienke). In many ecovillages, it is common to establish a sharing economy where appliances, chores, and, in some cases, even income is shared (Frost, 2022). These practices reduce purchasing costs for each ecovillage member and provide equal access to shared facilities and appliances (Frost, 2022). In Woldwijk, sharing different appliances does not just reduce overconsumption. It is also necessary since there is no space in each tiny house to install a washing machine or a dishwasher (Interview Nicolas). The argument made by Nicolas would also support the national strategy of creating a circular economy in the Netherlands until 2050 (Rijksoverheid, 2023). In this strategy, the national government aims to reduce the use of raw materials; replace fossil raw materials with sustainable alternatives such as wood or food waste; extend the life of products by repairing and reusing existing products and materials; and recycle materials into new products (Rijksoverheid, 2023).

Next to sharing items, the residents of Woldwijk share the property's space. The lots with the tiny houses do not have any fences and are connected with small paths to encourage sharing the physical space and stimulating interaction with others (Interview Bram). The physical layout of ecovillages is generally designed to 'encourage openness, interaction and sharing' (Pickerill, 2015, p. 44). The social interactions between the residents of Woldwijk were also described as something that is less common in regular neighbourhoods where people have little contact with their neighbours and, in many cases, only know some people in the street (Interview Thijs, interview Natalie). In Woldwijk, the residents help each other when there is an issue or if somebody needs help building a new project (Interview Bram, interview Nicolas). Additionally, there is always somebody to chat with or spend time with in the ecovillage (Interview Nienke). Nevertheless, these solid social contacts only develop sometimes, but the residents of Woldwijk organise many internal activities such as potlucks, pizza evenings and other moments.

Next to the layout of the ecovillage, the old farmhouse is used as a shared space to store tools and work on new projects and for activities and events (Interview Nienke). Moreover, there are two communal spaces the 'Living Room' (Huiskamer) of Landjegoed and the 'World Living Room' (Wereldhuiskamer) of StaatjeVrij. The 'World Living Room' is used for communal evenings and meetings but can also be rented by external organisations for activities (Woldwijk, n.d. e). Landjegoed recently built the Huiskamer with the help of StaatjeVrij. When the idea came to build this new community space, the options were limited as only some members of Landjegoed had the skills, knowledge and time to help with the construction. However, when StaatjeVrij offered their help, it opened up new possibilities for the construction as they are experienced builders (Interview Nicolas). According to Nicolas, the total price for the Huiskamer was around 70.000€, and a part of this amount was funded through a crowdfunding campaign and a subsidy. The residents of Landjegoed paid the rest of the amount. However, during the process, many questions came up about the amount of time, money and energy everybody of Landjegoed should invest in the construction of the Huiskamer. Nicolas described that discussions started since not everybody could share the same time and money due to personal circumstances. In the end, the group decided that funding by the residents would be done anonymously and that everybody could invest the amount of money and time that they could, and Nicolas was pleased with the outcome:

*'I'm very proud that that process came about because that is kind of special. Now we end up with a lot of money, and nobody knows who is paying for it. Awesome, right?'*

The example described by Nicolas is similar to sharing practices of other ecovillages in which knowledge, skills and labour are shared between members, which creates and strengthens the sense of community in the ecovillage (Brombin, 2015; Pickerill, 2015; Price *et al.*, 2020). Hall (2015) adds that sharing practices and community building can positively influence the well-being of ecovillagers and questions the extent to which these practices could be transferred to mainstream society.

### *Reuse of materials*

In Woldwijk, much material, such as wood, is second-hand and is reused for the different projects on the property. Many residents have built their houses from reclaimed materials, significantly reducing construction costs (Interview Bram, interview Nicolas). Showing the residents of Ten Boer the possibility to look first for second-hand items rather than buying new ones and creative ways to reuse existing materials can help shift to more sustainable practices (Avelino *et al.*, 2009; Ergas, 2010). Additionally, Tao *et al.* (2023) describe that materials can connect ecovillages with their surrounding community to demonstrate how to reuse them and create more extensive networks of people who recycle them.

According to Nick, it can be valuable to reuse certain items and materials of houses that need demolishing because of the area's earthquakes (Interview Nick). Research has described that many building materials and items can be reused after demolition, which has significant environmental benefits such as saving new raw materials and reducing the amounts of waste that go to landfills (Ghisellini *et al.*, 2018; Kabirifar *et al.*, 2020). Additionally, reuse can save high costs for municipalities when developing new projects and disposing of waste during demolition (Kabirifar *et al.*, 2020). Concerning the demolition in Ten Boer, this could save the municipality of Groningen some money when building parts can be reclaimed for other projects. Moreover, this can also be a means to support the municipality's vision to reduce the use of raw materials by half until 2030 (Gemeente Groningen, n.d.). Therefore, Woldwijk could collaborate with the municipality to showcase how materials are reused in the ecovillage and even in projects in Ten Boer.

### *Energy and water management*

Residents of Woldwijk can also be an example of the sustainable management of energy and water. Due to the small size of the tiny houses, the residents describe that they use little energy to heat their homes, and on sunny days the homes are heated up quickly by the sun, which also reduces the need to turn on the heating (Interview Nicolas, interview Nienke). This confirms the theory of Carragher *et al.* (2018) that the small size of a dwelling in an ecovillage causes a reduction in the amount of energy necessary to heat and operate appliances compared to a conventional dwelling.

Another practice to reduce water is using compost toilets that are installed in some tiny houses of Woldwijk, where the waste is collected in a bag, and the odour is minimised through sawdust. Compost toilets are also common in other ecovillages to reduce water consumption (Boyer, 2016; Tao *et al.*, 2023). However, the human waste collected is, in some cases, also composted in the ecovillage and then later used as a plant fertiliser (Boyer, 2016). This practice is, however, not yet established in Woldwijk.

## **5.2. Interactions between Woldwijk and Ten Boer**

The interviews with the members of the ecovillage Woldwijk and the residents of Ten Boer gave insights into their interactions. The current interactions were grouped into online and in-

person interactions, which also overlap in some instances, such as promoting events and activities. Moreover, the analysis of the interviews revealed meeting spaces in Ten Boer where ecovillagers and village residents could interact.

### 5.2.1. Online interactions

As described in section 4.1.2., Woldwijk uses various online communication methods to interact with Ten Boer residents and others interested in ecovillage practices. On the website of Woldwijk, all activities, events updates and relevant information are displayed. Previous research has shown that an online presence can significantly influence the visibility of an ecovillage and share current developments (Ergas, 2010; Cerratto-Pargman *et al.*, 2016; Dias *et al.*, 2017). Woldwijk also shares some updates on local Facebook groups and the local newspaper that reach many people in Ten Boer (Interview Nienke) (Figure 9).



Figure 9: Example of interaction on Facebook (Ten Boersters voor elkaar, 2023)

To further illustrate the online interaction between Woldwijk and Ten Boer, WIJ Ten Boer Opbouwwerk posted on one Facebook group that they got permission to reclaim one wheelchair-friendly toilet, a wall handle and a sink from one of the elderly care centres that will be demolished. The items will be used in the new community space of Woldwijk (Figure 10).



Figure 10: Example of reusing items from buildings that will be demolished (Wij Ten Boer Opbouwwerk, 2023)

Additionally, WIJ Ten Boer Opbouwwerk asked on one Facebook group that was analysed if people in Ten Boer had leftover pallets at home that could be picked up and used for the summer children's activities at Woldwijk (Figure 11).



Figure 11: Example of asking for pallets to reuse for children's activities (Wij Ten Boer Opbouwwerk, 2023)

Both examples above illustrate that the residents of Ten Boer who are members of the Facebook groups can hear about Woldwijk through the initiative WIJ Ten Boer Opbouwwerk. At the same time, it also presents that Woldwijk aims to reuse various materials in its projects. Online platforms like Facebook can be a tool to engage with residents to acquire materials and items that can be repurposed in Woldwijk.

Woldwijk also uses the platform YouTube to share videos of activities such as the tree planting event or the clothing market (*Boomplantdag 21 January 2023*, 2023).

However, not everybody might be reading the newspaper, using Facebook or follow the videos on YouTube. Therefore, it is also vital to communicate activities through other methods. Nienke aims to add more information boards for displaying current events. This could also reach the people who go for a walk through Woldwijk (Interview Nienke). Natalie

adds that the current communication is based on the voluntary work of the communication group, which leads to the pausing of many projects due to time constraints. Hiring a person for a few hours per week might help to take some workload off the volunteers and to make communication more efficient (Interview Natalie).

### 5.2.2. In-person interactions

The eco-cooperative Woldwijk organises activities throughout the year that attract locals of Ten Boer and people from the region. Most events are organised in collaboration with other organisations from Ten Boer, such as Dorpsbelangen Ten Boer. Due to the property size and the space to host hundreds of people, all activities organised by the ecovillage take place at the property of Woldwijk (Interview Ewout, interview Nicolas).

In the past, the ecovillage has organised multiple open days where visitors had a guided tour around the property of Woldwijk. These open days were aimed at visitors to learn about the practices and vision of Woldwijk and were communicated on the website of Woldwijk (Woldwijk, 2019). Many residents also opened their houses for visitors to get an insight into living on a small ecological footprint (Woldwijk, 2019). As Nicolas described in his interview:

*'And if you show the house, then that is very often an eye-opener for people. Gosh, but can you live that small and still be happy? You know?'*

By showing visitors the tiny houses and discussing how they were built, ecovillagers can share their knowledge and experiences with a broader audience and show what is possible beyond 'the regular' (Miller *et al.*, 2012).

The Groene Dag (Green Day) is another event organised twice per year by the communications group of Woldwijk (Interview Natalie). At the last Groene Dag, there was a market where one could get information about sustainable initiatives in Ten Boer and its surroundings but also participate in workshops related to gardening, organic cooking and working with wool felt (Interview Natalie, Woldwijk, 2022). Additionally, guided tours around Woldwijk and a foraging walk took place (Woldwijk, 2022a). Nienke described that this event receives subsidies to be organised since it is an educational way to inform people about sustainability (Interview Nienke).

Another major event is the Lutjefest, organised in July 2023 in collaboration with Dorpsbelangen Ten Boer. This event aims to bring the Ten Boer and Woldwijk locals together (Interview Ewout). For this, the organisers have received a lot of subsidies from the municipality to promote better integration of Woldwijk into Ten Boer (Interview Ewout). The Lutjefest is based on a pilot event called Lutjepicknick that the ecovillage organised in 2022 as part of a week-long Light festival (Lichtfeest) in Ten Boer (Interview Daniël, Interview Ewout). However, due to bad weather, only very few residents of Ten Boer attended this event, which Ewout described as disappointing (Interview Ewout). Therefore, it was decided to find a date for the Lutjefest in the summer months with better weather and to organise it apart from other festivities in the village (Interview Ewout). At Lutjefest, many activities will be organised, such as a market, live concerts and theatre plays.

Furthermore, there will be activities for children. Daniël and Nienke are part of the organising team and described that they try to integrate sustainability and a small ecological footprint as much as possible. Therefore, it is tried to reduce the use of plastic at the festival, but also for the market, mainly sustainable initiatives were selected (Interview Nienke, Interview Daniël). The Lutjefest is promoted on the websites of Woldwijk and Dorpsbelangen Ten Boer, on Facebook and along the N360 road when entering Ten Boer from Groningen, which I observed during my bus ride to Woldwijk (Figure 12). Furthermore, every house in Ten Boer will receive a flyer about the Lutjefest (Interview Nienke). However, giving out flyers is only



possible for some events in Woldwijk as it is expensive and takes time to distribute the flyers (Interview Nienke).



Figure 12: Promotion of the Lutjefest at the N360 road entering Ten Boer (Source: author)

Every year there are some activities for children organised in collaboration with the youth workers of Ten Boer (Interview Thijs, Interview Nick). Children can participate in a workshop to build insect hotels (Woldwijk, 2022b). Two of Annet's children also participated in this workshop, and they were only provided with the materials but could make their designs (Interview Annet). Teaching children to build with second-hand materials is essential for Annet as it teaches the children to be creative and imaginary. At the same, it creates unique insect hotels. According to Tao *et al.* (2023), involving children and other people in building projects enables 'qualities of playfulness, utility and expressiveness', which engage participants more than simply following a construction plan (p. 12). The Sloopjesdag is another event for children that Woldwijk organised together with the IVN (Instituut voor natuureducatie) in which children would catch animals that live in the ditch and investigate them under the microscope (Interview Nicolas, Woldwijk, 2022c). Through this event, the children would connect with nature (Interview Nienke).

One event that Woldwijk does not organise but from Dorpsbelangen Ten Boer is the Avondwandel4Daagse, an event for children to walk with their parents around the four schools of Ten Boer (Interview Ewout). This year they included a walking route through Woldwijk to show the participants the property and how the residents live there (Interview Ewout).

Recently, a clothing market took place at the farmhouse in Woldwijk, which was a big success (Interview Nicolas). Here, people could exchange and buy second-hand clothing for children and adults. This event was also visited by some residents of Ten Boer (Interview Daniël). Additionally, there were two tree planting events in which residents of Woldwijk and locals of Ten Boer planted around 1000 trees and bushes on the property of Woldwijk and the surrounding land (Interview Nicolas). Tom also participated in this event and helped plant the trees (Interview Tom). Lastly, the theatre group Depot Z presented their play *Gidsland* at the farmhouse in Woldwijk for a weekend, attracting residents of Ten Boer (Interview Ewout, (Woldwijk, 2023). Table 2 provides an overview of the main outreach activities organised throughout the year by Woldwijk based on the interviews and the website of Woldwijk.

Month	Outreach activity	Collaboration	Sustainability-related focus	Target audience
April	Second-hand clothing market		Consumption, reuse of products	Ten Boer (mainly families)
April	Groene Dag	Global Goals Werkgroep Ten Boer	Food, consumption	Ten Boer, surrounding villages
July	Lutefest	Dorpsbelangen Ten Boer	Market with sustainable products	Ten Boer
July	Building huts and pizza evening	WU Jongerenwerk	Reuse of materials	Children
August	Building huts	WU Jongerenwerk	Reuse of materials	Children
August	Building insect hotels	WU Jongerenwerk	Reuse of materials, nature	Children
August	Aardbevernifestival (by Mas con Menos)		Food, construction	General
September	Oogstfeest	Stichting Groninger voedseltuinen	Food	Province of Groningen
October	Groene Dag	Global Goals Werkgroep Ten Boer	Energy, food	Ten Boer, surrounding villages

Table 3: Overview of regular events at Woldwijk

Some of the residents of Woldwijk volunteer at the elderly care centre Innersdijk where they help in, for example, refurbishing the courtyard or going together for a walk (Interview Daniël). Recently, there was also a lunch organised for the residents of the temporary houses where fresh pizza was baked in the pizza oven at the farmhouse. Additionally, Natalie explained that a general pizza evening is happening once per month, where everybody can come to have fresh pizza (Interview Natalie). Tom has also joined the pizza evening multiple times, describing it as an enjoyable outing (Interview Tom). As described by the example of pizza, food can be a valuable tool to bring together the residents of an ecovillage and the surrounding community to come together and interact with each other (Brombin, 2015; Ulug *et al.*, 2021b).

The residents of Woldwijk have created a walking path from the self-harvesting garden behind the temporary housing (Figure 13, in blue). Furthermore, there is a new extension to connect the temporary housing with Woldwijk, which provides better access between the two (Interview Daniël).



Figure 13: Map of the walking route through Woldwijk

Since the creation of the walking path, many locals have been walking around Woldwijk and interacting with the residents of the ecovillage, as described by Nick:

*'I also think it happens because many people are walking around super happy. And they come and have a look: Oh how nice! I'm outside a lot, so I talk to many people.'*

Even though a walking path is a small spatial intervention, it has significantly impacted the interaction between the residents of Ten Boer and Woldwijk. Before the temporary housing and the walking path were there, it was impossible to access the land and to walk through nature to Woldwijk, and people had to walk along the road when going to Woldwijk (Interview Nicolas). While at Woldwijk, I walked along the path that goes from one side of the ecovillage to the other (Appendix 4). At the entrance and the along the path are two information boards that give information about Woldwijk and the local biodiversity. These information boards are also a method to educate walkers about some sustainability-related practices that Woldwijk works on. Additionally, there is also a bench to enjoy the view. Where the path accesses the tiny houses, there is a picnic bench to sit on (Figure 14).



Figure 14: Impressions of the walking path in Woldwijk (Source: author)

Residents of Ten Boer can also sign up for the workshops offered by Mas con Menos to learn about sustainable building practices (Interview Nienke). This activity is valuable since the participants learn the relevant skills to reproduce the construction in their environment. Therefore, participants can implement sustainable alternatives in their daily life (Tao *et al.*, 2023).

StaatjeVrij also started constructing with Landjegoed the new community space Huiskamer, and residents of Ten Boer are invited to participate in finishing the construction (Interview Nicolas). Next to the construction projects, StaatjeVrij is also managing the Zelfoogsttuin (self-harvesting garden), located beside the old farmhouse (see Figure 13). Residents of the initiative Landjegoed are automatically garden members and receive fresh vegetables and fruits (Interview Daniël). Ten Boer locals can also sign up for a membership to harvest local and seasonal food (Interview Ewout, Woldwijk, n.d. c). According to Ewout, some people of Ten Boer are already using the garden. The example of the self-harvesting garden shows that food can be a means for the ecovillage Woldwijk to interact with the locals of Ten Boer who have a membership. Since StaatjeVrij grows the fruits and vegetables and the members harvest, the garden brings a closer connection between producer and consumer (Kunze,

2020) and possibly fosters exchange about the preparation of the produce (Brombin, 2015; Ulug *et al.*, 2021b). Collecting local produce from the self-harvesting garden can potentially impact the members' sustainable behaviour as they might use no packaging to wrap the harvest and travel by bicycle if the residents live in Ten Boer (Kunze, 2020).

### 5.2.3. Meeting spaces in Ten Boer

Ten Boer has various facilities where Woldwijk and the village residents can meet (see section 4.2.1.). Van Den Berg *et al.* (2015) argues that local facilities can provide opportunities for people to meet and interact, influencing the perceived sense of community. Most interviewees of Woldwijk said that they use the local supermarket to buy groceries (Interview Thijs, Interview Bram). Tom describes that some ecovillagers stand out when they visit the local supermarket since they wear construction outfits and big boots:

*'Yes, I love that and think oh nice someone from the Tiny houses, because you can tell. You know? The big shoes and straw is hanging there a bit.'*

Nienke adds that some people might perceive the ecovillagers as strange when they go to the supermarket in construction outfits, but it could also increase curiosity about Woldwijk. This preconception of ecovillagers is similarly discussed in other research where the wider public stereotypes ecovillagers as 'hippies' due to their appearance (Alonso González *et al.*, 2019; Lennon *et al.*, 2022). The prejudices of seeing somebody as 'different' or 'alternative' can shape the relationships between individuals or groups and therefore, can harm interactions (Fedor, 2014).

In addition to the supermarket, some residents of Woldwijk visit other local facilities such as the library, restaurants or the municipal office (Interview Natalie, interview Nicolas). Sometimes the ecovillagers order food at the local snack bar, and Natalie explained that the snack bar owners started to offer vegan and vegetarian options since the ecovillagers asked for meatless snacks.

However, it was also discussed that the interviewees of Woldwijk have yet to visit any activities or events organised in the village. Natalie argued that the types of activities that are offered in Ten Boer do not match her interests, and therefore, she does not participate in them:

*'Well, karaoke, bingo and a schlager festival are not my type of thing, and I think a lot of the neighbours don't like them either. There is also a swimming pool, and I've never been there, but a lot of young people go there and I don't like that, so it's a bit of a search for the activities that are organised.'*

The quote shows specific challenges for the interactions between Woldwijk and Ten Boer that are influenced by prejudices about each other (Fedor, 2014). The perception about the activities in Ten Boer, as described by Natalie, shows that this can be a barrier to interaction as the organised activities do not correspond with the interests of some of the Woldwijk residents (Jepson *et al.*, 2014). Moreover, this can also reinforce the perception of Ten Boer as a 'boring' village.

However, Nienke also acknowledged that residents of Woldwijk should participate in some local activities to strengthen their interaction with the residents of Ten Boer. Ewout also questioned in his interview the extent to which residents of Ten Boer feel that the ecovillagers are participating in local events or making use of the facilities in the village.

#### 5.2.4. Potentials for the future

Woldwijk is already organising various activities and events, but there is still some potential for the future to expand these activities.

Since the new community space Huiskamer is almost finished, it is planned to start a food café and regular event with coffee, tea and cake that is also open for the residents of the Ten Boer, the residents of the temporary houses and the elderly care centre Innersdijk (Interview Natalie). Nienke describes that many residents of the temporary houses and the Innersdijk are lonely and that this type of activity can increase the interaction between Woldwijk and the residents around (Interview Nienke).

Another project for the near future is the restoration of the old farmhouse. Ewout and Nicolas believe that the farmhouse can become the new multifunctional centre of Ten Boer that can be used as an event space for local activities (Interview Ewout, interview Nicolas). The farmhouse also has the advantage that events can be organised inside independently from the weather (Interview Bram). During the interviews, the flea market idea came up multiple times, and Rob even thought about building the stands from recycled materials (Interview Bram, interview Nicolas, interview Nienke). A flea market allows decluttering and for others to purchase second-hand items (Interview Bram). Another future project is a little park between the tiny houses. This park will have a small animal paddock, a play area, some benches, a picnic table, and a pond where locals of Ten Boer can relax (Interview Bram).

Next to the occasional events, Natalie believes it is crucial to organise regular walking tours around Woldwijk that include a workshop (Interview Natalie). However, this would not just be for the residents of Ten Boer but also attract visitors from other parts of the Netherlands (Interview Natalie). Other examples of attracting more visitors from other areas are yoga workshops in the Wereldhuiskamer (World living room) of StaatjeVrij as well as giving foraging walks where people learn how to identify eatable plants and how to prepare them (Interview Nicolas, interview Nienke). Nienke adds that she would like to create more networks with other ecovillages to exchange knowledge and learn from each other (Interview Nienke). The knowledge exchange would be about sustainability practices and how to live in a group and could be combined with holidays to other ecovillages (Interview Nienke). This corroborates with the theory of Magnusson (2018) that creating networks with other ecovillages is a vital tool for exchanging knowledge about different practices and increasing the visibility of the different ecovillages.

Overall, there are many ideas on how to enhance the activities in the future. Nevertheless, the interviewees also described that the activities that will be organised should interest the residents of Ten Boer. As Nienke summarises:

*'Yes, we try to think very much about what a village [Ten Boer] would like. We know, for example, that bingo is a very popular activity and a flea market. So we try to organise things like that because we think there is a need for them.'*

Tom also agreed that it is necessary to organise activities that speak to the residents and that it could be valuable to ask the locals of Ten Boer about the activities they would like to participate in and to evaluate which activities attract many visitors (Interview Tom).

### 5.3. Perceptions of Interaction and Stereotypes

When the ecovillage Woldwijk was set up, there was little interaction between the residents of Ten Boer and Woldwijk. Natalie explains that in the beginning, the ecovillagers were more focused on building their own houses and developing the property of Woldwijk rather than

establishing a connection with Ten Boer (Interview Natalie). Similarly, Andreas (2013) describes that ecovillagers are mainly preoccupied with their activities and everyday life and that their interaction with the surrounding community needs to be remembered.

The interviews with the residents of Woldwijk described that Ten Boer is perceived as a very religious village which was not open towards the ecovillage (Interview Natalie). However, the interaction between Woldwijk and Ten Boer has become more frequent and more locals know about the ecovillage (Interview Ewout, Interview Nick). This is because Woldwijk tries to be very open and has also been transparent about the developments happening in the ecovillage (Interview Nick, interview Nienke). Thijs described that in the beginning, there were information evenings organised for every neighbourhood in Ten Boer to talk about Woldwijk and the plans for the property (Interview Thijs). Additionally, Woldwijk has set up various activities and events to stimulate further interaction with Ten Boer (see section 5.1). Even though the interaction has increased over time, it is also important to note that the ecovillage Woldwijk is not homogenous since it has different initiatives with its sustainability focus. Therefore, the interactions with the locals of Ten Boer are likely also influenced by the need for good connections to the village. As described previously, StaatjeVrij regularly gives workshops which people pay for. It might be more relevant for them to have good relations with the locals of Ten Boer to receive sufficient participants. Additionally, the interactions can also be influenced by how much importance a resident of Woldwijk gives to the connection with Ten Boer. If ecovillagers like Daniël or Nicolas work with local organisations, they could perceive the interaction as more relevant than somebody who only wants to live in Woldwijk for the low rent.

Since the interaction between Woldwijk and Ten Boer is not one way, it is also vital to understand how the residents of Ten Boer perceive the interaction. When Woldwijk was established, most locals were sceptical about constructing an ecovillage in Ten Boer (Interview Ewout). Furthermore, Woldwijk was not created like the other neighbourhoods in Ten Boer where all the houses look the same, but it is perceived as very alternative with the different shaped tiny houses (Interview Nienke). Ewout adds that when the municipality decided to establish a property for alternative uses, many residents would have preferred the construction of a 'traditional' Dutch neighbourhood. Especially for young people who grew up in Ten Boer, it is difficult to find housing within the village when moving out of their parent's house (Interview Ewout). Therefore, the village was very reserved about the new residents of Woldwijk and perceived them as different, alternative, and hippies:

*'They [the residents of Ten Boer] thought only hippies live here and that they [people from Woldwijk] were smoking weed and drinking all day, and oh yes, they were also carpentering, you know?'* (Interview Bram)

Stereotypes and preconceptions about ecovillages have also been discussed in previous literature, which describes that ecovillagers are seen as hippies living impoverished lifestyles (Metcalf, 2012). In some cases, these stereotypes are also strengthened by the media that portrays ecovillages as cult-like communities (Metcalf, 2012). In the case of Ten Boer and Woldwijk, the perception has changed over time, as also explained in the previous sections. More people of Ten Boer come to Woldwijk for walking, and some have also participated in the activities organised by the ecovillage. Additionally, more people in Ten Boer have started to know about Woldwijk, and Annet noticed that scepticism had shifted more towards curiosity and openness towards Woldwijk.

Furthermore, more locals acknowledge that having tiny houses in Ten Boer is trendy and puts it on the map (Interview Annet, interview Natalie). I made a similar observation at the event 'Cultuur versterkt' that I visited during my stay at Woldwijk (Appendix 4). Some of the

other participants from Ten Boer and the surrounding villages asked many questions about Woldwijk and wanted to learn more about what Woldwijk stands for. According to Lennon *et al.* (2022), there has been a shift in how the broader community perceives ecovillages. Due to the increasing attention to sustainability by the media and politics, more people have started to make sustainable lifestyle changes and also turn to ecovillages to learn more about sustainable alternatives (Lockyer *et al.*, 2013; Lennon *et al.*, 2022).

Nevertheless, it has to be acknowledged that the described preconception that Ten Boer is very religious and conservative while the ecovillagers of Woldwijk are perceived as 'alternative' and 'hippies' can also have implications for the interaction. Koch *et al.* (2016) argue that groups labelled as 'religious' or 'conservative' are perceived as wanting to preserve their traditions and are adamant to change. On the other hand, groups that are labelled as 'alternative' are seen as wanting 'things to change and diversify, and thus they emphasize freedom, autonomy, creativity, innovation [...] and alternative views and lifestyles' (Koch *et al.*, 2016, p. 702). Therefore, these stereotypes about each other can potentially lead to clashes and negatively impact interactions, as both groups have different views and beliefs (Fedor, 2014; Lennon *et al.*, 2022).

### 5.3.1. Balance openness and privacy

As described above, the interactions between the eco-cooperative Woldwijk and the village of Ten Boer have become more regular. Nevertheless, it also became apparent during the interviews that it can be challenging to balance the interaction since it is essential to be open and have privacy and time for oneself (Interview Natalie). Natalie explains further that she often receives questions about her tiny house and that it can be challenging to say no to answering questions. On the other hand, Bram and Nienke argued in their interviews that they retreat into their homes for more privacy and can close their blinds if they do not want to interact with others. This contrast shows that the need for privacy varies among individuals, and while some may be comfortable with constant interaction, others require more solitude and boundaries. This challenge might be further amplified by the physical location of the tiny houses within Woldwijk, as those situated along walking routes may encounter more interactions with locals than those tucked away. Similar results were described in the research by Tjihuis (2021) that curious visitors would walk around the ecovillage and that some ecovillagers felt like their privacy was invaded. By the same token, Rubin (2021) found that some members of Dancing Rabbit Ecovillage struggle to balance openness towards visitors and privacy because some members need to recharge from visitors. These members described that it takes much energy to be social.

Next to finding a balance about sufficient privacy, some interviewees of Woldwijk discussed that living with many other people in the ecovillage results in solid social contacts. It was also questioned whether it is necessary to have a strong interaction with Ten Boer since one lives in Woldwijk with around 60 other neighbours. As summarised by Natalie:

*'I also notice I also feel it's enough that you know everyone [in Woldwijk] by name and know the houses, the children, and the animals. But you know that's already a lot, sixty people. I've never had that much contact with neighbours, so I don't need a lot of contacts in the village [Ten Boer].'*

The literature has also discussed this challenge to balance visitors and sufficient time for community building within the ecovillage (Van Schyndel Kasper, 2008). Rubin (2021) concluded that 'being the centre of attention is great for spreading a message, but it's also difficult to turn off without setting boundaries around its availability' (p. 449).



#### 5.4. Influence on sustainable behaviour

The interviews with residents of Woldwijk and Ten Boer asked whether Woldwijk influences the awareness of sustainability in Ten Boer. Many respondents agree that Woldwijk has a particular impact on sustainability awareness, but it also has to be acknowledged that they cannot inspire everybody (Interview Nienke). Tom described that raising more awareness for sustainability can influence people positively or negatively. To positively influence sustainability awareness, the locals of Ten Boer must be open to sustainable alternatives. Additionally, the interviews revealed that it might be easier for Woldwijk to influence locals of Ten Boer when they already implement sustainable alternatives in their daily lives (Interview Annet). As argued by Craig (2019), the opinions that a person has about sustainability can be strengthened through online and face-to-face engagement.

On the other hand, when locals are not interested in sustainability, and Woldwijk tries to convince them, it might lead to resistance to making changes towards a more sustainable lifestyle (Interview Nienke). Therefore, some respondents described that it is essential to offer activities that integrate sustainability aspects, but it is not the main focus to interact with locals (Interview Annet). For example, Annet illustrates that if Woldwijk promotes the self-harvest garden as a cheaper and healthier option for vegetables and fruits compared to the local supermarket, it might attract more locals than if promoted as a sustainable alternative to the supermarket's products.

Some residents of Woldwijk agreed that the ecovillage demonstrates sustainable alternatives, which can start a conversation with the locals of Ten Boer. As described by Ewout, one is confronted with the alternative lifestyle when visiting Woldwijk:

*'Because you are confronted with the way of life in Woldwijk. And suppose people are genuinely interested in that and also come into contact with residents there. In that case, a person might start thinking hey if I translate something like that to my own home and my own life could I change things that would benefit sustainability? It might possibly be.'*

However, Thijs noted that the influence of Woldwijk might not be strong enough for people to make sustainable choices that last. He argues that in Woldwijk itself, one is constantly influenced by the other ecovillagers to make sustainable choices. This follows the results of Miller *et al.* (2012) that living in an ecovillage provides constant reminders to opt for sustainable choices. Therefore, whether locals of Ten Boer decide to integrate sustainability into their daily lives in the long term is also influenced by other factors, such as social norms or whether friends and family are active in sustainability (Culiberg *et al.*, 2016; Smith *et al.*, 2021).

Nicolas and Nienke mention that sustainability is nowadays more of a general trend since it is more discussed in the media than by politicians. However, Nienke believes that Woldwijk is more accessible for people to learn about sustainability than through the media or politics. Lockyer *et al.* (2013) and Lennon *et al.* (2022) describe similar findings by arguing that, on the one hand, sustainability has become a more mainstream term that is anchored in governmental policies. However, on the other hand, more people recognise that shifting to more sustainable day-to-day practices is necessary. This highlights the importance of creating tangible and hands-on experiences for individuals to engage with sustainability, as it can have a more substantial impact than abstract discussions in the media or politics.

Dorpsbelangen Ten Boer has started introducing sustainability-related events. Recently a weekend was organised with the municipality of Groningen where locals can drop off appliances they are not using anymore (Interview Ewout). The appliances were sorted in

different containers to donate to the local second-hand or giveaway shops (weggeefwinkel). Items that were broken ended up being recycled by the municipality. This event received much positive feedback from the locals of Ten Boer, and Ewout hopes it can be turned into a regular event.

Another activity that Dorpsbelangen Ten Boer organises is a repair café. Here people can hand in broken items, such as appliances or clothes, which are then repaired by volunteers (Interview Ewout). Bram described that the repair café could be an opportunity for residents of Woldwijk to volunteer and, through this get in contact with locals of Ten Boer. Creating networks with other sustainability-related initiatives in the surrounding area is vital for ecovillages as it strengthens local collaborations, creates community resilience and, at the same time, can have a greater impact on the sustainable behaviour of an individual (Lockyer *et al.*, 2013; Waerther, 2014).

## 6. Discussion and conclusion

This chapter first discusses two main themes that emerged from the results section by relating the results to the academic literature of the theoretical framework. In the conclusion section the secondary research questions and the main research question are answered. Furthermore, recommendations for further research and the ecovillage Woldwijk are given. The chapter closes by discussing to what extent the results are relevant for planning practice.

### 6.1. Discussion

#### 6.1.1. Property ownership: Forced vs. organic interaction

The analysis of the interviews with the residents of Woldwijk showed practical motivation to interact with the villagers of Ten Boer. Due to the temporary rental contract and the requirement by the municipality to have added value for Ten Boer, Woldwijk needs to actively engage with the residents and establish connections in the village. However, the situation could change if Woldwijk were to own the land. In that case, the necessity of Ten Boer's support and the need to demonstrate sustainable practices might be questioned. Based on the interviews, it became evident that there is a lack of collaboration among the various initiatives in Woldwijk regarding working on projects together. Moreover, it became apparent that there is a varying degree of integration of sustainability into day-to-day activities. Mychajluk (2017) argues that establishing expected working hours per ecovillager, involving activities like food production, land stewardship, or organisational work, can play a role in community building and help forge a shared sustainability vision for the ecovillage. It is also supported by the research of Rubin (2021) that the constant preservation of interpersonal relationships is important to strengthen the values of the ecovillage. Research has also shown that strict sustainability guidelines like those at the Dancing Rabbit Ecovillage can create a shared vision about what the ecovillage wants to achieve and find paths to share that vision with the surrounding community (Lockyer, 2017).

If the time pressure caused by the rental contract is removed, Woldwijk would have the opportunity to concentrate on building a stronger sense of community within its boundaries. By encouraging the creation of a sense of community among the different initiatives, a more unified image could be presented to the surrounding community. Additionally, Woldwijk would be better positioned to project a clearer and more compelling vision to mainstream society about its sustainability goals and what it aims to achieve. This vision would help communicate a stronger message to the outside world, highlighting Woldwijk's commitment to sustainable practices and making a more significant impact on a broader scale. Furthermore, by presenting a unified image to the surrounding community, Woldwijk can significantly enhance the visibility and credibility of its sustainability initiatives. This can attract interest and support from external stakeholders, opening up opportunities for collaborations and extending the impact of Woldwijk beyond the boundaries of the ecovillage (Ergas, 2010; Lockyer *et al.*, 2013; Lennon *et al.*, 2022).

#### 6.1.2. Sustainable behaviour: Everyday life vs like-minded community

The findings indicate that Woldwijk aims to influence the sustainable behaviour of the residents of Ten Boer. The ecovillage presents an 'alternative' lifestyle, but some ecovillagers doubt the Ten Boer residents' long-term adoption of Woldwijk's sustainable practices. Living in Woldwijk means surrounded by like-minded individuals who actively integrate sustainable practices into their daily lives (Miller *et al.*, 2012). However, the question arises as to whether individuals would continue these sustainable practices once they leave the Woldwijk environment. This emphasises the importance of individual attitudes and receptiveness to sustainability in determining the effectiveness of ecovillages in driving behaviour change (Fedor, 2014).

Furthermore, it can be argued that more than the influence of Woldwijk is needed to foster long term sustainable choices among residents. Various factors such as social norms, influence from friends and family, and broader cultural contexts significantly shape individual behaviour (Culiberg *et al.*, 2016; Smith *et al.*, 2021). Therefore, ecovillages must collaborate and establish networks with other organisations prioritising sustainability to challenge the dominant social paradigm focused on consumption, economic growth, and political liberalism (Casey *et al.*, 2020). As argued by Hong *et al.* (2016), it is crucial to acknowledge that the diffusion of ecovillage practices occurs gradually, and overcoming the dominant social paradigm requires time and concerted efforts.

## 6.2. Conclusion

This study aimed to explore the relevance of ecovillages to involve and actively interact with the broader community they reside in to tackle some urgent sustainability issues by zooming into the case study of the ecovillage Woldwijk and the village Ten Boer. Through the use of multiple research methods, a deeper understanding was gained about the motivations behind involving the broader community in sustainable practices of the ecovillage, the stereotypes associated with an ecovillage and the surrounding community, as well as the potential to influence the sustainable behaviour of the wider community. To be able to answer the main research question, the three empirical sub-questions have been answered:

1. *What motivates the ecovillage Woldwijk to involve the local community in their activities and how does Woldwijk perceive the current level of interaction?*

Based on the analysis of the interviews with residents of Woldwijk, the ecovillage has two motivations to involve the local community in their activities. On the one side, Woldwijk has a temporal rental contract for the property from the municipality of Groningen. It is valuable for Woldwijk to receive support from the residents of Ten Boer and show why Woldwijk brings added value to the village to stay at the property indefinitely. In other ecovillages, the properties are privately owned and where the ecovillagers rent a lot from the primary property owner (Lockyer, 2017; Mychajluk, 2017). This can decrease the uncertainty of whether the community can stay. If an ecovillage owns the ground, they might not see an urgency to have intense interactions with the surrounding community since they might be less dependent on the support to be able to stay.

The eco-cooperative Woldwijk is experimenting with alternative forms of living and tries to be a practical example for the inhabitants of Ten Boer to get in contact with sustainable practices around biodiversity and nature, sharing economy, reuse of materials, energy and water management, and food practices. The sustainable practices of Woldwijk are similar to those discussed in the literature, such as the self-harvesting garden, sharing economy or the reuse of materials (Price *et al.*, 2020; Tao *et al.*, 2023). However, as described in the result section and also discussed in existing literature, ecovillages such as Woldwijk are dependent on local regulations, and the local government can therefore influence the sustainable practices that ecovillages can establish (Ergas, 2010; Ergas *et al.*, 2016; Hong *et al.*, 2016).

Regarding the current interaction between Woldwijk and Ten Boer, it was generally described that the interactions with the local village have become more frequent since the establishment of the ecovillage. Woldwijk actively tries to be open towards Ten Boer by regularly organising events and activities where locals can participate. Nevertheless, the results also described that balancing openness and privacy in an ecovillage could be challenging. Previous research has also argued that ecovillagers need to find a way to interact with the visitors they receive while simultaneously having time for themselves and for community building with other ecovillage members (Lockyer, 2017; Renau, 2018).

2. *What are the current activities that bring together locals and the ecovillage Woldwijk and what are the potentials to enhance or extend these activities?*

The analysis results have shown that Woldwijk organises various activities throughout the year in which the locals of Ten Boer can participate. Some of the activities are aimed at specific target groups, such as children, and Woldwijk often organises events in collaboration with local organisations. It also tried to incorporate some sustainability-related aspects into the activities, such as reusing materials for the children's activities or offering workshops related to food and energy. Woldwijk posts information and updates on their social media and website to attract many participants to the activities. The results of the analysis confirm the theories from the literature, as it is common for ecovillages to offer a variety of activities to attract visitors (Christian, 2007; Schelly *et al.*, 2023). Nevertheless, the variety of events and workshops offered at Woldwijk are less diverse than in other ecovillages, such as Tamera in Portugal, where visitors can also stay for a more extended period to experience the ecovillage life (Esteves, 2017). Hosting visitors for a more extended period might be difficult since Woldwijk still faces the uncertainty whether the ecovillage is able to stay. Setting up an intensive visitor program will cost time and also money since Woldwijk would need to construct visitor accommodations. Therefore, it is more suitable for Woldwijk to organise short-term activities such as events or pizza evenings.

The results have demonstrated that there is still great potential to enhance the activities in Woldwijk in the future. The ecovillage has the goal that the local farmhouse will become the multi-functional centre of the village for events and festivals. Additionally, some ecovillagers see the potential to create frequent walking tours for visitors to learn about sustainable practices and to expand the interactions with the elderly centre and the temporary housing. Nevertheless, it was also reflected that Woldwijk should consider which activities the locals of Ten Boer enjoy that could accommodate more interactions. However, as described under the previous sub-question, it is necessary to evaluate how far the interactions should be expanded to be still able to keep the balance with the privacy of the ecovillagers.

3. *How do the locals perceive and interact with the ecovillage Woldwijk and has Woldwijk influenced the local's perception of sustainability?*

The interviews with the residents of Ten Boer described that the interaction has improved, similar to the interviews with ecovillagers. In the beginning, however, the residents were very sceptical about the establishment of Woldwijk, and some wished for a more 'traditional' neighbourhood as an expansion of Ten Boer. Additionally, many locals had stereotypes about ecovillages, and they perceived the residents of Woldwijk as alternative and different (Metcalf, 2012; Esteves, 2017; Renau, 2018). Through the transparency and open communication between Woldwijk and Ten Boer about developments, scepticism is slowly decreasing, and more locals are participating in activities at the ecovillage. Some inhabitants of Ten Boer are members of the self-harvesting garden, and others have visited the events such as the clothing market or the children's activities in the summer.

The second part of the third sub-question investigated whether Woldwijk has influenced the sustainable behaviour of the residents of Ten Boer. The results showed that Woldwijk impacts sustainability awareness since residents are confronted with the lifestyle in the ecovillage. Nevertheless, the respondents also acknowledged that the ecovillage cannot influence everybody but that locals often have already previous interest in sustainability (Culiberg *et al.*, 2016; Smith *et al.*, 2021). Some ecovillagers reflected that the term sustainability had become a buzzword and that there is more attention to it in the media and the political agenda, following the observations of Lennon *et al.* (2022) and Lockyer *et al.* (2013). Therefore, the question remains whether the ecovillage Woldwijk strongly influences

the sustainable behaviour of the locals or if the general trend of sustainability also influences this behaviour.

To answer the main research question *What is the relevance for ecovillages to involve and actively interact with the broader community they reside in, and how can the ecovillage Woldwijk in the Netherlands more effectively involve the community of Ten Boer in their activities in order to tackle some urgent sustainability issues?* it can be said that it is very relevant for ecovillages to interact and involve the surrounding community in their activities. The integration of an ecovillage into the surrounding community is necessary for the long-term sustainability of an ecovillage and to diffuse their practices around sustainability into the surrounding areas. As described by the case study of Woldwijk, the integration into the local community is relevant for gaining local support for continuing with their practices and serving as a role model for sustainable practices. To foster interactions with the residents of Ten Boer, Woldwijk organises various events and activities that combine sustainability-related elements, such as reusing materials with other aspects such as music, theatre or food. The findings of this thesis suggest that while Woldwijk plays a role in influencing sustainability awareness in Ten Boer, its impact may depend on the openness of individuals, the presence of other influencing factors, and the creation of practical opportunities for engagement. To effectively involve the community, ecovillages such as Woldwijk should focus on providing accessible and practical information about sustainable alternatives, engaging in knowledge sharing, and offering support to individuals who seek sustainable solutions. The collaboration between Woldwijk and local initiatives, such as Dorpsbelangen Ten Boer, can further enhance the dissemination of sustainable practices and foster a collective effort to tackle urgent sustainability issues such as climate change, biodiversity loss and overconsumption.

#### 6.2.1. Recommendations for future research

Based on the findings of this thesis, some recommendations can be made for future research. Since more events and activities are taking place after this thesis has been submitted, the interaction between the residents of Woldwijk and Ten Boer might grow in the coming year. Therefore, an evaluation study should be conducted into the interaction to investigate whether the interconnection has become more robust. Additionally, Woldwijk has started a collaboration with local organisations such as Dorpsbelangen Ten Boer, and it is recommended to conduct further research into how the collaboration can be strengthened, especially around activities that can promote sustainable practices for the residents of Ten Boer.

As argued by other authors, more research should be conducted into how surrounding communities perceive ecovillages and the extent that ecovillages have an impact on the sustainable behaviour of the wider community (Esteves, 2017; Schelly *et al.*, 2023). The findings could give more insights into the spillover effects of sustainable practices and whether people have adopted practices they have learned in their participation in ecovillage activities.

#### 6.2.2. Recommendations for Woldwijk

Next to the recommendations for future research, there are also some recommendations for the ecovillage Woldwijk to enhance the interactions with the residents in the future. As argued in the discussion section, it can be valuable to have a guideline with sustainability goals for Woldwijk to create a shared meaning about what Woldwijk aims to achieve in terms of sustainable practices. This can also be beneficial for being a demonstration site to present clear examples of the sustainability-related projects Woldwijk is working on.

Regarding the events and activities that Woldwijk organises to attract the locals of Ten Boer, it is recommended to create an evaluation form that can be filled out by the end of an activity or event. This can give insights into which aspects are valued by the locals that have participated in an activity or event, and it can also give information about how these activities can be improved in the future. Lastly, it is recommended to participate in the sustainability activities that Dorpsbelangen Ten Boer organises in the centre of the village. This can reassure the ecovillagers of Woldwijk are also willing to participate in the local activities and that the ecovillagers want to be part of Ten Boer.

### 6.2.3. Relevance for planning theory and practice

The various sustainability issues that the world faces have impacts on every individual and community (Seyfang *et al.*, 2012; Gernert *et al.*, 2018; Pisters *et al.*, 2020) and this study gave an insight into the sustainability-related interactions of an ecovillage and its surrounding community. The findings of this research offer relevant knowledge for planners and policymakers. Ecovillages can provide important meeting spaces for people to learn about local food. Additionally, self-harvesting gardens, as set up by Woldwijk, contribute to sustainable food systems by reducing the distance that the food has to travel and by contributing to local resilience (Leitheiser *et al.*, 2021; Ulug *et al.*, 2021b).

Furthermore, ecovillages can be examples of sustainable innovations relevant to the local context. Therefore, developing strategies and policies that focus on how ecovillages can be facilitated in examples of a circular economy is relevant. In the local context of Groningen, the municipality could facilitate ecovillages and other citizens' initiatives that experiment with sustainable solutions and get support to reuse items and materials from the buildings that have to be demolished because of the earthquakes. Additionally, ecovillages shed light on sharing practices to reduce consumption within their community (Frost, 2022). Sharing appliances, cars, and communal spaces can be established in the broader community and lead to social interactions between people. These strategies and policies can facilitate the transition to a circular economy in the Netherlands as aimed by the national government (Rijksoverheid, 2023).

## 7. Reflection

This chapter reflects on the thesis by reviewing the strengths and limitations of the research process and the research outcomes.

### 7.1. Research process

When reflecting on the research process of the thesis, the interviews with the residents of Woldwijk and Ten Boer went well. My contact with Natalie in Woldwijk made finding interviewees who wanted to participate in my research easy. Additionally, the opportunity to stay for three days at Woldwijk helped me understand the ecovillage life better and visit the local facilities in Ten Boer. Another strength of the research was the use of multiple research methods to investigate the interactions between Woldwijk and Ten Boer, as it led to more knowledge about aspects that might not be revealed by only using one qualitative research method. Nevertheless, the research process came also with some limitations. Initially, I had planned to send out a survey to the locals of Ten Boer and conduct semi-structured interviews with the residents of Woldwijk. Due to a meagre response rate (28 responses) and the time limitation to gather more responses, I decided to exclude the responses in this thesis and to conduct some interviews with locals of Ten Boer instead. However, conducting a survey again with a time frame where representative data is collected can give more significant insights into the general perception of Woldwijk and the interactions with the ecovillage. Additionally, it could lead to more general conclusions about the extent to which Woldwijk influences the sustainable behaviour of locals.

### 7.2. Research outcomes

The research has added to the existing literature about ecovillages by looking at an example in the Netherlands. The results gave insights into the interactions between the ecovillage Woldwijk and the residents of Ten Boer by conducting interviews with members of the initiatives Tiny House Noord-Nederland and Landjegoed (Woldwijk) and some residents of Ten Boer. In hindsight, it would have also been an added value to interview members of the energy cooperative of Woldwijk and the members of StaatjeVrij to learn more about how they interact with the locals of Ten Boer. This would have added to the results to understand if there are any differences between the initiatives in the interactions with the residents of Ten Boer. Moreover, the information gained from interviews with members of StaatjeVrij and the energy cooperative could give insights into the extent that the locals of Ten Boer adopt their sustainable practices.

Another major limitation is that only three interviews were conducted with residents of Ten Boer to understand their perception and interaction with Woldwijk. Additionally, I was connected to the interviewees of Ten Boer through my contacts in Woldwijk, which resulted in rather untypical residents of the village who previously knew about the sustainable practices of the ecovillage. Therefore, it would have been better to conduct interviews with residents with less connection with Woldwijk to understand their perception of Woldwijk and the interaction.



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## 9. Appendix

### 9.1. Appendix 1: Interview guide Woldwijk

#### Introduction

Bedankt voor uw deelname aan het interview voor mijn masterscriptie over de eco-coöperatie Woldwijk en de interconnectie met het dorp Ten Boer. Het interview duurt ongeveer 45 minuten en uw antwoorden helpen mij om beter inzicht te krijgen in hoe eco-coöperaties kunnen samenwerken met de bredere gemeenschap om dringende duurzaamheidskwesties op te lossen.

Wie ben ik?

#### Opening questions

1. Kunt u uw connectie met en uw rol in Woldwijk beschrijven?
2. Hoe lang woont u al in Woldwijk?
3. Wat motiveerde je om je aan te sluiten bij Woldwijk/het initiatief (Tiny house, StaatjeVrij / Landjegoed, Energiecoöperatie)?

#### Main questions

##### *Current activities related to sustainability*

1. Kan je beschrijven hoe duurzaamheid een rol speelt in Woldwijk?
2. Kunt u uitleggen welke activiteiten rond duurzaamheid Woldwijk aanbiedt?
3. Hoe ziet u de rol van Woldwijk in het promoten van duurzaamheid op grotere schaal, en welke strategieën gebruikt u om uw kennis te delen en anderen te inspireren om duurzaam te leven?

##### *Interaction with Ten Boer*

1. Hoe zou je TB beschrijven als een plaats? Hoe zou je de inwoners / de gemeenschap beschrijven?
2. Hoe zou u de interactie tussen W en TB beschrijven?
3. Vindt u de connectie tussen Woldwijk en Ten Boer belangrijk? Ja: waarom; Nee: waarom niet?
4. In hoeverre heeft Woldwijk samengewerkt met andere organisaties / bedrijven van Ten Boer?
5. Kunt u uitleggen in hoeverre Woldwijk de bewoners van Ten Boer bij hun activiteiten betreft?
6. In hoeverre denkt u dat Woldwijk het bewustzijn van duurzaamheid van de bewoners van Ten Boer kan beïnvloeden?
7. In hoeverre denkt u dat duurzaamheid een instrument kan zijn om de interactie tussen Woldwijk en Ten Boer te versterken?
8. Kunt u uitleggen hoe Woldwijk van meer betekenis kan zijn voor Ten Boer?
9. Hoe kan de interactie met de inwoners van Ten Boer in de toekomst verbeterd worden?

#### Closing

1. Heeft u nog iets anders waarover u wilt praten of wat ik vergeten ben te vragen?
2. Kent u misschien iemand uit Ten Boer die ik kun interviewen?

Bedankt voor uw tijd en deelname aan dit interview.

## 9.2. Appendix 2: Interview guide Ten Boer

### Introduction

Bedankt voor uw deelname aan de interviews voor mijn masterscriptie over de eco-coöperatie Woldwijk en de interconnectie met het dorp Ten Boer. Het interview duurt ongeveer 1 uur en uw antwoorden helpen mij om beter inzicht te krijgen in hoe eco-coöperaties kunnen samenwerken met de bredere gemeenschap om dringende duurzaamheidskwesties op te lossen.

Wie ben ik?

### Opening questions

1. Hoe lang woont u al in Ten Boer?
2. Hoe zou je TB beschrijven als een plaats? Hoe zou je de inwoners / de gemeenschap beschrijven?

### Main questions

#### *Sustainable behaviour*

1. Kunt u me iets vertellen over duurzame praktijken die u in uw privéleven of op uw werk hebt toegepast?
2. In hoeverre bespreekt u duurzaamheid met vrienden?
3. In hoeverre heeft Woldwijk uw visie op duurzaamheid beïnvloed?
4. Kunt u beschrijven in hoeverre u met vrienden over Woldwijk praat (bijv. praten over evenementen of andere activiteiten)?

#### *Interaction with Ten Boer*

1. Kunt u uw connectie met Woldwijk beschrijven?
2. Heeft u deelgenomen aan activiteiten van Woldwijk?
3. Hoe zou u de interactie tussen W en TB beschrijven?
4. Vindt u de connectie tussen Woldwijk en Ten Boer belangrijk? Ja: waarom; Nee: waarom niet?
5. In hoeverre denkt u dat Woldwijk het bewustzijn van duurzaamheid van de bewoners van Ten Boer kan beïnvloeden?
6. In hoeverre denkt u dat duurzaamheid een instrument kan zijn om de interactie tussen Woldwijk en Ten Boer te versterken?
7. Kunt u uitleggen hoe Woldwijk van meer betekenis kan zijn voor Ten Boer?
8. Hoe kan de interactie met de inwoners van Woldwijk in de toekomst verbeterd worden?

### Closing

1. Heeft u nog iets anders waarover u wilt praten of wat ik vergeten ben te vragen?

Bedankt voor uw tijd en deelname aan dit interview.

### 9.3. Appendix 3: Consent form (in Dutch)



university of  
 groningen

#### Akkoord met deelname - Research Ethics Committee (REC) in onderzoeksproject:

##### Een coöperatie en haar omgeving

Het doel van dit onderzoek is het verbinden van de relevantie van een goede verbinding en interactie tussen eco-coöperaties en hun omringende gemeenschap met dringende duurzaamheidskwesties op te lossen. Voor dit onderzoek ligt de focus op de eco-coöperatie *Wolfsbos* en de omringende gemeenschap van Ten Boer in de provincie Groningen (NL).

- Ik heb het informatiefeld van het onderzoeksproject gelezen en begrepen.
- Ik begrijp dat deelname aan dit onderzoek vrijwillig is en dat ik het recht heb om mij tot drie weken na het interview terug te trekken uit het onderzoek, alsnede om te weigeren een vraag te beantwoorden die ik niet wil beantwoorden.
- Ik begrijp dat mijn deelname aan dit onderzoek vertrouwelijk is. Zonder mijn voorafgaande toestemming zal geen materiaal dat mij een kenbaar identificeren, worden gebruikt in rapporten die uit dit onderzoek voortvloeien.
- Ik begrijp dat de interviewgegevens zullen worden gebruikt in een masterscriptie die openbaar toegankelijk is op de website van de Rijksuniversiteit Groningen en dat ze kunnen worden gebruikt in academische artikelen, boekbesprekingen, gepubliceerd en ongepubliceerd werk en presentaties.
- Ik begrijp dat alle door mij verstrekte informatie vertrouwelijk zal worden behandeld, hetzij in een afgesloten faciliteit, hetzij als een met een wachtwoord beveiligd bestand of bestand op een met een wachtwoord beveiligde computer.

Een met onderzoeksinstelling / instelling/instansie JA of NEE een van de volgende opties  
ik geef toestemming dat mijn interview wordt opgenomen.

JA / NEE

Ik wil aanwezig blijven voor dit onderzoek

JA / NEE

Indien JA

Mijn voornamen mag gebruikt worden voor dit onderzoek

JA / NEE

OF

In dit onderzoek kan een door mijzelf gekozen pseudoniem worden gebruikt

JA / NEE

Als u een eigen pseudoniem wilt kiezen, kunt u dat hier aangeven:

"Ik ga akkoord met deelname aan dit interview en bevestig de ontvangst van een kopie van dit toestemmingsformulier en het informatiefeld over het onderzoeksproject."

Handtekening van de deelnemer: \_\_\_\_\_ Date: \_\_\_\_\_

"Ik ga erin akkoord mij te houden aan de voorwaarden die in het informatiefeld staan en ik garandeer dat geen enkele deelnemer tijdens dit onderzoek kwaad zal worden gedaan."

Handtekening onderzoeker: \_\_\_\_\_ Date: \_\_\_\_\_

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## 9.4. Appendix 4: Observations in Woldwijk

### **29<sup>th</sup> of May 2023:**

When I arrived at Woldwijk, I went to Natalie's tiny house, but on my way there I did not meet any residents of Woldwijk. In the afternoon, I was sitting in the backyard and I observed that one neighbour was getting honey from her bees, while two other neighbours were working in their garden. It felt very quiet and calming and everybody was focused on their homes and gardens.

### **30<sup>th</sup> of May 2023:**

I went for a walk along the walking route that Woldwijk created. There are two information boards about biodiversity but also one about Woldwijk itself. Both boards also have the logo of Woldwijk. The walking route goes along the path where the tiny houses are and then behind the wisselwoningen along the fields. There is also a bench where people can rest and enjoy the view. When I walked there, I did not meet anybody, but from the interviews I heard that many people walk there during the weekend.

I also strolled through Woldwijk and met some residents. Everybody is very friendly and is greeting you, but they don't seem so approachable to ask questions since they are working on their own projects in their houses and gardens. One woman and a guy were building their yurt and some others were working on the Huiskamer. I could hear a lot of laughter and people having conversation while they worked on their projects.

In the evening I could observe that many residents came back to Woldwijk by bike or car, which could be that they work in other places.

You can also see many people cycling and walking their dogs along the main street but they don't enter the street of Woldwijk.

### **30<sup>th</sup> of May Event cultuur versterkt (19:30-21:00)**

Natalie and Nicolas invited me to join for the event Cultuur versterkt at the library in Ten Boer. It was organised by the area team Ten Boer and the Cultuurcoach of the area. This event was organized to bring together different citizens' initiative to exchange about ideas and how they can support each other. It was a great opportunity for networking and find new potential collaborations. When we arrived at the event, there were already some other people from which some were from Ten Boer while others came from the surrounding villages. After the introduction, there was a round of pitches of the initiative and I got the chance to also pitch my master thesis topic. Some people had some questions about Woldwijk and since I was there with Natalie and Nicolas, they gave some information about Woldwijk. Some other people were already familiar with Woldwijk but have not visited it yet. During the break, I had the chance to have conversations with some of the participants and we talked about my thesis topic. People seem to be very curious about the interaction between Woldwijk and Ten Boer. Furthermore, I handed out the QR code for my survey which was filled in by some. After the second round of pitches, there were more opportunities to network and I also managed to get more people as potential interviewees. The whole evening was very insightful and it was nice to meet a handful of residents of Ten Boer.



## 9.5. Appendix 5: Coding tree

