

Master's Thesis - Master Sustainable Development

# THE TRANSFORMATIVE POTENTIAL OF DUTCH COMMUNITY SUPPORTED AGRICULTURE

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# The Transformative Potential of Dutch Community Supported Agriculture

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## Summary

There is wide scientific and societal consensus about the necessity of a structural transformation in the Dutch food system, moving away from conventional practices that cause various interrelated ecological and socio-economic issues. This research set out to map the potential of Dutch community supported agriculture (CSA) in bringing about such structural transformation, additionally exploring how this potential could be further harnessed in the future. An extensive literature review and semi-structured interviews with CSA farmers, members, and experts were conducted for this purpose. The findings uncovered that CSA has the potential to challenge and address underlying philosophies and patterns on which the conventional Dutch food system rests, and that cause the interrelated ecological and socio-economic issues stemming from this system. Dutch CSA does this by empowering conscious actors to translate their sustainable worldviews into locally adapted practices that reconnect society and nature in harmony, fostering social and supportive communities that enhance awareness creation, leading to further emergence of CSA. The research furthermore identified enablers and barriers for CSA's transformative potential on three embedded and interrelated layers, including a practical, political and a deeper layer that encompasses values, beliefs, and worldviews. CSA's transformative potential could be enhanced through holistic schooling that fosters sustainable value, worldview, and awareness creation, and governance and incentive systems could be redirected to create a facilitating environment for CSA and for diverse societal groups to engage in CSA. The synthesis of this study's results adds to previous literature that explored transformative aspects of CSA, instead of CSA's potential to bring about transformative change, and that predominantly focused on general barriers and enablers for CSA on practical and political levels, overlooking deeper level worldviews, values, and beliefs that are instrumental to transformative change. Further emergence of Dutch CSA can start a transformative spiral towards a sustainable and just food system that allocates the benefits of the Dutch agri-food landscape back to society.

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# 1. Introduction

## 1.1 Societal Background

After World War II, the so-called green revolution highly transformed the global food system through processes of industrialization and globalization (Miller & Spoolman, 2018). Conventional agriculture is now characterized by high yields through the use of monocultures of selectively bred or genetically engineered crops that are being cultivated with the help of heavy machinery, along with large inputs of pesticides, synthetic fertilizers, fossil fuels, water, and financial capital. The Netherlands became one of the frontrunners of this high-input industrial agriculture, as Dutch farmers were moved towards widespread intensification and mechanization of their production to stay profitable, increasing farm size and productivity, while decreasing the use of labor (Meerburg et al., 2009). This contributed to the current position of the Netherlands as second largest agricultural exporter worldwide (Jukema et al., 2023).

Although the reconstruction of the Dutch food system was very successful in improving food security in the short term (Meerburg et al., 2009), it is becoming increasingly evident that conventional agriculture is unsustainable in the long term, causing ecological issues like biodiversity loss, agrochemical pollution, soil degradation, antibiotic resistance, eutrophication, and greenhouse gas (GHG) emissions that result in climate change (Reganold & Wachter, 2016). In the Netherlands, the total costs of environmental damage caused by conventional agriculture are estimated at 6,5 billion euros per year (Oudman, 2022).

Additionally, the conventional food system causes several socio-economic issues. In the face of Dutch population growth (Ritchie et al., 2023) and urbanization (PBL, 2022), there is increasing competition over the limited land available for purposes like agriculture, infrastructure, housing and recreation (Kok & Eichholtz, 2021), while 66% of land is now used for agricultural purposes (European Commission, 2023b). The urbanization, together with a drop in agricultural labor force (World Bank, 2021), and increased ‘food miles’ between our plates and the origins of our food have physically and mentally distanced Dutch society from food production and nature in general (Buijs et al., 2006; Kushnir, 2020; Meerburg et al., 2009). Various scholars have suggested that such alienation may negatively affect sustainability, because ‘how people perceive, value and interact with the natural world fundamentally shapes the goals and paradigms underpinning many systems of interest.’

(Abson et al., 2017, p. 34). A study by Nisbet et al. (2009) supports this claim by demonstrating that people with more relatedness to nature show more environmental concerns, behaviors and attitudes.

In light of these challenges, various institutions are trying to govern a sustainable transition in the food system; ranging from the United Nations' sustainable development goals (UNGA, 2015), the European Union's Green Deal and new Common Agricultural Policy (CAP) (European Commission, 2023a), to national and regional Dutch government (Erisman et al., 2021). Current (inter)national top-down policies are often critiqued for operating within the paradigm that contributed to the emergence of sustainability issues in the first place, coming up with solutions that are criticized for their economic growth rhetoric, reliance on technological innovations, unsustainable resource use, market-based thinking, and their neglect of social dimensions (Eisenmenger et al., 2020; Mann, 2018; Raworth, 2017).

An increasing number of bottom-up actors is trying to govern more structural change in the food system. These initiatives are commonly referred to as alternative food networks (AFN) (Michel-Villarreal et al., 2019). One common form of AFN is community supported agriculture (CSA), where local community members and farmers form long-term partnerships to produce food, while sharing the risks, responsibilities and rewards of farming (CSA Network, 2020c). There is a plurality of CSA variations and forms, but they generally are networks of trust and solidarity, where community members pay upfront to cover the production costs of sustainable and healthy food, in turn receiving a weekly share of the harvest (Volz et al., 2016). Community members are often involved in the production process by volunteering or decision-making, through which CSAs try to foster educational and awareness-raising processes. The CSA model '... is considered to be strongly embedded in local community, bringing economic value for both farmers and consumers, supporting the environment-friendly production and distribution of food, and enhancing social equity in the community.' (Fomina et al., 2022, pp. 294-295). It is furthermore argued that CSA has a significant potential to transform the current food system, because of its sustainable, resilient and healthy production methods, along with its equitable and social nature that empowers, educates and raises awareness amongst local communities (Bloemmen et al., 2015; Hvitsand, 2016; Mert-Cakal & Miele, 2022; Van Oers et al., 2023; Vincent & Feola, 2020).

However, such transformations are difficult to accomplish in practice, because physical infrastructure and underlying paradigms cause a so-called lock-in into the conventional system (Liebowitz & Margolis, 1995). Since conventional practices are very prevalent in the Dutch context, causing various issues that need urgent attention, this study i)



maps the emergence and current reality of the Dutch food system and its issues, ii) examines the role Dutch CSA could play in addressing these issues and transforming the food system, and iii) maps barriers and enablers for further emergence of Dutch CSA.

## 1.2 Scientific Background

A bibliometric analysis by Fomina et al. (2022) showed that the CSA research area is still quite small, but is gaining increased attention from diverse scholars. The literature generally introduces CSA as being both ecologically and socio-economically sustainable and fit for addressing issues in the conventional food system. However, only a handful of studies have been conducted in the Dutch context, where conventional agriculture is very prevalent (Loerakker, 2020; Mouskos, 2020; Van Kampen, 2020; Van Oers et al., 2018; Van Oers et al., 2023).

Reviewing the existing literature investigating CSA, two main research gaps could be identified. First, only a very small percentage of existing studies looked at the ‘transformative potential’ of CSA to reform the conventional system (Fomina et al., 2022). Concretely, various scholars have identified transformative characteristics of CSA, but often themselves remark a research gap regarding how this could lead to actual system change and what factors form enablers or barriers on this pathway. Standal and Westskog (2022) found that consumers that were engaged in CSA for a year, displayed pro-environmental behavior changes in other parts of their lives, such as becoming vegetarian or flying less. They concluded that the observed changes are far from ‘... collective social action towards alternative food production on a larger scale.’ (p. 21), and identify this as an area for future research. Other scholars examined how CSA is diverting away from conventional capitalist practices (Bloemmen et al., 2015; Vincent and Feola, 2020). However, Vincent and Feola stress that their research does not support understanding of how transition processes occur, and label this as a fruitful future research area. Van Oers et al. (2023) studied Dutch CSA to see how ‘unlearning’ processes discarded mental models, knowledge and routines underpinning the conventional system, and concluded that future research could look for barriers and enablers for unlearning processes. Hvitsand (2016) explored how Norwegian CSA can be seen as a transformational act. She described CSA as ‘... an arena for converting societal values into practical actions (p.333), and identified its sustainable production methods and ability to reallocate power to producers, consumers and local communities as indicative of the transformational power it exercises on the conventional system. However, she says that ‘... to see these visions

materialize in a shift in how food is produced and how the food system is organized will be another more difficult question to be explored.’ (p.348).

Second, while some studies looked at general barriers and enablers for CSAs, they often did not consider barriers and enablers specific to the transformative potential or advancement of CSA, or stuck to practical barriers and enablers, failing to look at those addressing deeper level values and worldviews. Medici et al. (2021) explored such practical barriers for Italian CSAs and found that they lacked policy support and had trouble attracting new members. Mert-Cakal & Miele (2022) looked at how CSA in Wales is a bottom-up response to issues in the food system and argue that CSA can gradually transform this system by providing a space where communities can experiment, raise awareness, and build knowledge and skills. They also argued that the COVID-19 pandemic is an enabler for transformation, because it showed the resilience of CSA in contrast to the conventional system. For future advancement, they argue ‘...CSA initiatives need to overcome the barriers that prevent them from replicating, participating in policies and decision-making at macro level, and scaling up.’ (p.22). A study by Hoenninger et al. (2019) studied CSA in France and Sweden, and identified barriers and enablers for the flourishing of CSA, including CSAs definition, consumer commitments, trust and solidarity, and knowledge sharing. Van Kampen (2020) did an explorative study on Dutch CSA and highlighted barriers like obstructing legislation and certification schemes, and enablers like knowledge sharing and facilitating policies and regulations. Other research in the Dutch context looked at legitimacy building for survival of CSA (Van Oers et al., 2018), CSA’s ability to empower producers in their battle against the conventional food system (Mouskos, 2020), and five barriers to overcome for sustainable production and consumption in CSA (Loerakker, 2020).

This study addressed the identified research gaps by i) adding to literature on the transformative potential of CSA, by exploring how Dutch CSA could challenge the conventional food system and its earlier discussed issues, and ii) adding to the literature on barriers and enablers for Dutch CSA, by looking at multiple interrelated levels of barriers and enablers, including deeper level values, beliefs and worldviews (Gosnell et al., 2019; O’Brien & Sygna, 2013). The research furthermore takes perspectives of bottom-up actors in sustainable transformation processes into account (Avelino & Wittmayer, 2016), by conducting interviews with bottom-up actors involved in Dutch CSA.

## 1.3 Research Questions

To add to the literature and fill the described research gaps, qualitative research on CSA in the Netherlands was conducted. The aim of this study was to better understand the role Dutch CSA could play in transforming the conventional food system, offering insights for policymakers, practitioners, and other stakeholders on how to facilitate this change or resolve any constraining factors. The following research questions were developed to conduct the research:

### Main research question:

How could the transformative potential of Dutch community supported agriculture (CSA) be harnessed to address the underlying causes of interrelated issues in the Dutch food system?

### Sub-question 1:

What comprises the landscape, regime, niche, and landscape pressures in the Dutch food system?

### Sub-question 2:

How could Dutch CSA address the underlying causes of interrelated issues in the Dutch food system?

### Sub-question 3:

What practical, political, and personal barriers and enablers can be identified for harnessing CSA's transformative potential, according to people involved in CSA?

To answer the main research question, the findings of sub-questions 1, 2, and 3 were analyzed and synthesized. Figure 2 in the Methods section provides a visual overview of how the research questions relate to the used theories and methods.

## 2. Theory

The following section describes the main concepts and theories of the study, used to answer the research questions as described above.

### 2.1 Community Supported Agriculture

CSA exists in many variations and is adjusted to local contexts (Markiet, 2011; Volz et al., 2016). As a guideline, this research uses the definition that URGENCI, an international network that advocates for and supports CSA initiatives, formulated during the 3rd European meeting on CSA: ‘Community Supported Agriculture (CSA) is a direct partnership based on the human relationship between people and one or several producer(s), whereby the risks, responsibilities and rewards of farming are shared, through a longterm, binding agreement.’ (URGENCI, 2016, p.1). CSA Netwerk, a Dutch organization that facilitates and connects Dutch CSA initiatives, endorses URGENCI’s definition of CSA and operationalizes it as including both individual farms or gardens, as well as food networks that consist of consumers forming partnerships with multiple farmers and producers (CSA Netwerk, 2020c). Although this research discusses food networks, CSA is operationalized as including solitary farms or gardens only, which is in line with the general idea and definition of what constitutes CSA in the literature (Fomina et al., 2022; Markiet, 2011). Furthermore, a distinction between three different types of CSA that Markiet (2011) identified in the Netherlands will also be used. These types are ‘subscription CSA’, where farmers are the most prominent player in the production process, ‘shareholder CSA’, where a group of consumers obtain a piece of land for joint production with producers, and ‘self-harvest CSA’, where the consumers harvest themselves.

Commonly, members of a CSA pay the farmers an annual membership fee that entitles them to a share of the harvest (Markiet, 2011), but the definition and operationalization of CSA in this research also includes the phenomenon of Herenboeren farms. Herenboeren is a Dutch organization that started in 2016, helping communities of about 250 households to initiate and manage their own farm of about 20 hectares, including animals and a variety of crops for on-farm circularity (Herenboeren, 2023). Members of a Herenboeren farm pay a one-time farm initiation sum of 2000-2500 euros, appoint a board for farm management and then pay 10-15 euros weekly to cover the agricultural production that is overseen by 1-3 farmers that are detached from the national Herenboeren organization.

## 2.2 Multi-Level Perspective

Geels (2002, 2011) developed the Multi-Level Perspective (MLP) framework to understand socio-technical change. According to this framework, transitions occur through interrelated developments that are hierarchically nested within each other on three different levels. Specifically, niches at the micro-level are embedded within regimes at the meso-level, which are in turn embedded within socio-technical landscapes at the macro-level. The MLP framework has been applied in various studies looking at sustainable transitions in the agri-food system (El Bilali, 2019; Elsner et al., 2023), and is used in this study to analyze the emergence and current state of the Dutch food regime, its interrelated issues, and CSA as a niche development, consequently answering sub-question 1, and providing important background information for answering sub-question 2.

The socio-technical regime is the underlying structure that regulates the stability of a socio-technical system through rules and principles that govern the activities of the actors operating and reproducing the socio-technical system (Geels, 2002, 2011). In the niches, radical innovations emerge that are aimed at solving problems arising in the regime. A niche is a safe environment where technologies are improved by learning processes and where social networks are built that support these new innovations. Socio-technical landscapes are composed of deep structural trends that provide the context that surround regimes, but are external and hard to change for the actors within a regime. These include elements like normative and cultural values, environmental problems and economic growth. When there are issues in a system, calls for change arise and so-called ‘landscape pressures’ challenge the regime. This can cause a ‘window of opportunity’ on the meso- and macro-levels, enabling alternative technologies to enter or replace the regime.

In this study, it is analyzed how the Dutch food regime was formed by the landscape it is embedded in, and how landscape pressures are now challenging the system, because of its environmental and socio-economic issues. Dutch CSA is analyzed as a niche development within an agroecological niche, challenging the conventional Dutch food regime.

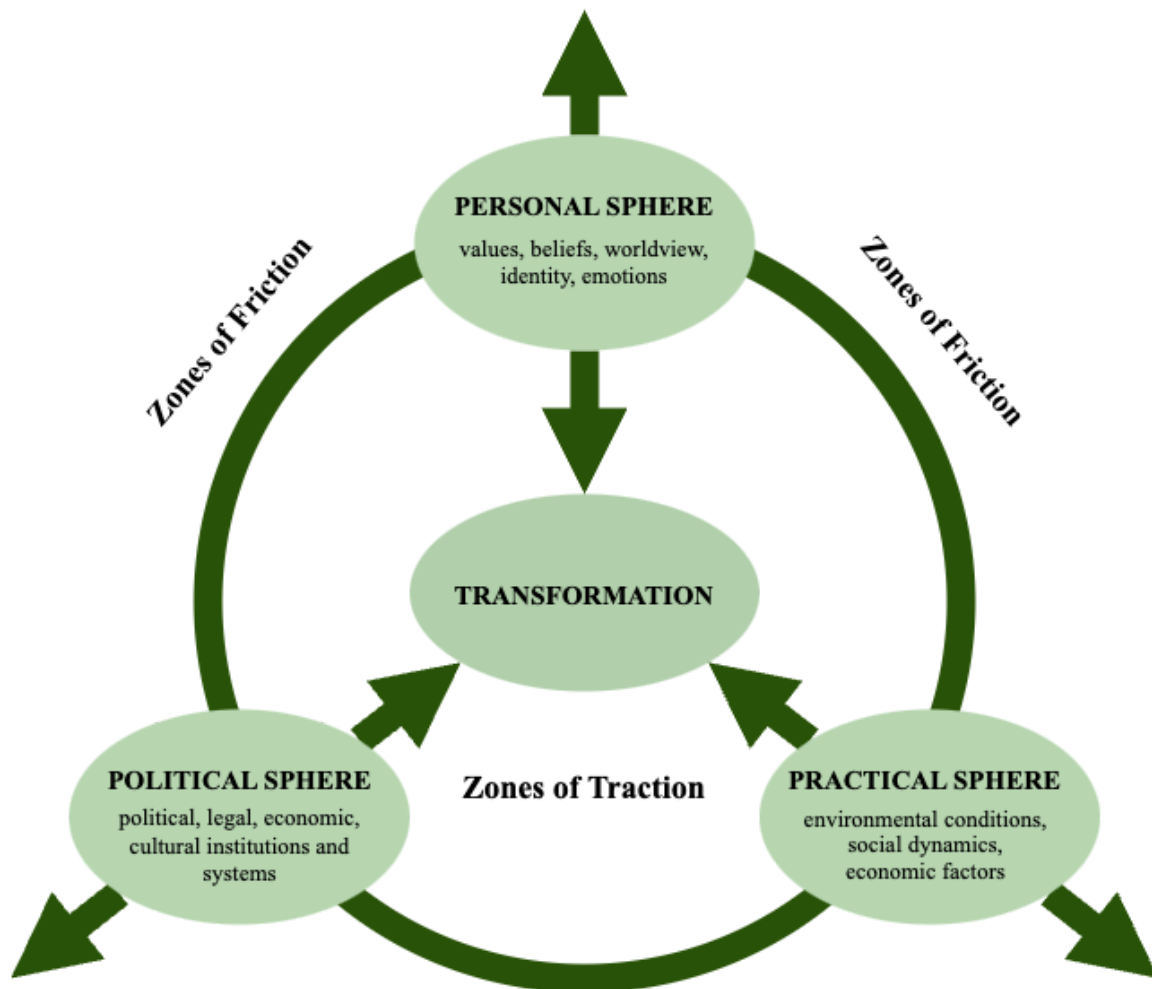
## 2.3 Three Spheres of Transformation

The Three Spheres of Transformation model, developed by O'Brien and Sygna (2013), proposes that transformative processes towards sustainability take place across three embedded spheres: the practical, political and personal sphere. The practical sphere represents strategies, behaviors, practices and technical solutions. It is also considered the 'outcome' sphere, where parameters, indicators and numbers resulting from the political sphere are measured, because the political sphere '... includes the social and ecological systems and structures that create the conditions for transformations in the practical sphere.' (p.4). The political sphere is made up of political, economic, legal, cultural and social systems and provides the space where '... politics and power influence the rules of the game, where social movements, collective action campaigns, lobbying, electoral politics, and revolutions respond to them, and where threatened interests resist or quash pressures to change.' (p. 6). The personal sphere is '... where the transformation of individual and collective beliefs, values and worldviews occur.' (p. 6). These values, beliefs and worldviews determine how systems, structures, issues and solutions are framed and which of them are prioritized.

The model emphasizes that transformative change requires action in all three spheres, and that the spheres are embedded within each other. O'Brien and Sygna (2013) point out that all three spheres are prevalent in transformation literature, but that there is often little attention to the interrelation and interaction between the spheres. After all, 'a regime shift cannot occur without changing worldviews, institutions, and technologies together, as an integrated system.' (Beddoe et al., 2009, p. 2484). The model can be used to situate places in a system where interventions have the most effect. Interventions in the personal sphere are believed to be more powerful than those in the other spheres, because it is here where underlying paradigms and goals of a system are situated.

In this research, the adjusted version of the Three Spheres of Transformation model by Gosnell et al. (2019) was used (see Figure 1). They included the concept of 'zones of friction and traction' from Head et al. (2013), including social, economic, ecological and psychological factors that facilitate or impede sustainable transformation processes across all three spheres. To answer sub-question 3, barriers and enablers for the transformative potential of Dutch CSA were identified by looking at the corresponding zones of 'friction' and 'traction' across all three spheres of the Three Spheres of Transformation model by Gosnell et al. (2019). By considering underlying values, worldviews and beliefs, and their

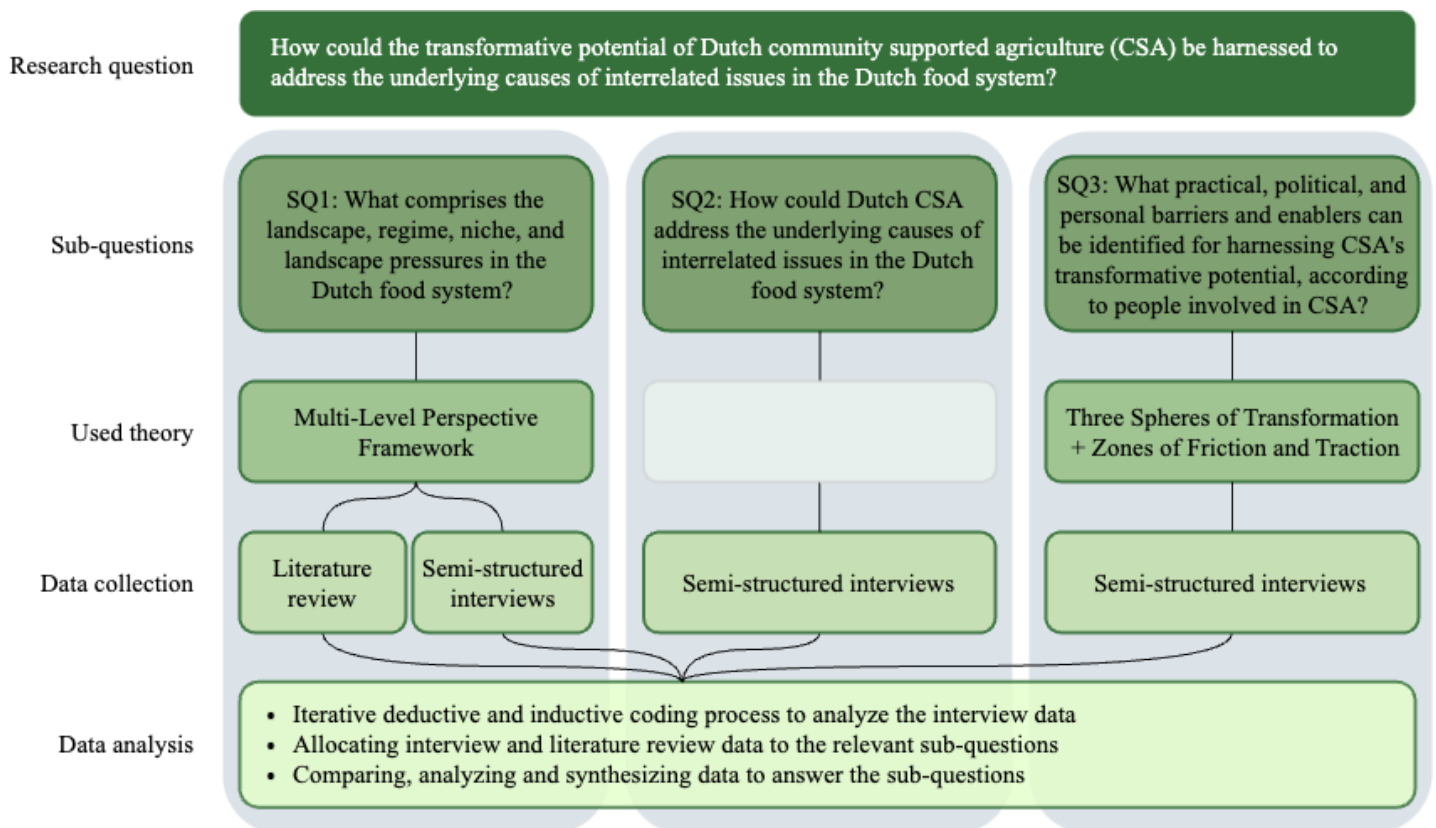
interrelation and interaction with the other spheres, this model adds to the technology-focused MLP framework, which is critiqued to oversee the importance of cultural, social and behavioral factors in driving transitions (El Bilali, 2019).



**Figure 1.** The Three Spheres of Transformation model with Zones of Friction and Traction. Adapted from Gosnell et al. (2019).

### 3. Methods

A mix of methods has been applied in this qualitative research, resulting in a wide range of data that could be triangulated, enabling the validation of data across multiple methods (Verschuren et al., 2010). Sub-questions 1, 2, and 3 were answered by comparing and synthesizing the results of an extensive literature review in combination with semi-structured interviews with actors in Dutch CSA. The findings were compared and analyzed to answer the main research question. The research framework in Figure 2 visually displays the relation between the research questions, theories, and methods.



**Figure 2.** Research framework. The framework provides a visual overview of the research questions, theories, data collection and data analysis methods, and their relations.



## 3.1 Data Collection

### 3.1.1 Literature Review

To get an overview of prior research, a literature review was conducted. The studies that were included looked at the emergence and current state of the Dutch food landscape, regime, and niche, the transformative potential of Dutch CSA and barriers and enablers for harnessing this potential. The literature review provided a starting point for this thesis, answered sub-question 1, and provided relevant background to compare with findings from the semi-structured interviews. Scopus, Worldcat and Google Scholar were used to find the policy documents, (academic) reports, policy documents and academic literature that were reviewed. Search strings included key terms like *community supported agriculture, food regime, transformation, issues, sustainability, system, paradigm, alternative food network, barriers and enablers*, in combination with *Dutch* and *the Netherlands*.

### 3.1.2 Interviews

During the research, semi-structured interviews were conducted with 20 relevant actors in Dutch CSA. These included 7 farmers and 8 members on 6 Dutch CSA initiatives that were visited. Two double interviews were done: one with two farmers, and one with two members simultaneously. Tables 1, 2, and 3 display the key characteristics of the visited CSA initiatives and the interviewed farmers and members respectively. If there were multiple farmers or members interviewed on one CSA, they are referred to as ‘member’ or ‘farmer’ followed by the numbers 1-3, depending on who comes first in the respective table. To get a broader overview of CSA as a general movement in the Netherlands, the study also included 5 experts. Table 4 gives an overview of the 5 interviewed experts, displaying their relevant educational background, relevant past experience, current relevant function(s). It also depicts that some experts were or are involved in the initialization or management of a specific Dutch CSA, which resulted in participants drawing examples and insights from these specific initiatives. The experts were given codes from E1-E5.

An interactive map on the website of CSA Netwerk (CSA Netwerk, 2020b) was used to identify CSA initiatives. After a selection process, 22 CSA initiatives were contacted by phone and/or email. To ensure that the selected CSAs were diverse and representative of Dutch CSA as a sector, the following factors were considered:

- Urban or rural location
- Spreading amongst different Dutch provinces
- Solitary garden or part of a larger organization or farm
- Multifunctionality of other services and/or activities than agricultural production
- Size in hectares
- Farming methods.
- Subscription, shareholder or self-harvest CSA (Markiet, 2011)

The considered factors were looked up on the websites of the initiatives that were provided in CSA Network's interactive map. More self-harvest CSAs were contacted, because it became evident from the interactive map that this was the most common CSA-type in the Netherlands at the time of this research. The nature and variation of Dutch CSA was further explored in the research itself.

To include experts in the study, 3 Dutch authors who wrote articles or book sections on CSA - and whose works were included in the literature review - were contacted. The Rural Sociology Group of Wageningen University & Research was also contacted to ask if someone with relevant experience in CSA research was willing to be interviewed for the study. Furthermore, multiple people that were involved in CSA Netwerk at the time of this study were contacted, as well as various people involved with Herenboeren farms and/or the national Herenboeren organization.

**Table 1.** Overview of the CSA initiatives included in this study and their key characteristics.

CSA Name	Number of farmers	Location	Starting year	Land size (in Ha) & ownership	Legal ownership CSA	Type of CSA	Number of subscriptions	Subscription prize(s) (in €)	Certification	Services & other activities
Kansrijk	3	Groenekan	2016	1: rent	Farmers	Self-harvest	350	320 or 360 or 390	Organic	Workshops, yoga lessons, tea garden, shop, internships, selling seeds and plants
Het Zoete Land	1	Leiden	2015	0.3: rent	Foundation	Self-harvest	Food & flowers: 80 Food: 50 Flowers: 20	Food+flowers: 405 Food: 330 Flowers: 110	No	Workshops, farm education, tours, selling seeds and plants
Pluk! Groenten van West	6	Amsterdam	2017	0,8: rent	Foundation	Self-harvest	265	585 - 1758 Standard: 680	Organic	Workshops, internships, tours
Birkenhof	3	Soest	2009	0,35: owned	Farmers	Subscription	Standard: 32 Small: 28	Standard: 402,5 Small: 276	Biodynamic	Carefarming, recreation, events, workshops, shop, dairy cows, chicken
Pluk Den Haag	3	Den Haag	2019	0.2: Rent	Farmers	Self-harvest	Single: ±36 Double: ±18 Total: 54	Single: 275 Double: 495	No	Carefarming, restaurant, shop, education, events, tours, workshops, recreation
Van Bergse Bodem	2	Bergen op Zoom	2022	0.2-0.25: Rent	Farmers	Self-harvest	50	295	No	Plans for: workshops, education, tea garden, carefarming, recreation

**Table 2.** Overview of the CSA farmers included in this study and their key characteristics. The term 'higher education' in the table includes Dutch higher professional education (hbo) and academic education (wo), aligning with the definition as set out in the Dutch Law on Higher Education and Scientific Research (WHW) (MBZK, 2023).

Farmer's CSA	Age	Gender	Country of origin	Residence	Living on CSA	Higher education	Agricultural education	Function at CSA	Involved since	Other function
Kansrijk	41	Woman	The Netherlands	Utrecht	No	Yes	Yes	Owner & farmer	2022	No
Het Zoete Land	49	Woman	The Netherlands	Leiden	No	Yes	Yes	Founder & farmer	2012	Yes
Pluk! Groenten van West	47	Woman	The Netherlands	Amsterdam	No	Yes	Yes	Farmer	2021	Yes
Birkenhof	51	Woman	The Netherlands	Amersfoort	No	Yes	Yes	Intern/farmer	2021	Yes
Pluk Den Haag	29	Man	The Netherlands	Den Haag	No	Yes	Yes	Owner & farmer	2017	No
Van Bergse Bodem	33	Man	The Netherlands	Bergen op Zoom	No	No	No	Owner & farmer	2021	No
Van Bergse Bodem	39	Woman	The Netherlands	Halsteren	No	Yes	Yes	Owner & farmer	2021	No

**Table 3.** Overview of the CSA members included in this study and their key characteristics.

Member's CSA	Age	Gender	Country of origin	Living in	Higher education	Job	Relation to CSA	Involved since
Kansrijk	56	Woman	The Netherlands	De Bilt	Yes	DNA analyst	Member & volunteer	2021
Kansrijk	31	Woman	The Netherlands	Utrecht	Yes	Program maker	Member	2023
Kansrijk	34	Man	The Netherlands	Utrecht	Yes	Copyrightier & online marketeer	Member	2023
Het Zoete Land	57	Woman	Germany	Leiden	Yes	Social worker	Member & volunteer	2012
Pluk! Groenten van West	58	Woman	The Netherlands	Amsterdam	Yes	Theologian	Member & volunteer	2019
Birkenhof	60	Woman	The Netherlands	Soest	Yes	Writer & communication advisor	Member & volunteer	2018
Pluk Den Haag	39	Woman	The Netherlands	Den Haag	Yes	Remedial educationalist	Member & volunteer	2021
Van Bergse Bodem	54	Woman	The Netherlands	Bergen op Zoom	No	HR-assistant	Member & volunteer	2022

**Table 3.** Overview of the experts included in this study and their key characteristics.

Code	Relevant education	Relevant past experience	Current relevant function(s)
E1	Irrelevant higher education	PHD: agro-ecological transitions in Brazil	<ul style="list-style-type: none"> <li>• Sociologist at Wageningen Rural Sociology Group</li> <li>• Post-doc rural sociology: food networks in sustainable transition</li> </ul>
E2	<ul style="list-style-type: none"> <li>• Wageningen University &amp; Research: post-academic training food &amp; urban development</li> <li>• Southern Oregon Permaculture Institute: permaculture design course</li> <li>• Warmonderhof: urban farming</li> </ul>	<ul style="list-style-type: none"> <li>• CAH Vilentum university of applied sciences: guest-lecturer urban agriculture</li> <li>• CSA Het Zoete Land: co-founder</li> <li>• Foundation Leiden Oogst: chair of board</li> <li>• Delfse Proeftuin: manager</li> <li>• Dutch network for agro-ecology: part of workgroup for land access</li> <li>• NMCX Centrum voor Duurzaamheid: project lead food transition</li> <li>• Cooperation Land van Ons: policy, strategy and direction</li> <li>• Foundation Aarde-Werk: secretary of board</li> <li>• Municipality Nieuwegein: policy advisor Green and Ecology</li> <li>• URGENCI report on CSA in Europe: writer Dutch context chapter</li> <li>• Lenteland: concept development</li> </ul>	<ul style="list-style-type: none"> <li>• Advise &amp; design of urban agriculture, community gardens and edible forest edge gardens</li> <li>• Stichting Bodembende: chair of board</li> <li>• Municipality Zoeterwoude: policy advisor 'Groene Hart'</li> </ul>
E3	Irrelevant higher education	Herenboeren Nederland: communication coordinator	<ul style="list-style-type: none"> <li>• Herenboeren Nederland: relationship manager for new farms &amp; coordinator concept development</li> <li>• Herenboeren farm: initiator and chair of board</li> </ul>
E4	<ul style="list-style-type: none"> <li>• Utrecht University: BSc Science and Innovation Management, MSc Innovation Sciences UU: thesis on creation of legitimacy in CSA</li> <li>• Wageningen University &amp; Research: minor Organic Agriculture</li> </ul>	<ul style="list-style-type: none"> <li>• Voedsel Anders Netwerk NL: general membership</li> <li>• Copernicus Institute of Sustainable Development: Junior Researcher &amp; Lecturer (part of research on legitimacy creation in CSA)</li> <li>• CSA Kansrijk: member</li> </ul>	<ul style="list-style-type: none"> <li>• Copernicus Institute of Sustainable Development: PHD Candidate (looking at CSA's as transformative communities and learning spaces for awareness building)</li> </ul>
E5	<ul style="list-style-type: none"> <li>• Amsterdam University of Applied Sciences: Environmental Science and Protection</li> <li>• Permaculture School: permaculture education (one year)</li> </ul>	<ul style="list-style-type: none"> <li>• Work on sustainability issues at several (non-profit) organizations</li> <li>• Co-author of Groenboerenplan (10 policy recommendations for sustainable agricultural transition)</li> </ul>	<ul style="list-style-type: none"> <li>• Hamelynck Sustainability consulting: director (sustainability consultig for farming community, financial institutions, ministries and industry)</li> <li>• Foodcoop Ús Iten: co-founder</li> <li>• CSA Netwerk: co-founder</li> <li>• Federation of Agro-ecological Farmers NL: co-founder</li> <li>• Farmers Council: co-founder</li> <li>• CSA Ús Hôf: co-founder</li> </ul>

The method of semi-structured in depth interviews was chosen because it provides flexibility in the sequence of questioning and permits the researcher to ask follow-up questions (Hennink et al., 2020). The interviews with farmers lasted between 52-87 minutes, with members between 17-38 minutes, and with experts between 51-85 minutes. All interviews with farmers and members were conducted on location, which was a necessary condition for some of the farmers. The visits lasted up to 5,5 hours, during which the interviews were conducted, unofficial conversations with various actors were had, and help with farmwork was provided. The long visits allowed for a more complex and complete understanding of the CSAs, and enabled a dynamic interview process, sometimes accommodating participants by interviewing during farmwork or by dividing the interview into several separate moments. This dynamic process was facilitated by using cue cards containing the interview questions. The experts were offered the option of online or physical interviews. Four of these interviews were conducted during a video call on Microsoft Teams and one interview was done in person. All interviews were recorded for later transcription.

To ensure that all relevant topics were discussed, three interview guides, for the farmers, members, and experts, were developed (see Appendix A). The questions in the first part of the interview guides were dedicated to answering sub-question 1 and 2, focusing on practical information and ecological and socio-economic sustainability of CSAs. In the expert interview guides these questions were focused on CSA as a sector. The second part of the interview guides focused on questions surrounding current and future barriers and enablers for specific CSAs and for CSA as a sector, corresponding to the zones of *friction* and *traction* in the Three Spheres of Transformation model by Gosnell et al. (2019). To go more in depth, and account for the interrelatedness of the different dimensions of sustainability and the three spheres, follow-up questions were asked. During the second part of the interviews, about barriers and enablers, the farmers were encouraged to collaboratively make a board with post-its that contained barriers and enablers, possibly including linkages and divisions. This participatory research element was used to enhance participant engagement and empowerment, resulting in a richer understanding of their experiences and fostering a sense of co-creation in the research process (Hennink et al., 2020). Table 5 gives an overview of the types of interview questions that were asked in relation to the research questions, preliminary themes, and theories.

**Table 5.** Overview of related research questions, preliminary themes, interview questions, and theories.

<b>Preliminary theme</b>	<b>Aim of interview questions</b>	<b>Addressed research question</b>	<b>Related theory</b>
Overview of the Dutch CSA sector	Mapping current practices and past and future developments of Dutch CSA	Sub-question 1	Multi-Level Perspective
Ecological sustainability	Finding out how Dutch CSA's ecological sustainability aspects could address (underlying causes of) ecological issues in the conventional food system	Sub-question 2	X
Socio-economic sustainability	Finding out how Dutch CSA's socio-economic sustainability aspects could address (underlying causes of) socio-economic issues in the conventional food system	Sub-question 2	X
Practical sphere barriers & enablers	Identifying practical barriers and enablers for Dutch CSA's transformative potential and further emergence, such as consumer commitments and expectations	Sub-question 3	Three Spheres of Transformation
Political sphere barriers & enablers	Identifying structural barriers and enablers for Dutch CSA's transformative potential and further emergence, such as constraining or facilitating policy structures	Sub-question 3	Three Spheres of Transformation
Personal sphere barriers & enablers	Identifying deeper level barriers and enablers for Dutch CSA's transformative potential and further emergence, such as worldviews, beliefs, and values	Sub-question 3	Three Spheres of Transformation

## 3.2 Data Analysis

The interviews were first transcribed with the transcription software Good Tape, after which the transcripts were manually corrected while listening to the recordings. In accordance with Hennink et al. (2020), the information in the transcripts was iteratively coded through the combination of inductive and deductive processes. To guide the coding process, preliminary themes were developed by synthesizing prior knowledge from the literature review. Table 5 gives an overview of these preliminary themes in relation to the research questions, types of interview questions and theories. Information from the interview transcripts was coded using the software Nvivo. During and after the coding process, deductive analysis was used to identify patterns and overthink and adjust the preliminary themes. See Appendix B for the Nvivo codebook, containing the final themes, codes and child-codes with their descriptions and the number of transcript files they were used in, together with the amount of times they were used in total. Finally, the data from the interviews and literature review were compared and synthesized to answer the research questions.

## 3.3 Ethical Issues

Several ethical issues arise in qualitative research (Hennink et al., 2020). This research prioritized ethical considerations and aimed to safeguard the privacy and dignity of the participants. Data was securely stored and destroyed after the research. Participants were provided with a consent form (See Appendix C) that they signed before the interviews took place, ensuring that they understood and agreed to the terms of the study. The consent form also informed participants about the scope and goal of the research, as well as the procedures involved, and their right to withdraw from the study without penalty at any moment. The consent form did not state that people would be anonymous, but it was still chosen to not mention participants by name in the research. Lastly, to avoid that the positionality and biases of the researcher were impacting the results of the study, the researcher was transparent about his positionality, and consciously reflected and considered it in the research process.



## 4. Results

### 4.1 The Dutch Food Landscape

Using the concepts from the Multi-level Perspective, this chapter gives an overview of the emergence, development and current state of the Dutch food landscape, regime, and niche, and furthermore explores the interrelated ecological and socio-economic issues and their underlying causes, arising from the conventional Dutch food regime, consequently answering sub-question 1.

#### 4.1.1 Emergence of the Dutch Food Regime and Landscape

To understand the emergence of the conventional Dutch food regime and its surrounding landscape, food regime literature was analyzed, which categorizes three periods of international hegemony that shaped production, distribution, and consumption in the global food system (Friedmann & McMichael, 1989; McMichael, 2009, 2013, 2021).

The first food regime, starting in the late 19th century, was characterized by large scale grain exports from settler colonies to industrialized European nations, giving rise to increased international trade and the use of monocultures (Friedmann & McMichael, 1989). The second food regime started after World War II, when the United States (US) helped European economies rebuild and enhance food security under the Marshall Plan, consequently spreading their green revolution, and linking national farming sectors in transnational commodity complexes with international division of labor and specialization (McMichael, 2009, 2013). The Dutch food system was also reformed and modernized, causing the adoption of high-input mechanized agriculture, and heavy government investments in agricultural research, innovation, education and structural support (Grin, 2013; Meerburg et al., 2009).

The third and current food regime emerged in the 1980's, and is founded on neoliberal ideology, which promotes free market mechanisms, private property rights, and reduction of government intervention, believing in consumerism, economic growth, and individualism (Carlquist & Phelps, 2014; McMichael, 2021). The neoliberal ideology rests upon an *anthropocentric* and *mechanistic* worldview that asserts human dominion and superiority over nature, viewing nature as understandable, predictable, manipulatable, and not having intrinsic value besides its usefulness to humanity (Curry, 2011; Keller & Brummer, 2002).



This worldview leans on a reductionist belief that the complex natural system can be understood through a focus on its individual elements, and that these elements can be optimized through rationalization, using scientific methods and technological interventions to maximize profits, efficiency, and yields (Curry, 2011; Jordan, 2013; Phelan, 2009). Inherent to these philosophies is a framing of humans as *Homo economicus*: rational, self-interested agents that seek to maximize profit and utility (Bloemmen et al., 2015).

Following the neoliberal ideology, Dutch public investments and government interference declined through processes of deregulation and privatization (Meerburg et al., 2009). Multinational corporations gained increased control of production, processing, and distribution in the global food system, which was supported by liberalization of global investment and trade in international trade agreements, and a reform of the EU's Common Agricultural Policy (CAP) in the 90s (McMichael, 2013; Meerburg et al., 2009; Robinson, 2018). The third regime saw widespread adoption of genetically modified organisms (GMOs), further rationalization and standardization of production and distribution, and increased food processing and a supermarket revolution (McMichael, 2013; Meerburg et al., 2009). Big surpluses of grain were increasingly used for growing animal husbandry sectors, making animal products cheaper, leading to higher meat consumption (Kassam & Kassam, 2021). Dutch consumers gained access to a large variety of globally sourced food products in supermarkets, while Dutch farmers and the government lost much of their power and became subject to market demands and corporate interests in a globalized food system (Grin, 2013; Spaargaren et al., 2013).

#### 4.1.2 Current Regime and Landscape Pressures

There is wide consensus about the necessity of a regime change in the global food system, because it is both one of the biggest drivers of climate change, and very vulnerable to the effects of climate change (FAO et al., 2020; IPCC, 2023). The conventional food system is responsible for losses of arable land, biodiversity, natural resources, and ecosystem services on which the agricultural system is dependent, consequently leading to losses of agricultural productivity and livelihoods. The Dutch food system is also embedded in a global economy, over which it has little control, increasing its vulnerability to ‘... the impacts of natural disasters, wars, disease, economic slumps, and speculative bets—thousands of miles away.’ (Norberg-Hodge, 2021, p.404). This became evident during recent developments like the COVID-19 pandemic and the war in Ukraine (Van Meijl, 2022; Cristiano, 2021). High

external input use in Dutch agriculture is furthermore coupled with indirect usage of foreign labor, energy, and land, leading to resource depletion, environmental impact, and exploitation of cheap labor elsewhere in the global food system (Smit, 2018).

In the Dutch context, the conventional system is estimated to cause 6,5 billion euros in environmental damages yearly (Oudman, 2022). Of the land used by the Dutch agricultural sector, 71,9% is used for growing livestock feed, as the Netherlands has the highest livestock density in the world (Oudman, 2022). This large animal husbandry sector is leading to antibiotic resistance, zoonoses (Erisman et al., 2021), ethical issues concerning the treatment of animals (Singer, 2013), non-communicable diseases that are linked to consumption of animal products (Kassam & Kassam, 2021), and large surpluses of nitrogen rich manure that are altering Dutch ecosystems (Oudman, 2022). A ruling in 2019 found the nitrogen policies in place inadequate and in contradiction with Dutch and European law, forcing the Dutch government to implement stricter measures and restrictions that offset the so-called ‘nitrogen crisis’ (Julen, 2019). In comparison to other European countries, Dutch agriculture uses more pesticides (Silva et al., 2021), which is also leading to ecosystem disruption (RIVM, n.d.), and is furthermore linked to cancer, lowered fertility, and various brain diseases (Schuttenhelm, 2023).

There are also several socio-economic impacts stemming from the conventional food system. The last two food regimes have caused scale-enlargement and replacement of labor by capital in Dutch agriculture (Meerburg et al., 2009). Since 1950, the amount of Dutch farms has dropped by 88% (CBS, 2023b), while average farm size went up from 5.7 hectares to 35.4 hectares in the same period (CBS, 2023a; Oudman, 2022). As farms grew larger, the share of agriculture in total employment plummeted from 19% in 1947 (Roser, 2023) to 2% in 2021 (World Bank, 2021). Farmers now struggle to find succession: the number of farms and farmers halved since the beginning of the century and are projected to decline another 30% in the coming decade (Smit, 2021). The remaining farmers are managing larger and larger farms with more intensified and mechanized production methods. The drop in people involved in Dutch agriculture, together with urbanization processes and globalization of the food system, has alienated Dutch society from agriculture and nature in general (Buijs et al., 2006; Kushnir, 2020; Meerburg et al., 2009). This alienation likely contributed to increased polarization in Dutch society (Ockhuijsen, 2023), which is displayed in the debate surrounding the Dutch nitrogen crisis, where environmental groups think policy measures for nitrogen reduction are insufficient (Stokstad, 2019), while farmers feel unheard in their struggle with these measures, leading to large farmer protests (Smit, 2020).

In recent years, there has been a gradual increase in policy attention for sustainability issues, reflected in the current policy landscape (McMichael, 2013; Meerburg et al., 2009). This includes the European Green Deal, which has the objective to make Europe climate neutral by 2050 (European Commission, 2023), and a new Common Agricultural Policy (CAP), which takes issues like biodiversity loss, food security, and climate mitigation into account, while supporting small-scale farming and leaving flexibility for context-adjusted national policies. The Dutch government underlines formulated policy within the bounds of the European Green Deal and CAP, focusing on circular, climate resilient and nature-inclusive farming, while protecting the economic competitiveness of the sector (Erisman & Strootman, 2021; MLNV, 2019).

Despite the policy attention for sustainability, and increasing awareness in recent years amongst consumers, farmers, and civil society about the impacts of the food system on the environment, there has not been a major shift in conventional food practices yet (Kassam & Kassam, 2021; Norberg-Hodge, 2021; Spaargaren et al., 2013). Current (inter)national policies are often critiqued for looking for solutions within the frame of the conventional paradigm (Eisenmenger et al., 2020). This is displayed in the nitrogen crisis, where a large part of the 24,3 billion euros reserved for solving the crisis in the next ten years is directed towards technological innovations like the use of special stable floors and air-washers to reduce nitrogen emissions (Oudman, 2022). Critics point out that these technological innovations can be disappointing in practice, are not leading to sufficient emission reduction, lead to further lock-in into the current system, do not address related or underlying issues, and are only short-term oriented (Albers, 2022; Erisman et al., 2021; Oudman, 2022). The underlying *anthropocentric* and *mechanistic* worldview ‘...partly explains [this] preference for narrow technical fixes rather than systemic and holistic solutions.’ (Kassam & Kassam, 2021, p. 189). Structural long term changes, that address interrelated issues in coherence, are hard to bring about, because physical infrastructure and underlying paradigms cause a lock-in into the conventional system (Liebowitz & Margolis, 1995), making change processes path-dependent and incremental (Elsner et al., 2023). Deeper level interventions, like changing the goal or underlying mindset of a system, are believed to have the most leverage in bringing about radical and structural change (Meadows, 1999).

### 4.1.3 CSA as an Agroecological Niche Development

According to MLP literature, niches are safe social environments with the core mission of developing innovations and novelties that divert from and challenge the dominant regime (Geels, 2002, 2011). This does not only include technological innovation, but also the radical structural reformation of system governance, power relations, and rules (Elsner et al., 2023). In an agricultural context, a plurality of developments are considered to be part of niches, varying from specific innovations and practices to wider movements and schools, and varying in radicalness of the conception of change (Elsner et al., 2023; Herren, 2021; Shiva, 2021).

The niche development of CSA is considered to be part of an agroecological paradigm (CSA Network, 2020a; Espelt, 2020; URGENCI, 2016). Agroecology is considered to be an overarching embodiment of niche developments and visions that propose radical and structural change towards a new paradigm in the food system (Dumont et al., 2020; Shiva, 2021). For such structural change, it is argued that the underlying philosophical foundation of the conventional food system should be challenged (Mason & Kassam, 2021; Norberg-Hodge, 2021), opposing its *anthropocentric* and *mechanistic* worldview with an *ecocentric* and *holistic* worldview that believes all interconnected elements in ecosystems to have intrinsic value, advocating harmonious engagement with nature through a systems-based approach that considers social, economic, and environmental factors as interdependent components rather than isolated variables (Curry, 2011; Jordan, 2013; Phelan, 2009). Such a philosophical shift would also replace the assumption of *Homo economicus* with *Homo ecologicus* and *holistic microeconomic agents* (Bloemmen et al., 2015). Agroecology operates on the premise of the *ecocentric* and *holistic* worldview, using a holistic systems-thinking approach to redesign food systems and address complex interrelated challenges, encompassing participatory research, sustainable farming practices, and a social movement (Dumont et al., 2020; FAO, n.d.; Herren, 2021; Kassam & Kassam, 2021).

CSA is considered to put agroecological visions of a structurally different system into practice (Mert-Cakal & Miele, 2022; Sumner et al., 2010). Such a structurally different system is envisioned to involve a relocalization of food production, distribution, and consumption through the use of decentralized, multifunctional, diversified, and small-scale short food supply chains that foster increased manual labor, social equity, local autonomy, and community cooperation and participation, consequently reframing connections between

communities, farmers, and nature, and providing societies with wider services than food production (Norberg-Hodge, 2021; Robinson, 2018; Smit, 2018; UNCTAD, 2013).

#### 4.1.4 Dutch CSA

##### History and Development

The roots of CSA can be traced back to Japan and Switzerland, where community-based farming systems first emerged in the 1970s (Henderson, 2010). In the second half of the 1980s, Jan van der Tuin brought the idea to the United States, where it was further popularized and where the term ‘community supported agriculture’ was born. Jolie Perotti encountered CSA in the United States, and brought it to the Netherlands, where the first CSA was started in 1996 (Markiet, 2011). The amount of Dutch CSA’s grew steadily since then, but has really taken steam in the last decade, reaching an estimate of 47 initiatives by 2015 (Volz et al., 2016). CSA Netwerk’s map from 2020 showed 111 CSA initiatives that fell within the scope of this research, including 9 Herenboeren farms (CSA Netwerk, 2020c). At the time of this study, there were already 18 Herenboeren farms (Herenboeren, 2023), and the interviewed Herenboeren expert indicated that two more farms were expected to start by the end of the year, and that there were 42 initiatives emerging. Although it is hard to get a recent and complete estimate of Dutch CSA initiatives, all experts mentioned a steep increase in recent years and a general growth in societal interest in CSA. Warmonderhof, the biodynamic school where most CSA farmers studied (including 5 of the 7 interviewed farmers in this study), was said to have seen a large increase in applications, leading to a waiting list in the past few years. The interviewed farmers also mentioned a large increase in interest, leading to long waiting lists. CSA has furthermore gained legitimacy and appreciation on local governance levels, where ‘its use and benefits are increasingly recognized or mentioned’ (E4), recognizing its ‘important educational and social cohesion role’ (E4).

To support and foster the rapid development of the Dutch CSA sector, CSA Netwerk was founded in 2019, aiming for CSAs to provide 25% of Dutch food provisioning by 2030 (CSA Netwerk, 2020a). Due to limited resources, CSA Netwerk was reported to have had a limited impact so far, but both CSA Netwerk and Herenboeren recently received government subsidies to broaden their operations, indicating that the Dutch CSA sector might further accelerate in the coming years. Herenboeren and CSA Netwerk are also part of a larger ecosystem of agroecological organizations and actors that work together to stimulate a wider sustainable transformation of the Dutch food system, by focusing on laws & regulations,

access to land, farmers' position in the food chain, and education and research (Boeren Raad, 2023; CSA Netwerk, 2020b; Federatie van Agro-ecologische Boeren, 2023; Herenboeren, 2023).

### Sector Profile

Dutch CSA practices and forms vary, depending on local contexts, but a general image of the sector became evident during the interviews with experts and farmers. Dutch CSAs are generally located close to urban areas, are often around 1 hectare, and have about 100-250 harvest shares, including mostly vegetables and herbs, but sometimes fruits, flowers, and in more rare occasions animal produce like eggs or honey. The number of involved members is around double or triple the amount of harvest shares. Some CSAs have a greenhouse to prolong their season and offer more diverse produce to their members. Most initiatives in the Netherlands have a self-harvest structure, where members harvest their own shares once a week during a 25-30 week harvesting season. The members receive a weekly harvest message or newsletter containing information about what can be harvested, how it should be harvested, and more general information and stories related to the CSA or agriculture and nature in general. The diversity and quantity of the harvest shares were said to vary per CSA, cultivation season, and time of the season, depending on location, weather, degree of professionalization, and conceptualizations of what a share entails. Generally, one share is considered enough to cook 3-7 meals a week for 1-2 people. The Herenboeren concept differs from most CSAs, with sizes around 20 hectares, around 250 involved households, a pick-up system for the harvest shares, an initiation sum for members, and inclusion of animals to create a circular farm (Herenboeren, 2023). CSA members, including those involved in Herenboeren, generally lived within a 5km radius of the farm, with exceptions of some members living 10 to 15 km away.

Member communities were said to be diverse, but often contain more young families with children or retired people, and predominantly consist of white, politically left and idealistic people with higher educations and higher incomes. The farmers were also described as idealistic, and were said to have often completed a higher education before getting involved in CSA. The interviewed members and farmers mentioned (combinations) of various motivations for their involvement in CSA, including provisioning of sustainable, local, healthy, fresh, and tasty food, supporting local farmers, learning or educating (children) about agriculture, being and working in nature, and the social aspects of the community. Although some members and farmers were less socially active, all interview participants

valued and appreciated the social and educational aspects of the CSAs. They furthermore all had negative views of conventional agriculture and the conventional food system, stating that ‘something has to change’ (Farmer, Birkenhof).

The CSAs organize social events and activities for and with their members, including feasts at the beginning and end of the season, social events like potlucks, excursions and trips for volunteers, and workshops. Social interaction is often encouraged through seating areas at the garden, and sometimes communal coffee, tea or lunch is organized during harvest days. Although the main focus of Dutch CSAs was said to be on their member communities, they often include other people through wider services and activities in their business models, like carefarming, agro-tourism, event hosting, shops with local produce, and various forms of education, including school class visits, (farming) courses and workshops for both adults and kids, and offering internships to students from Warmonderhof. CSA farmers sometimes work together with local actors or organizations that organize (some of) these services and activities, and some CSAs are located on larger farms or initiatives that do so. Herenboeren farms have a special committee that is responsible for community building, activities, education, and tours, and are stimulated by the national organization to ‘become meaningful, not only for members, but for the whole area surrounding the farm’ (E3).

## 4.2 CSA's Transformative Potential

This chapter aims to give an overview of Dutch CSA's transformative potential, analyzing how its sustainable nature is addressing underlying causes of interrelated issues in the conventional system, by:

- i) discussing the very organizational and economic structure of CSA that empowers conscious bottom-up actors to design and build systems on the basis of their own values and considerations, largely independent from global market structures;
- ii) exploring the underlying worldviews on which CSA communities and practices are built, and the ways these worldviews are spread through awareness creation;
- iii) analyzing how these worldviews are resulting in ecologically sound and resilient practices;
- iv) and looking at CSA's ability to build social and supportive communities and offer wider societal functions, fulfilling social needs and reconnecting society with food, nature, and each other.

CSA initiatives can be seen as circular motors of change and transformation, providing the structure for sustainable and conscious groups in society to translate their *ecocentric* and *holistic* worldviews into ecologically sound farms and social communities that foster further awareness creation, contributing to a growing agroecological movement.

### 4.2.1 CSA Structure

CSA initiatives display a different way of socio-economic organization around food production, distribution, and consumption, fostering local autonomy in contrast with the globalized conventional regime. CSAs are less dependent on global market demands through their localized short food supply chains that empower CSA communities to set their own standards and think: 'we have our own group, we can think about how we want to do things together.' (E4). Where conventional farmers are often forced to borrow money for scale-enlargement and capital investments, further rationalizing their production to stay competitive in a global economy, CSAs do not have to fall in line with this economic growth rhetoric, because their small scale and reliance on manual labor do not require loans for large (capital) investments, making it easier and more attractive to start a CSA. The interviewed CSA farmers showed a rhetoric of sufficiency instead, indicating that they had low interest in increasing the size of their CSAs, because it would require labor from extra farmers or members instead of increased mechanization (leading to less efficiency increase), and



because it would be harder to maintain a sense of community. In contrast with competition in conventional markets, the farmers wished as many people to start a CSA as possible: ‘It would be nice if every neighborhood would get a garden like this.’ (Farmer, Het Zoete Land). The reliance on manual labor also reduces lock-in to existing infrastructure, making the CSAs more flexible to adjust to new insights or developments. This flexibility, together with the direct relation and frequent interaction of CSA farmers with their communities, makes it easier to mirror the needs and desires of the member communities and wider surroundings. The interviewed experts and farmers did not perceive CSA as a static model, but as a practice that is adjusted to its local environment and that is constantly undergoing processes of learning and improvement. This was confirmed by the farmers, who indicated to always look for new ways to improve cultivation, sustainability and social interaction on their farms.

The experts and farmers indicated full transparency about (financial) information to be a core value of CSA, although some farmers said they did not share proactively, while others published everything on their website. The CSAs in this study involved their community members in decision-making processes through surveys at the end of the season, member meetings, and by listening to inputs and questions of members throughout the season. However, the final decisions were made by the farmers themselves, sometimes in consultation with the board of an overarching foundation. Herenboeren was more democratic by empowering community members to be an ‘owner, entrepreneur, producer, and consumer at the same time.’ (E3). At Herenboeren farms, the member community employs the farmers and makes the decisions, appointing a board that represents the community. Besides the members of the board, Herenboeren members are also involved in three committees that oversee harvesting and distribution, sustainability, and community building and social and educational activities. Herenboeren farms do require larger initial investments, but source this money through initiation sums from their member community. Additionally, both CSA Network and Herenboeren increasingly work with foundations like Aardpeer, that buy land through community sourced bonds, placing land ownership in the hands of communities, on the condition that the land is used for agroecological purposes and can never be sold. This community does not have to be the same community as the member community of the farm that rents the land.

Besides requiring low financial investment, the CSA structure is also attractive for farmers, because risks are shared with the members through the yearly payments for harvest shares. The direct connection between farmers and members, without retailers, and the seasonality of the produce, makes CSA cheaper than organic produce in supermarkets: ‘If

you want to eat sustainably with a small budget, this is the most attractive option there is.’ (E1). The experts mentioned that when asking fair prices, the farmers could earn a respectable income that is sometimes better than that of conventional farmers, without getting into debt. CSA farmers ‘to my knowledge, have the best business model in agriculture for someone involved in primary production.’ (E2). Although Herenboeren farmers were said to have less autonomy by being employed by the member community, the Herenboeren expert said that the concept was attractive because the Herenboeren organization takes care of finding land and community members, the farmers get a large budget for initial investments, and they can work fixed hours. Herenboeren farms, and some CSAs that fall under larger overarching non-profit foundations, are not making any profit, in contrast to conventional capitalist practices that are often focused on maximizing profits for shareholders.

#### 4.2.2 Worldviews and Awareness Creation

The interviewed experts, farmers, and members reported CSA to attract certain groups in society with pre-existing levels of awareness, idealism, and sustainable behavior. The interviewed farmers and members had mainly idealistic motivations for their involvement and displayed a similar ideology and vision on agriculture and nature that was in line with the agroecological *ecocentric* and *holistic* worldview, which a member at Birkenhof articulated as ‘having respect for soil, life and nature, by moving along with it instead of working against it, as much as you can.’ Although the experts mentioned there to be more variety in members’ conceptions of change, varying from ‘wanting to overthrow the whole capitalistic system, to looking at what is possible within the current system.’ (E1), the farmers were said to often have a deeply rooted worldview that ‘fundamental change’ (E1) is needed: ‘Most people that start a CSA initiative in the Netherlands, do this out of a conviction that agriculture needs to change, making it more social, reconnecting farmers and society, and bringing people closer to each other.’ (E4). Although it is hard to separate the exact role of CSA and that of other influences in creating awareness and worldviews, there were various indications of learning, inspiration, and awareness creation processes at the CSAs, and all participants stated that their involvement in CSA at least strengthened and deepened their motivations and beliefs. The interviewed farmer at Birkenhof said that her belief ‘that something really has to change’ increased since her involvement in CSA, and a member at Birkenhof said she felt strengthened by ‘seeing that there is such a big growing group of people that do and think the same.’ The experts also saw CSA as an important driver of change that creates awareness and

‘a transformative community that dares to actively and collectively move away from existing food systems, and actually shows that things can be different in practice’ (E4). The direct interaction and relation between farmers and consumers, and the physical experience of the farms provide ‘a good stage for sharing a wider story (...) and making people aware’, because ‘other than something like a newspaper article, here people can experience: they taste, see and hear it.’ (Farmer, Birkenhof). Members and volunteers learned ‘about what there grows, how it grows, and how hard it grows’ (Member3, Kansrijk), and often said they got to know new vegetables, shared recipes, learned to eat along with the seasons, learned how to harvest, and saw the effects of weather and plagues on the crops. Members inspired each other to engage in sustainable behavior in other parts of their lives, like a member at Het Zoete Land, who said she reduced her plastic use and make her own soap since her involvement, and a member at Kansrijk, who gave a workshop about fermentation to help everyone conserve their harvest. There was no clear indication that CSAs inspired people to eat less meat, but a member at Pluk! Groenten van West mentioned that a large part of their member community was vegan or vegetarian, and Herenboeren farms were said to create awareness about the fact that three quarters of land are used for animals in a circular system. Members were ‘less likely to throw stuff away, because you are more grateful for your food.’ (Member, Van Bergse Bodem), ‘more aware about where my food is coming from, also in the supermarket.’ (Member, Pluk! Groenten van West), and ‘more aware of what happens around them in nature during the seasons.’ (E3). Members, farmers, and experts also mentioned the importance of involving kids on the CSAs to make them experience and become aware of food and nature, so they know ‘that food does not grow in the supermarket.’ (Member, Pluk Den Haag). Some members and interns started their own (personal) garden, which the farmers only encouraged, because ‘then you really reached your goal, creating places for new people to learn again.’ (Farmer2, Van Bergse Bodem).

The interviewed experts mentioned CSA’s important role in the transition towards a more sustainable food system, because CSA initiatives can provide proof of concept that ‘things can actually be done differently’ (E3), showing that they are viable without scale-enlargement, monocultures, mechanization, and large external inputs. The farmers also refrained from becoming dependent on government subsidies, because they wanted to show that CSA initiatives are sustainable and durable without help, fighting the image of ‘organic and healthy food to need subsidies.’ (Farmer1, Van Bergse Bodem).

### 4.2.3 Ecological Sustainability

According to the interviewed experts, the majority of Dutch CSAs do not have an organic or other form of certification, because the direct relation and involvement of consumers, who ‘can see how their food is produced with their own eyes’ (E2), was argued to make certification obsolete. Moreover, instead of imposing top-down guidelines and rules through certification schemes, underlying worldviews inherently motivated the CSA farmers and their communities to promote as much sustainability and ecological soundness as they could. However, CSA Netwerk (in participation with other organizations and actors) is developing so-called participatory guarantee systems (PGS), a form of local quality control on and by sustainable farmers and their consumers, based on a combination of official certification standards and locally relevant subjects (PGS Nederland, n.d.). PGS rests on ‘...trust, social networks, and knowledge exchange.’ (PGS Nederland, n.d., para. 4). Although CSAs are often not involved in certification schemes, they were said to be ‘organic plus’ (Farmer, Het Zoete Land), ‘more organic than organic’ (E2), and to see ‘organic as an absolute baseline’ (E3). In contrast with conventional agriculture, the CSAs all refrained from inputs of synthetic fertilizers and pest control substances, while organic certification still allows for mineral and organic based substances for pest control.

The CSAs focused on promoting healthy soils by rotating a large variety of crop species on cultivation beds in dedicated crop sections, which were tilled or plowed as little as possible, fertilized with compost and manure, and covered with layers of organic material in a process called mulching. These techniques create healthy soil with ‘...a diverse community of organisms that help to control plant diseases, insect pests and weed populations; recycle soil nutrients; and improve soil structure with positive effects on water holding capacity, nutrient retention and supply and levels of organic carbon.’ (FAO, 2022, p.2). The interviewed farmers furthermore reported that there was always enough food, simply because the diversity in crop species compensated for pests or diseases killing off one specific species. Some of the CSAs left one crop section lying fallow in the rotation, making cultivation even less intensive for the soil, and Birkenhof rotated one section with chickens. Most of the CSAs produced a part of the compost themselves, but were dependent on suppliers for manure and the rest of the compost, although Pluk! Groenten van West did not use any manure. Herenboeren aimed to reach full circularity on its farms, sourcing any inputs like manure and compost from its own production cycles. Every Herenboeren farm furthermore had a special committee dedicated to increasing sustainability and biodiversity on the farm.

Almost all the work was done by hand on the CSAs - except for the use of some small machinery like irrigation pumps or lawn mowers - making the use of fossil fuels for machinery (almost) obsolete, consequently reducing the greenhouse gas emissions from tractors and other machinery. Several sustainable practices that were not directly related to cultivation were also encountered at the CSAs, namely: renewable energy use, small (food) forests, toad ponds, natural hedges with native species, insect hotels, planting flowers and herbs for insects, nature-friendly riverbanks, breeding mounds for grass snakes, branch piles, and bird boxes. These activities, together with the focus on healthy soils, and the use of diverse crop species, foster biodiversity and a balanced ecosystem, forming the basis for a crop production system that is more resilient to the effects of climate change, prevents carbon release of eroded soils, and has ‘...increased water and nutrient use efficiency and (...) improved and sustained crop production.’ (FAO, 2022, p. 1). These crop production systems are more efficient in their use of natural resources and refrain from using resources like fossil fuels, synthetic fertilizers, and pesticides, making them less dependent on external inputs, consequently empowering farmers ‘...by increasing their autonomy and resilience to natural or economic shocks.’ (FAO, 2018, p.6).

#### 4.2.4 Community Building and Support

CSAs are firmly rooted in their surroundings through local partnerships, creating supportive social member communities, and offering wider societal services and activities for their surroundings, consequently reconnecting people to food, nature, and each other. The member community often formed a source of resources and support for the farmers. Some volunteers specialized in certain tasks and got more responsibilities from the farmers, like one member at Pluk! Groenten van West doing most of the technical maintenance, and a member doing the administration at Van Bergse Bodem. At Het Zoete Land, the farmer said community members provided a car or trailer when needed, and helped to patrol the garden when there was a lot of vandalism. At Van Bergse Bodem members started a youth club, and at Pluk! Groenten van West the community financially helped the farmers by organizing an auction.

The members were also advocates for the CSAs, promoting the CSAs to others, which all farmers noticed to be a very efficient way of marketing that led to long waiting lists. Long waiting lists were furthermore said to help with gaining legitimacy with local municipalities, helping the CSAs to get permits or renew land leases. There was also solidarity, trust, and support amongst the community. Most members rather took too little than too much, because ‘they want the other members to have enough harvest’ (Farmer2, Van Bergse Bodem). The

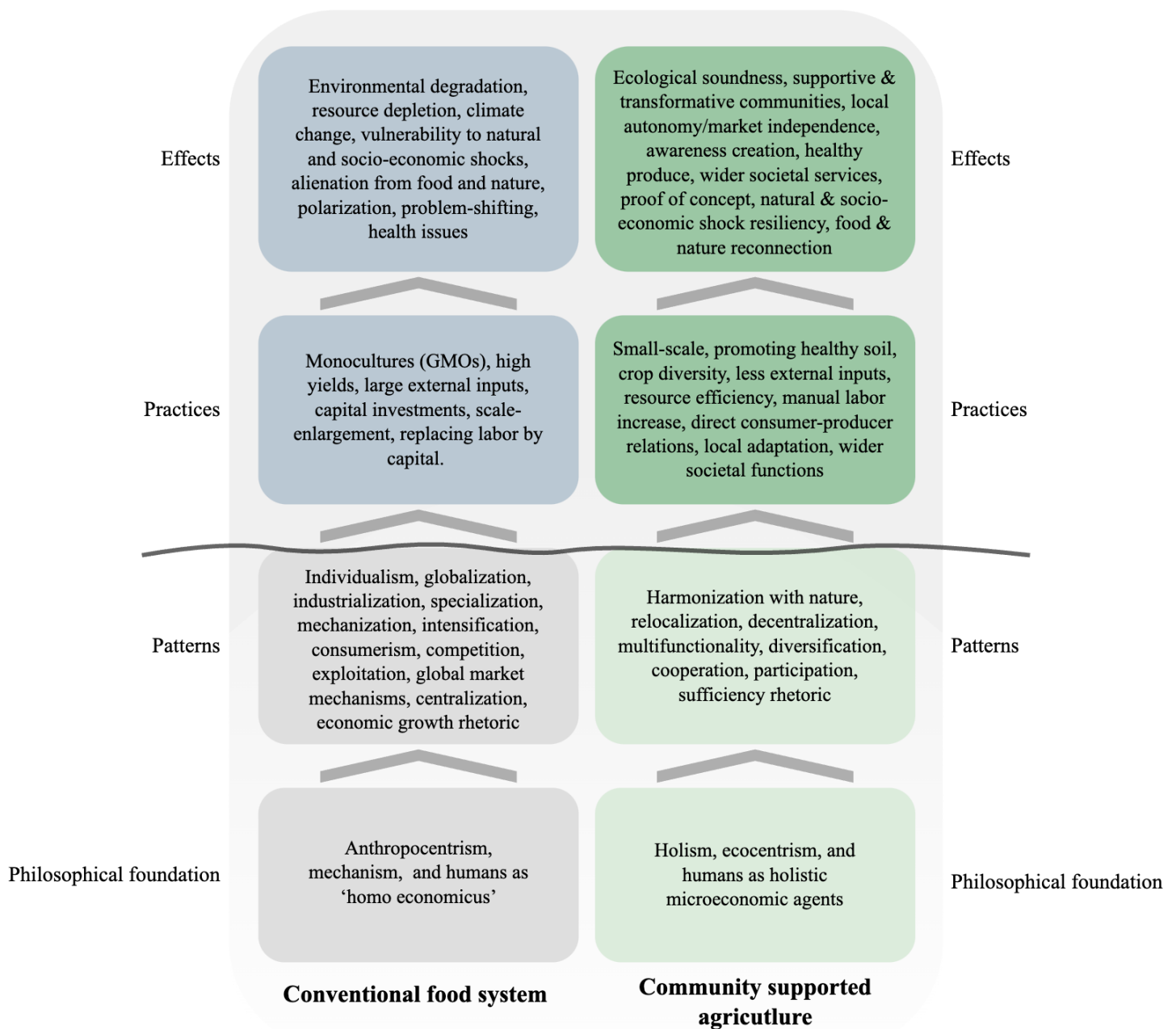
members trusted the farmers enough to pay for the whole harvesting season in advance, and understood and supported the farmers when prices were increased or misharvests led to less produce. The experts said that an increasing amount of CSAs (including two initiatives included in this study) is implementing so-called solidarity payments: a price differentiation in harvest subscription prices, coupled to both the income you want the farmer to earn, and the height of a member's income. Depending on income, members pay a lower or higher price, but together as a community they need to cover operation costs of the CSA and supply the farmer(s) with a fair wage. Het Zoete Land and Herenboeren farms also offered members to pay in installments, and the Herenboeren expert mentioned a farm that started a fund to pay membership costs for low income groups.

The involvement in CSA was said to have a positive impact on the participants, who experienced feelings of happiness, peace, and joy. These positive feelings were reported in relation to the experience of the natural environment and the action of harvesting at the CSAs, but also in relation to the social and educational aspects of the CSAs. The farmer at Pluk! Groenten van West said: 'I am 150% more happy since I started working here', and a member at Het Zoete Land stated that although the CSA 'is a small piece of land, it is an oasis in the middle of the city that is able to bring happiness to so many people, which is really valuable.' People were visiting the farms to relax and experience peace, and describe the social environment at the farms to be friendly and welcoming. Many people brought their kids, because they thought it was important for their children to be in touch with nature and food cultivation. People also mentioned that they felt like they were contributing to something good and positive: 'While everything is getting worse in the world (...) creating a place where things are actually getting nicer and better.' (Farmer, Het Zoete Land). CSAs were also said to fulfill important social roles like enhancing social cohesion and 'finding a sense of meaning or belonging on the farms' (E3), making people 'feel a part of a whole, where you are seen and heard (...), where you share food, but also joy and suffering, creating a safety net for worries and joy.' (E1). One expert said that 'where people may have used to meet each other in the church, now CSA can fulfill a similar function.' (E2). People felt like being part of a community of like-minded people that are united in their common ideals and goals: 'being part of a movement that is looking for change, (...) and realizing you are not the only one that cares about issues and wants to do things differently' (Farmer, Birkenhof). A member at Het Zoete Land said to be grateful to 'be a part of this community project that is such a generous place for everyone involved', and the farmer at Birkenhof said: 'I feel at home in this social bubble'. The interviewed experts mentioned the potential of CSAs to

address 'loneliness in society' (E1), and offer solutions for 'various problems arising in the Dutch care system' (E3), which is done through care farming, but also through CSAs volunteering communities, because 'there are volunteers with a care need, although in that case you are talking more about empowerment than treatment.' (E2).

### 4.3 Comparative Overview Framework

Figure 3 visually displays a synthesis of the discussed practices and outcomes of both the conventional Dutch food system and Dutch CSA, furthermore showing their underlying patterns and philosophical foundations. The (un)sustainable nature of both systems can be understood and compared through the culmination of these four levels.

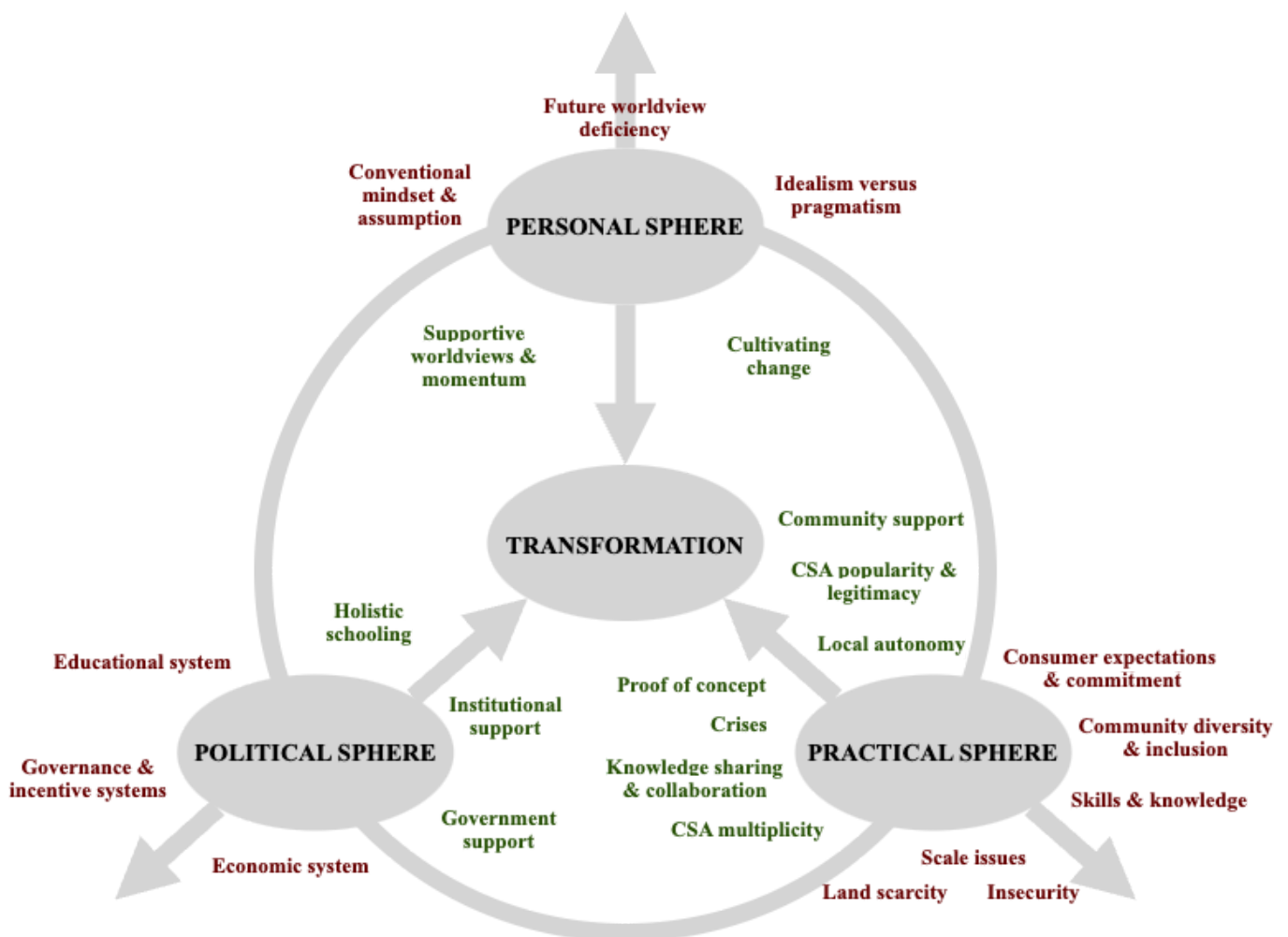


**Figure 3.** Visual comparative overview. The framework displays and compares the philosophical foundations, patterns, practices, and outcomes of the conventional Dutch food system and community supported agriculture.



## 4.4 Barriers & Enablers for CSA's Transformative Potential

This chapter gives an overview of the interrelated and overlapping practical, political, and personal barriers and enablers that were encountered or mentioned by the interview participants, including current and (possible) future barriers and enablers for CSA's transformative potential, and for wider emergence of CSA to further harness this potential. Figure 4 visually displays the barriers and enablers that are discussed in this chapter, placing them in corresponding Zones of Friction and Traction in the Three Spheres of Transformation model by Gosnell et al. (2019).



**Figure 4.** Three Spheres of Transformation Framework with filled in Zones of Friction and Traction. Adapted from Gosnell et al. (2019).

#### 4.4.1 Practical Sphere Barriers

Six (overarching groups of) barriers were encountered in the practical sphere:

*i) Consumer expectations & commitment.* A CSA membership ‘demands quite a lot of people’ (E3). Members reported that picking up, harvesting, and washing the produce took a lot of time. People furthermore have to commit and pay for a whole season in advance (or pay a large initiation sum at Herenboeren), without knowing when they receive what and how much produce, and this produce was said to sometimes be weirdly shaped, vary in size, or contain snails. Although CSA members generally ‘did their research, know what CSA entails, and think it is all fantastic.’ (Farmer, Pluk! Groenten van West), and ‘would not wish it any other way’ (Member, Van Bergse Bodem), the ‘high entry point’ (E4) of commitments and costs, together with conventional product expectations, were argued to make a lot of people in society unable or uninterested to join a CSA, forming a barrier for wider future emergence of CSA that includes various societal groups.

*ii) Community diversity & inclusion.* Farmers were said to struggle with finding ways for more inclusion and diversity, which was said to be ‘a point of attention’ (E2) in two ways. First, the *consumer expectations & commitment* barrier was said to make it hard to include diverse societal groups in member communities. Tensions between affordable harvest shares and respectable farmer wages were adding to this difficulty, and one farmer mentioned that he was afraid ‘to bring in a different type of consumer to whom I cannot make the idealism and concept [of CSA] as clear’ (Farmer, Pluk Den Haag). The Herenboeren expert added to this that when a Herenboeren farm started a fund that paid memberships for people, these people were often ‘less engaged, causing them to quit faster.’ (E3). An increasing amount of farmers was said to implement solidarity-payments to allow more people to join their CSAs, and farmers also mentioned their communities to contain ‘an increasing amounts of students’ (Farmer, Pluk! Groenten van West), and lower income groups that ‘are going to food banks as well’ (Farmer2, Van Bergse Bodem). Second, it was mentioned that there was tension between ‘the autonomy of the farmer and inclusion of the community’ (E1) in decision-making processes, because ‘you need certain knowledge to make certain decisions’ (Farmer, Het Zoete Land), making it hard to ‘involve people, when not everyone has the same background and knowledge.’ (E1). Barriers for inclusion and diversity limit CSA’s ability to foster local autonomy and empowerment towards sustainable transitions in the food system.

*iii) Land scarcity.* All experts mentioned the availability of affordable land ‘where you can also get a permit to build a shed, and where you can stay for a long time’ (E2) was one of the biggest barriers for starting CSAs.

*iv) Insecurity.* The experts mentioned that a lot of CSAs were dealing with short term land leases and limited rights on these lands, forming a barrier for continuity and long-term planning and investment. Past or current insecurity issues were mentioned at Het Zoete Land, Kansrijk, and Pluk! Groenten van West in this study.

*v) Skills & knowledge.* The experts and farmers mentioned that CSA farming requires a complicated and diverse knowledge and skillset, involving the ability to work and experiment with ecologically sound cultivation methods, but also requiring farmers to be ‘a host, have good communication skills, do administration, (...) lobbying, maintaining land leases, and sustain their community.’ (E4). A farmer’s personality was said to influence a CSA’s success, requiring ‘idealism, ambition, knowledge, and persistence.’ (Farmer, Het Zoete Land). The required knowledge and skills were argued to form a barrier for starting or transitioning to CSA, because people might ‘not see how to do it differently [than conventional].’ (Farmer, Pluk Den Haag).

*vi) Scale issues.* Although CSA’s reliance on manual labor reduces the benefits of scale-enlargement, it was mentioned that things like composting were more efficient on a larger scale, and that delivery costs or call-out fees were relatively more expensive on a small scale. Furthermore, some crops need a lot of space, making them less suitable to ‘devote a large space to’ (Farmer, Kansrijk) on the small CSAs, reducing CSA’s ability to offer full diets and take up a large part of Dutch food provisioning in the future, because ‘we also need carbohydrates, protein, and fats, and current CSAs do not provide that’ (E2).

#### 4.4.2 Practical Sphere Enablers

Seven (overarching groups of) enablers were encountered in the practical sphere:

*i) Crises.* Crises were argued to stimulate reflection and awareness creation in society, often leading to increased interest, support and legitimacy for CSA: ‘COVID-19 and the Ukraine war played a role in raising awareness about how important it is to organize [food provisioning] well in your surroundings.’ (E1). ‘Climate issues are also helping with awareness raising’ (E5), ‘the 2008 financial crisis caused more appreciation of local food.’ (E2), and ‘the current nitrogen crisis also showed how important it is to support farmers and share risks with them.’ (E1).

*ii) Community support.* CSAs foster social member communities that are ensuring the longevity of CSA initiatives through their engagement, trust, solidarity, and propagation, providing the CSA with a source of labor, knowledge, and resources. See chapter 4.2.4 for further elaboration and examples.

*iii) Local autonomy.* CSA's localized nature and production methods result in less dependency on external (global) markets and processes, empowering local producers and consumers to design and operate their own food practices in accordance with their values, needs, considerations, and local environments. This allows them to form a 'transformative community'(E4) that has the space and freedom to bring about structural sustainable change. See chapter 4.2.1 for more elaboration and examples on this enabler.

*iv) Knowledge sharing & collaboration.* 'Sharing knowledge, techniques, and materials' (E4) and collaboration between farmers and other actors and organizations were said to strengthen the CSAs and address the *skills & knowledge* barrier. The interviewed farmers exchanged knowledge at national CSA meetings, with other local farmers, and with Warmonderhof graduates in a Whatsapp group. Seeds and seedlings were often shared, and Kansrijk ordered them together with other local initiatives, and looked into collective seedling cultivation as well, consequently addressing the barrier of *scale issues*. Pluk! Groenten van West teamed up with neighboring initiatives to collectively communicate with the municipality about common interests like an upcoming increase in land lease price, and Pluk Den Haag and Van Bergse Bodem joined networking platforms that brought together local organizations.

*v) CSA popularity & legitimacy.* The rise in CSA popularity, appreciation, and legitimacy were reported to enhance further development of the Dutch CSA sector (see chapter 4.1.4). Interview participants therefore mentioned that an important enabler could be to let even more people get in touch with and experience CSA through activities like 'open house days, inviting schools to visit' (Member1, Kansrijk) and 'more publicity' (Member, Het Zoete Land).

*vi) Proof of concept.* The experts mentioned that CSA 'gives hope that it can be done differently, and gives insight into how this can be done' (E1). CSAs provide proof that localized, small-scale and ecologically sound practices are financially and socially viable, increasing their legitimacy. One expert said that 'more numbers and research' (E3) could be an enabler in further proving CSA's case.

*vii) CSA multiplicity.* The interviewed experts mentioned that for wider emergence of CSA, 'variations are needed' (E4). A plurality of co-existing forms and practices could

complement each other, and should be ‘acknowledged and appreciated, without pushing one dominant model.’ (E4). More diverse practices could address more diverse wishes, needs, and interests in society, consequently addressing the barriers of *consumer expectations & commitment* and *community diversity & inclusion*, so ‘everyone could think, what suits me?’ (E3). Diverse CSA forms could furthermore put into practice ‘what type of agriculture suits what crop species best’ (E4). CSA diversity could entail ‘hybrid forms’ (E2) that reduce consumer commitments through pick-up systems or by delivering produce, CSAs that produce on a larger scale through methods like ‘agroforestry, to cultivate crops like cereals, legumes, and nuts’ (E2), providing a more complete diet, CSAs with ‘a few thousand members’ (E2), or CSAs that consist of ‘very small groups of people that share costs and benefits.’ (E2). The expert involved in CSA Netwerk said to believe in a combination of CSA gardens with food networks, ‘offering a complete substitution of supermarkets’ (E5), and empowering farmers with alternative distribution channels that ‘improve their negotiating position with supermarkets.’ (E5). Another expert thought that ‘basic needs [like food] should be organized in [non-profit] cooperatives without anonymous stockholders that want returns.’ (E2). The Herenboeren expert said to expect ‘derivatives of Herenboeren in the future, because it is hard to find 15 to 20 hectares of contiguous land.’ (E3).

#### 4.4.3 Political Sphere Barriers

Three (overarching groups of) barriers were encountered in the political sphere:

*i) Governance & incentive systems.* The experts said that CSA was often not taken seriously ‘on higher policy levels’ (E4), and that CSA was ‘structurally impeded’ (E4), because ‘a lot of policies are made for large scale agriculture, and not for small scale sustainable agriculture.’ (E1). ‘It is very difficult to qualify for subsidies’ (E1), and most subsidies are allotted ‘on a base of hectare compensation’ (E1), which is very disadvantageous for small-scale CSAs. The Netherlands have furthermore not ‘checked off that we have small-scale farmers in the Netherlands, in the context of EU subsidies.’ (E1), not recognizing the legitimacy of small scale initiatives like CSA. The experts furthermore mentioned ‘spatial planning, laws, and regulations’ (E2) to be an important barrier for CSA. Zoning plans like ‘open landscape’(E1) often restrict building ‘a little shed’ (E2) or ‘planting trees’ (E5), or CSAs deal with long and difficult permit procedures. Herenboeren farms require various things, like buildings, animals, orchards, and greenhouses, making the permit processes difficult: ‘there has not been one farm that was allowed to do this all at once, (...) while we check all the boxes for municipal, provincial, and state goals and plans (...) only the

law is just not set up for it yet.’ (E3). The land used by Pluk Den Haag and Het Zoete Land both had a (past) ‘green’ zoning plan, which makes agricultural activities fall in a gray area, complicating permit procedures. The conventional *governance & incentive systems* add to the barriers of *land scarcity* and *insecurity* in the practical sphere.

*ii) Economic system.* CSAs were said to ‘have to earn their place within a capitalist model’ (Farmer, Pluk Den Haag), because while ‘you are organizing yourself differently around food, you are still the same person that has to pay rent, has to pick up your kids, and care for your parents.’ (E4). As long as ‘wellbeing and care are not central values’ (E4), and we uphold a system based on global market demands, corporate power and competition dictating the prices, a lot of people will be unable to combine CSA ‘with the lives they are leading’ (E4), and ‘these kind of initiatives [CSA] will always have to fight harder’ (E4), and ‘swim against the current’ (Member, Birkenhof).

*iii) Educational system.* Current agricultural schooling in the Netherlands is ‘mainly focused on specialization’ (E1) and conventional practices, leading to ‘insufficient knowledge’ (E5) for engaging in diverse and multifunctional practices like CSA, contributing to the *skills & knowledge* barrier in the practical sphere. It was furthermore argued that the general Dutch schooling system was not fostering enough knowledge and awareness about food and nature, leading to children that ‘do not know how a Brussel sprout grows’ (E4). Less awareness and appreciation of CSA could contribute to the *consumer expectations & commitment* and *community diversity & inclusion* barriers.

#### 4.4.4 Political Sphere Enablers

Three (overarching groups) of enablers were encountered in the political sphere:

*i) Institutional support.* Experts mentioned support of bottom-up institutions to be an important enabler for CSA, from small non-profit foundations behind CSAs that ‘help with applying for subsidies’ (E2) and that ‘make municipalities more willing to grant land’ (E2), to support from (collaborating) national institutions like Herenboeren and CSA Netwerk. This support entails facilitating the *knowledge sharing & collaboration* enabler by connecting farmers in a national network, guidance and education in ‘starting a successful CSA’ (E5), developing participatory guarantee systems, and help with obstructive *governance & incentive systems*. Institutions like Aardpeer en BD Grondbeheer use community sourced obligation loans to ‘purchase land and make it available to farmers.’ (E5), consequently addressing the barriers of *land scarcity* and *insecurity*. CSA Netwerk and Herenboeren are furthermore part of a larger agroecological ecosystem of institutions that propagate the

movement and ‘try to influence policy on a broad spectrum, to create better conditions for CSAs.’ (E5), consequently fostering *CSA popularity & legitimacy*.

*ii) Government support.* The interviewed participants mentioned that (local) government could play a role in facilitating wider emergence of CSA. Municipalities could reserve ‘a certain percentage of land [for CSA] (...), and enable more people to join CSAs.’ (Farmer, Birkenhof). At Kansrijk, some members with lower incomes got their subscription through the ‘U-pas’, a card that was provided by the local government. Municipalities could ‘free up more space for CSA initiatives’ (Farmer, Het Zoete Land) in (urban) spatial planning and ‘zoning plan changes’ (E5). Experts and farmers also mentioned heavier taxation for unsustainable practices, and more subsidies for sustainable and healthy initiatives to be an enabler, including subsidies for non-monetizable ecosystem and social services offered by CSA, such as restoring soil, increasing biodiversity, and fulfilling societal needs. CSA Netwerk recently received a subsidy for educating and guiding CSA farmers, and some CSAs got subsidies for individual projects like ‘nature inclusive riverbanks or an education space’ (E3). However, most CSA farmers said they did not want to become dependent on structural subsidy support, because ‘if you want to change the system, you cannot simultaneously make use of it.’ (E3).

*iii) Holistic schooling.* To address the conventional focused *educational system*, agricultural schooling should focus on ‘mastering various types of skills’ (E1) needed for CSA farming, including ‘political schooling’ (E1) to help farmers maneuver around difficult policies, laws, and regulations. Warmonderhof was said to educate ‘well equipped farmers’ (E3) for running diverse and multifunctional farms, but *institutional support* for ‘further guidance and schooling’ (E1) by institutions like CSA Netwerk was also said to be important. *Government support* was also mentioned as an enabler for developing more holistic educational systems, both for farmers as for wider society.

#### 4.4.5 Personal Sphere Barriers

Three (overarching groups) of barriers were encountered in the personal sphere:

*i) Conventional mindsets & assumptions.* A ‘friction between old thinking and new forms [of agriculture]’ (E2) was said to form a barrier for CSA. People's conventional worldviews are both shaping the *educational* and *economic system* and are being shaped by them. *Consumer expectations* mirror conventional practices, and the belief that conventional agriculture is the only way to feed the world upholds the old system. ‘How the Netherlands looks at its food provisioning, sustainability, and the revenue model for farmers is based on a



lot of culture, assumptions, and image.’ (E2), including ‘images of what success is’ (E4), the ‘values we prioritize as the basis for our economy’ (E4), and the visions of sustainable change ‘as changing the current system, or breaking loose from it’ (E4). More specifically, a conventional Dutch ‘farmer mentality’ was mentioned that revolves around ‘a feeling of autonomy (...), being your own boss, being free’ (E2) to ‘have control over your own company’ (E5) that you ‘can leave to your kids’ (Farmer, Birkenhof). This farmer mentality is in contrast with community ownership in new forms of organization around food, consequently forming a barrier to *CSA multiplicity*.

*ii) Idealism versus pragmatism.* Interview participants mentioned some frictions between idealism and pragmatism on CSA initiatives, including tensions between keeping harvest shares affordable for various groups in society and respectable farmer wages, causing some farmers to ‘take less financial care of themselves’ (Farmer, Kansrijk). The farmer at Pluk Den Haag displayed the idealism lying at the basis of this tension, saying ‘I want to give people with lower incomes the chance to join the CSA as well, [because] (...) food should be available to everyone.’ The tensions between ‘the autonomy of the farmer and inclusion of the community’ (E1) in decision-making processes also display a friction between idealism and pragmatism. The social and educational aspects of the farm were sometimes said to be hard to balance with getting practical work done and Herenboeren changes their slogan from ‘helping is not necessary, but is always allowed’ to ‘help makes more possible’ (E3), because they needed more hands to keep the farms running.

*iii) Future worldview deficiency.* The required skills and knowledge of CSA farmers and the ‘social bubble’ (Farmer, Birkenhof) of mostly idealistic, wealthy and highly educated people involved in CSA form a possible barrier for wider emergence of CSA, because these groups in society might possibly ‘run out’ and stagnate the rapid growth and development of CSA.

#### 4.4.6 Personal Sphere Enablers

Two (overarching groups) of enablers were encountered in the personal sphere:

*i) Supportive worldviews & momentum.* The *ecocentric* and *holistic* worldviews amongst CSA actors, and a general increase in awareness about sustainability in society have spurred on *CSA popularity & legitimacy* and *community support*, enhancing the rapid development of the CSA sector. CSA ‘used to have a dusty and old-fashioned image, (...) but it has now become really hip to grow your own food.’ (Member, Het Zoete Land). As the popularity and legitimacy of CSA grow, more people in society become involved in CSA,



allowing CSA to spread its underlying *ecocentric* and *holistic* worldviews through awareness creation. As the bottom-up support for CSA grows, societal institutions like CSA Network can exert more influence on higher policy levels, causing further momentum for the wider emergence of Dutch CSA.

*ii) Cultivating change.* A wider ‘societal transition’ is needed that incorporates ‘new ways of thinking in which we put the community at the center rather than the individual.’ (E4), to invoke ‘structural change that gives more breathing room to these [CSA] initiatives.’ (E4). Enablers like *crises* could foster such societal transitions, but CSAs are also seen as motors of change and transformation, fostering awareness amongst their member communities and wider society through facilitating direct farmer-consumer relations, physical experience and interaction with sustainable food production and the natural environment, and by providing proof of concept, showing CSA’s ecological and socio-economic viability. See chapter 4.2.2 for examples and further elaboration of how CSA fosters awareness creation.

## 5. Discussion

### 5.1 Theoretical Contributions & Implications

This study explored how Dutch CSA's transformative potential could be harnessed to address underlying causes of the interrelated issues in the Dutch food system. By answering sub-question 1, the emergence and current state of the Dutch food landscape, regime, niche, and landscape pressures were mapped, uncovering the underlying worldviews and patterns on which the conventional Dutch food system and Dutch CSA are built, leading to on the one hand unsustainable conventional practices that cause interrelated ecological and socio-economic issues, and on the other hand small-scale and diverse CSA practices, that are in harmony with their natural and social environments. Sub-question 2 builds on these results, exploring the transformative potential of Dutch CSA to address underlying causes of interrelated issues in the conventional system. CSA was found to empower conscious societal actors to translate their *ecocentric* and *holistic* worldviews into ecologically sound farms that nurture social and transformative communities, offer wider societal functions and services for their surroundings, and provide proof of concept for CSA's ecological and socio-economic viability, consequently fostering awareness creation that contributes to further emergence of Dutch CSA. Sub-question 3 was answered by identifying the interrelated and overlapping practical, political, and personal barriers and enablers for CSA's transformative potential, and for a wider emergence of CSA to further harness this potential. Enabling *ecocentric* and *holistic* worldviews in the personal sphere were found to facilitate both political enablers like holistic schooling, government, and incentive systems, as well as practical enablers like knowledge sharing and community support, which in turn added to the spread of *ecocentric* and *holistic* worldviews, presenting a circular pattern of enabling CSA's transformative potential and alleviating barriers for this potential, like challenges of involving diverse societal groups, land scarcity, and restrictive policies and regulations. It was furthermore uncovered that widening the concept and practices of CSA to include a plurality of practices that are adapted to different crops and societal needs and interests, is an important enabler for further emergence of CSA, further harnessing its potential to transform the conventional food system. By synthesizing the transformative potential of CSA and the barriers and enablers for harnessing this potential, which were explored in the sub-questions, the main question of this research was answered, filling the research gaps of looking at Dutch CSA's transformative

potential, and the research gap of looking at barriers and enablers for harnessing this potential.

Most previous studies considered how CSA incorporates and displays transformative practices and qualities, but state that exploring how transition processes actually occur is an area for future research (Bloemmen et al., 2015; Bobulescu et al., 2018; Hvitsand, 2016; Vincent & Feola, 2020). Mert-Cakal & Miele (2022) encountered awareness creation processes on Welsh CSAs, and talked about how this could contribute to sustainable transitions. Van Oers et al. (2023) looked at two Dutch CSAs and how they displayed processes of ‘unlearning’ that discard conventional mental models, knowledge, and routines, concluding that future research could look for barriers and enablers for these unlearning processes. Previous studies on barriers and enablers for CSA predominantly focused on general practical and political barriers and enablers (Loerakker, 2020; Van Kampen, 2020), or studied CSA in other countries (Hoenninger et al., 2019). Previous research overlaps with some of the barriers and enablers encountered in this study, like Hoenninger et al. (2019), who also encountered a barrier of consumer commitments and expectations, but who also mentioned barriers like difficulties in building trust and solidarity in CSA communities, which was not encountered in the Dutch context. Van Kampen (2020) performed an explorative study on Dutch CSA, also encountering barriers of land scarcity, and obstructive policies and regulations, but noticed that the research only marginally looked into Dutch CSA and that additional research is needed.

This study differentiates itself from previous research by providing a comprehensive overview of Dutch CSA’s transformative potential, including its embeddedness in a wider Dutch food landscape and its ability to address underlying causes of interrelated issues in this landscape. Additionally, specific barriers and enablers for CSA’s transformative potential were explored in a holistic manner, looking at the interrelation between multiple levels of barriers and enablers, including deeper level values, beliefs, and worldviews. By focusing on such deeper level aspects of transformation throughout all research questions, this study has furthermore taken into account that deeper level interventions are considered to have the most leverage in bringing about radical and structural change (Meadows, 1999). Additionally, the research has taken bottom-up perspectives in sustainable transitions into account, by interviewing bottom-up actors involved in Dutch CSA (Avelino & Wittmayer, 2016).

## 5.2 Societal Implications & Reflections

CSA embodies a plurality of features that are envisioned for structural sustainable change, indicating that it could play an important role in the transition towards a more sustainable food system in Dutch society. CSA initiatives are social and educative hubs that provide proof of concept of CSA's ecological and socio-economic viability and sustainability, leading to awareness creation processes in member communities and wider society, fostering transformation of values, beliefs, and worldviews, which is considered to be a powerful and necessary leverage for structural system change (Kassam & Kassam, 2021; Meadows, 1999). The involvement of children in CSA adds to its potential to create awareness in society, because research supports that '... values, attitudes, habits, and behaviors, (...) are often learned and cemented at a young age.' (Redman & Larson, 2011, p.1), and that kids' involvement in gardens is important in shaping eating habits and creating awareness about the value of agriculture (Morris et al., 2000).

In contrast with the conventional system, CSA is resilient to both natural and (global) socio-economic shocks, through its local rootedness, independence from global market structures, and ecological soundness and resource efficiency. CSA's localized production could furthermore reduce the need for large-scale animal husbandry, addressing the nitrogen crisis. Moreover, Dutch CSA seems to address the prevalent 'tragedy of the commons' (Ostrom, 2008) in the conventional system, shifting from resource exhausting central management by a small number of utility-maximizing actors, to decentralized and multifunctional practices that conserve the benefits of Dutch nature and food production and allocate them to local communities.

These benefits for Dutch society include the enhancement of physical and mental health, by healthy food provisioning through sustainable farming practices that refrain from harmful inputs, but also through nurturing trust, solidarity, equity, happiness, and senses of belonging and meaning amongst their member communities and wider surroundings. Research supports that interaction with and working in the natural environment have a positive impact on mental health and wellbeing (Irvine & Warber, 2002; Sempik, 2010), both of which are ingrained in CSA through self-harvesting structures, volunteering communities, carefarming, and recreational activities. Through these activities, CSA also has the potential to address the 'care crisis' caused by an understaffed care sector, and the increased individualization and loneliness in Dutch society (Berger, 2022; MVRM, n.d.; Veldboer,

2022). Additionally, CSA reconnects Dutch society to nature, food production, and each other, consequently addressing the alienation processes caused by the conventional system.

There are also critiques on CSA, questioning its ability to transform the food system and provide a large share of Dutch food provisioning. There are concerns that small-scale and sustainable practices like CSA are unable to feed growing populations, because of lower yields, requiring more land to grow the same amount of food (Jouzi et al., 2017; Rahmann et al., 2017). However, studies show that the conservation agriculture methods applied in CSA, including no-tillage and crop rotation, minimize the yield gap with conventional agriculture, and that sustainable farming practices even exceed conventional yields under circumstances like droughts (Knapp & Van der Heijden, 2018; Pittelkow et al., 2015; Reganold & Wachter, 2016), which will happen more frequently in the future, due to climate change (IPCC, 2023). Moreover, we already produce enough food to feed the 9,7 billion people that are projected to inhabit the earth by 2050 (Holt-Giménez et al., 2012; UN DESA, 2019), but food is unequally distributed and up to half of the grown food is wasted (Reganold & Wachter, 2016). In contrast, CSA showcases a rhetoric of sufficiency, reducing food losses in global supply chains by only provisioning food to local communities that are furthermore conscious about the value of agricultural produce, trying to waste as little as possible.

In this study, it also became evident that CSAs are often struggling with diversity and inclusion, mostly attracting white, higher educated, wealthy, politically left, and idealistic people, because CSAs require investments of time and money that are not possible for everyone in society. At the same time, a tension was reported between respectable farmer wages and keeping CSA affordable and accessible to diverse groups in society. These difficulties can be seen as a barrier for wider emergence of CSA that provisions all diverse groups in society. However, CSAs were mentioned to be flexible and undergo constant processes of learning and adaptation, indicating that CSA initiatives have the ability to evolve reciprocally with wider emergence of Dutch CSA. CSA could improve its inclusion of various societal groups and provision fuller diets by adopting multiplicity, evolving into various forms and sizes of CSAs that adapt to different crops and different needs and interests in society, while upholding the underlying philosophical foundation of and *ecocentric* and *holistic* worldview and its further spread among Dutch society.

## 5.3 Policy & Stakeholder Recommendations

As the most effective interventions for sustainable transformations are aimed at changing deeper level philosophical foundations underpinning systems, the most important recommendations of this research are focused on alleviating and facilitating the encountered barriers and enablers for CSA's transformative potential in the personal, and then the political sphere. This in turn will trickle down to resolving barriers and enhancing enablers in the practical sphere. The recommendations are for governing institutions like national government and municipalities, , as well as for societal stakeholders and institutions like CSA Network and Herenboeren.

### Holistic Schooling

More holistic schooling systems could incorporate and foster *Ecocentric* and *holistic* worldviews through including more interaction with nature and food production in curricula, and by raising awareness about sustainability issues and their complicated interrelated causes. Agricultural schooling should redirect its focus away from conventional practices, and equip farmers with the knowledge and skills to design and manage multifunctional, complex, and diverse agroecological practices like CSA. Programs could also be developed to guide and support CSA farmers after schooling in starting their initiatives. Societal institutions, like CSA Network, could be supported to organize this. A positive development in this aspect has been the discussed recent government subsidy for CSA Network to guide and educate CSA farmers.

### Supportive Policies & Incentives

Governance and incentive systems should be redirected to bring about structural change to the conventional economic system, creating a facilitating environment for CSA initiatives to emerge, and space for society to engage in these initiatives. Niche developments like CSA could also be protected from the conventional economic system to become more mature and competitive, although it is important to respect and maintain CSA's independent character to avoid overprotection, dependencies and control mechanisms (Elsner et al., 2023). More practically, negative externalities could be included in prices of conventional produce, and the ecosystem and societal services that CSA offers could be rewarded. Generally, unsustainable practices could be taxed more heavily, while subsidizing practices that foster harmony between humanity and the natural environment. (Local) governments could alleviate or help

with obstructing regulations and policies, help with acquiring land, and (financially) support more societal groups to participate in CSA. Societal institutions like CSA Netwerk could also take on these tasks, and be (financially) supported by governing institutions in doing so. A positive development in this aspect is that a plurality of agroecological institutions recently deposited the ‘green farmer plan’, containing ten recommendations for the Dutch government to stimulate a transition to an agroecological Dutch farming system (Groenboerenplan, n.d.).

## 5.4 Research Limitations and Future Avenues

### Generalizability

The study focused on a limited sample size of six CSA initiatives, which might raise concerns regarding the representativeness of the findings for the broader Dutch CSA sector. However, it's worth noting that repetitive patterns emerged during the interview process, suggesting even this sample size could identify potential commonalities among Dutch CSAs. It is furthermore doubtful that the results of this study could be generalized to CSA in other countries, since similar studies in different contexts have encountered very different results, like Medici et al. (2021), who talked about the barrier for Italian CSAs to attract enough members that are actively participating in the community, and Hoenninger et al. (2019), who saw that building trust and solidarity in French and Swedish CSA communities was a challenge. Both of these findings were not found in the Dutch context, where the communities were very supportive and engaged, and the CSAs had long waiting lists. Future research could apply the scope of this study in different contexts.

### Time Limitations

Given the time-intensive nature of physically visiting farms and the concurrent harvesting season, there were limitations in accessing more farmers for inclusion in the research. This constraint could have influenced the depth or breadth of the insights obtained. Future research could build on this study by increasing the number of studied Dutch CSAs.

### Positionality & Subjectivity

By interviewing individuals that were already involved in the CSA sector, there might be inherent biases. The interviewees might have perspectives and biases that are too optimistic and that do not (fully) reflect the challenges of CSA in the Dutch food landscape. To bring about sustainable transformations in the Dutch food system, it is important to also consider the perspectives and challenges of actors outside the CSA sector. Future research could look at what holds conventional farmers and consumers back from engaging in CSA, and what might incentivize them to become engaged. Such studies could offer valuable insights for further emergence of the CSA movement.

### Study Breadth & Methodology

By emphasizing on deeper-level aspects of Dutch CSA, and covering a large array of topics with this scope, the research might have missed some nuances and depth on particular aspects. The methodological approach of using literature review and semi-structured interviews limits the nature of research findings. Future research could apply different research methods like surveys and observational studies, capturing a wider variety of experiences and patterns in the Dutch context. Given the evolving nature of CSAs, ongoing monitoring and longitudinal research could provide insights into long-term impacts, challenges, and successes of CSAs over time. Longitudinal studies could furthermore monitor the impact of CSAs on the awareness and sustainable behaviors of involved people. Given the difficulties the CSA sector faces regarding diversity and inclusion, future research could furthermore delve into strategies, policies, and practices to enhance the inclusivity of CSA initiatives, ensuring they include broader and more varied societal groups.



## 6. Conclusion

This study set out to map how CSA's transformative potential could be harnessed to address the underlying causes of interrelated issues in the Dutch food system, using an extensive literature review and data from semi-structured interviews with CSA farmers, members, and experts. The research provided a holistic overview of the emergence and current state of both the conventional Dutch food regime, and CSA within an agroecological niche, exploring their embeddedness in a wider Dutch and global food landscape. It was retraced how the underlying worldviews of the conventional regime and niche development of CSA resulted in unsustainable patterns, practices, and interrelated issues in the conventional Dutch regime, and holistic, sustainable, and transformative patterns, practices, and outcomes in Dutch CSA. It was furthermore analyzed how Dutch CSA is attracting and empowering conscious local actors to translate their holistic and ecocentric worldviews into sustainable and transformative practices that foster further awareness creation, creating an upward spiral of change cultivation away from the unsustainable conventional system. Additionally, the research mapped the interrelated practical, political, and personal barriers and enablers for CSA's transformative potential that were encountered or perceived by actors involved in Dutch CSA. By synthesizing the results of the study, a comprehensive and holistic understanding of CSA's transformative potential and ways to further harness it took shape, resulting in policy and stakeholder recommendations. Societal and governing institutions should foster *Ecocentric* and *holistic* worldviews through holistic schooling systems, and furthermore create facilitating environments for CSA through redirection of incentive systems towards sustainable practices, alleviating obstructive policies and regulations, and by (financially) enabling wider societal groups to participate in Dutch CSA. Future research could add to this study by applying its scope in different contexts, adding to the number of studied Dutch CSAs, and by widening the scope of this research, applying different methods, or different angles, like exploring what holds societal groups like conventional farmers back to transition to CSA farming. Wider emergence of Dutch CSA will not only cultivate healthy food, but will also cultivate a sustainable and just future, where the benefits of Dutch food and nature are conserved and allocated to local communities.

## References

- Abson, D. J., Fischer, J., Leventon, J., Newig, J., Schomerus, T., Vilsmaier, U., Von Wehrden, H., Abernethy, P., Ives, C. D., & Jager, N. W. (2017). Leverage points for sustainability transformation. *Ambio*, *46*, 30–39.
- Avelino, F., & Wittmayer, J. M. (2016). Shifting Power Relations in Sustainability Transitions: A Multi-actor Perspective. *Journal of Environmental Policy & Planning*, *18*(5), 628–649. <https://doi.org/10.1080/1523908X.2015.1112259>
- Beddoe, R., Costanza, R., Farley, J., Garza, E., Kent, J., Kubiszewski, I., Martinez, L., McCowen, T., Murphy, K., & Myers, N. (2009). Overcoming systemic roadblocks to sustainability: The evolutionary redesign of worldviews, institutions, and technologies. *Proceedings of the National Academy of Sciences*, *106*(8), 2483–2489.
- Berger, L. (2022, July 3). *Nog even en een zware zorgcrisis klopt aan de deur. Waarom zorgen we toch zo slecht voor de zorg?* de Volkskrant. <https://www.volkskrant.nl/columns-opinie/nog-even-en-een-zware-zorgcrisis-klopt-aan-de-deur-waarom-zorgen-we-toch-zo-slecht-voor-de-zorg~b42a8910/>
- Bloemmen, M., Bobulescu, R., Le, N. T., & Vitari, C. (2015). Microeconomic degrowth: The case of Community Supported Agriculture. *Ecological Economics*, *112*, 110–115. <https://doi.org/10.1016/j.ecolecon.2015.02.013>
- Bobulescu, R., Le, N. T., Vitari, C., & Whittingham, E. (2018). Socio-economic and ecological transition in community supported agriculture: From the “transitional” to the “ideal” CSA. *International Journal of Agricultural Resources, Governance and Ecology*, *14*(2), 122. <https://doi.org/10.1504/IJARGE.2018.093990>
- Boeren Raad. (2023). *Wie zijn wij. Boerenraad*. <https://boerenraad.nl/wie-zijn-wij/>
- Buijs, A., Langers, F., & de Vries, S. (2006). *Een andere kijk op groen: Beleving van natuur en landschap in Nederland door allochtonen en jongeren (1871-028X)*. WOT Natuur & Milieu.
- CSA Network. (2020a). *Visie en missie – CSA Network*. <https://csanetwerk.nl/over-csa-netwerk/>
- CSA Network. (2020b). *Wat doet het CSA netwerk? – CSA Network*. <https://csanetwerk.nl/informatie-en-ondersteuning/>
- CSA Network. (2020c). *Wat is een CSA? – CSA Network*. <https://csanetwerk.nl/wat-is-een-csa/>
- CSA Network. (2020d). *Zoek een CSA bij jou in de buurt – CSA Network*. <https://csanetwerk.nl/kaart/>
- Eisenmenger, N., Pichler, M., Krenmayr, N., Noll, D., Plank, B., Schalmann, E., Wandl, M.-T.,

- & Gingrich, S. (2020). The Sustainable Development Goals prioritize economic growth over sustainable resource use: A critical reflection on the SDGs from a socio-ecological perspective. *Sustainability Science*, 15(4), 1101–1110.  
<https://doi.org/10.1007/s11625-020-00813-x>
- El Bilali, H. (2019). The Multi-Level Perspective in Research on Sustainability Transitions in Agriculture and Food Systems: A Systematic Review. *Agriculture*, 9(4), Article 4.  
<https://doi.org/10.3390/agriculture9040074>
- Elsner, F., Herzig, C., & Strassner, C. (2023). Agri-food systems in sustainability transition: A systematic literature review on recent developments on the use of the multi-level perspective. *Frontiers in Sustainable Food Systems*, 7.  
<https://www.frontiersin.org/articles/10.3389/fsufs.2023.1207476>
- Erismann, J. W., Strootman, B., Bastmeijer, K., Jongeneel, R., Poppe, K., van den Wittenboer, S., & van Dorp, M. (2021). *Naar een ontspannen Nederland: Hoe het oplossen van de stikstofproblematiek via een ruimtelijke benadering een hefboom kan zijn voor het aanpakken van andere grote opgaven en zo een nieuw perspectief kan opleveren voor het landelijk gebied.*
- European Commission. (2023a, March 7). *The common agricultural policy: 2023-27.*  
[https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-2023-27\\_en](https://agriculture.ec.europa.eu/common-agricultural-policy/cap-overview/cap-2023-27_en)
- European Commission. (2023b, July 19). *Netherlands—CAP Strategic Plan.*  
[https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans/netherlands\\_en](https://agriculture.ec.europa.eu/cap-my-country/cap-strategic-plans/netherlands_en)
- Federatie van Agro-ecologische Boeren. (2023). *Federatie van Agro-ecologische Boeren.*  
 Federatie van Agro-ecologische Boeren.  
<http://www.federatieagroecologischeboeren.nl/>
- Fomina, Y., Glińska-Neweś, A., & Ignasiak-Szulc, A. (2022). Community supported agriculture: Setting the research agenda through a bibliometric analysis. *Journal of Rural Studies*, 92, 294–305. <https://doi.org/10.1016/j.jrurstud.2022.04.007>
- Geels, F. W. (2002). Technological transitions as evolutionary reconfiguration processes: A multi-level perspective and a case-study. *Research Policy*, 31(8), 1257–1274.  
[https://doi.org/10.1016/S0048-7333\(02\)00062-8](https://doi.org/10.1016/S0048-7333(02)00062-8)
- Geels, F. W. (2011). The multi-level perspective on sustainability transitions: Responses to seven criticisms. *Environmental Innovation and Societal Transitions*, 1(1), 24–40.  
<https://doi.org/10.1016/j.eist.2011.02.002>
- Gosnell, H., Gill, N., & Voyer, M. (2019). Transformational adaptation on the farm: Processes of change and persistence in transitions to ‘climate-smart’ regenerative agriculture. *Global Environmental Change*, 59, 101965.
- Groenboerenplan. (n.d.). *Samen voor een Groenboerenland!* Retrieved September 28,

- 2023, from <https://www.groenboerenplan.nl/#aanbevelingen>
- Head, L., Farbotko, C., Gibson, C., Gill, N., & Waitt, G. (2013). Zones of friction, zones of traction: The connected household in climate change and sustainability policy. *Australasian Journal of Environmental Management*, 20(4), 351–362.  
<https://doi.org/10.1080/14486563.2013.835286>
- Hennink, M., Hutter, I., & Bailey, A. (2020). *Qualitative research methods*. Sage.
- Herenboeren. (2023). Over ons. *Herenboeren*. <https://herenboeren.nl/over-ons/>
- Hoenninger, J., Costamilan, L., & Ochiai, M. (2019). *Community Supported Agriculture: Towards a Flourishing Movement in Europe*.
- Holt-Giménez, E., Shattuck, A., Altieri, M., Herren, H., & Gliessman, S. (2012). We already grow enough food for 10 billion people... and still can't end hunger. *Journal of Sustainable Agriculture*, 36(6), 595–598.
- Hvitsand, C. (2016). Community supported agriculture (CSA) as a transformational act—Distinct values and multiple motivations among farmers and consumers. *Agroecology and Sustainable Food Systems*, 40(4), 333–351.  
<https://doi.org/10.1080/21683565.2015.1136720>
- IPCC. (2023). *Climate Change 2023: Synthesis Report. A Report of the Intergovernmental Panel on Climate Change. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change* (p. 81). The Intergovernmental Panel on Climate Change.
- Irvine, K. N., & Warber, S. L. (2002). Greening healthcare: Practicing as if the natural environment really mattered. *Alternative Therapies in Health and Medicine*, 8(5), 76.
- Jouzi, Z., Azadi, H., Taheri, F., Zarafshani, K., Gebrehiwot, K., Van Passel, S., & Lebailly, P. (2017). Organic Farming and Small-Scale Farmers: Main Opportunities and Challenges. *Ecological Economics*, 132, 144–154.  
<https://doi.org/10.1016/j.ecolecon.2016.10.016>
- Jukema, G., Ramaekers, P., & Berkhout, P. (2023). *De Nederlandse agrarische sector in internationaal verband: Editie 2023* (9464475463). Wageningen Economic Research.
- Kassam, A., & Kassam, L. (2021). 10—Paradigms of agriculture. In A. Kassam & L. Kassam (Eds.), *Rethinking Food and Agriculture* (pp. 181–218). Woodhead Publishing.  
<https://doi.org/10.1016/B978-0-12-816410-5.00010-4>
- Knapp, S., & van der Heijden, M. G. A. (2018). A global meta-analysis of yield stability in organic and conservation agriculture. *Nature Communications*, 9(1), Article 1.  
<https://doi.org/10.1038/s41467-018-05956-1>
- Kok, N., & Eichholtz, P. (2021, December 19). *Zonder landbouwgrond geen nieuwbouw*. <http://www.maastrichtuniversity.nl/nl/nieuws/zonder-landbouwgrond-geen-nieuwbouw>
- Kushnir, A. (2020). *Ethical Eating: Overcoming Alienation in the Industrial Food System by*

- Aligning Our Practices with Our Principles*. 64.
- Liebowitz, S. J., & Margolis, S. E. (1995). Path Dependence, Lock-in, and History. *Journal of Law, Economics, & Organization*, 11(1), 205–226.
- Loerakker, G. (2020). *A comparative study on Dutch community supported agriculture (CSA)*. 66.
- Mann, C. C. (2018). *The wizard and the prophet: Two remarkable scientists and their dueling visions to shape Tomorrow's world*. Knopf.
- Markiet, V. (2011). The future prospect of Community Supported Agriculture farm 'De Nieuwe Ronde': A profile analysis of the potential new consumer. *Van Hall Larenstein*.
- Meadows, D. (1999). Leverage points. *Places to Intervene in a System*, 19, 28.
- Medici, M., Canavari, M., & Castellini, A. (2021). Exploring the economic, social, and environmental dimensions of community-supported agriculture in Italy. *Journal of Cleaner Production*, 316, 128233. <https://doi.org/10.1016/j.jclepro.2021.128233>
- Meerburg, B. G., Korevaar, H., Haubenhof, D. K., Blom-Zandstra, M., & Keulen, H. V. (2009). The changing role of agriculture in Dutch society. *The Journal of Agricultural Science*, 147(5), 511–521. <https://doi.org/10.1017/S0021859609990049>
- Mert-Cakal, T., & Miele, M. (2022). 'Workable Utopias' for Social Change Through Inclusion and Empowerment? Community Supported Agriculture (CSA) in Wales as Social Innovation. In G. Desa & X. Jia (Eds.), *Social Innovation and Sustainability Transition* (pp. 307–326). Springer Nature Switzerland. [https://doi.org/10.1007/978-3-031-18560-1\\_21](https://doi.org/10.1007/978-3-031-18560-1_21)
- Michel-Villarreal, R., Hingley, M., Canavari, M., & Bregoli, I. (2019). Sustainability in Alternative Food Networks: A Systematic Literature Review. *Sustainability*, 11(3), Article 3. <https://doi.org/10.3390/su11030859>
- Miller, G. T., & Spoolman, S. (2018). *Living in the environment*. Cengage Learning.
- Ministerie van Binnenlandse Zaken en Koninkrijksrelaties (MBZK). (2023). *Wet op het hoger onderwijs en wetenschappelijk onderzoek [Wet]*. <https://wetten.overheid.nl/BWBR0005682/2023-09-01>
- Ministerie van Volkshuisvesting Ruimtelijke Ordening en Milieubeheer (MVRM). (n.d.). *Aanpak eenzaamheid—Eenzaamheid—Rijksoverheid.nl* [Onderwerp]. Ministerie van Algemene Zaken. Retrieved August 30, 2023, from <https://www.rijksoverheid.nl/onderwerpen/eenzaamheid/aanpak-eezaamheid>
- Morris, J., Briggs, M., & Zidenberg-Cherr, S. (2000). School-based gardens can teach kids healthier eating habits. *California Agriculture*, 54, 40–46. <https://doi.org/10.3733/ca.v054n05p40>
- Mouskos, K. (2020). *Power in the Short Food Supply Chain: An exploration of Community*

- Supported Agriculture's Producer Empowerment Capacity* [Master Thesis].  
<https://studenttheses.uu.nl/handle/20.500.12932/37053>
- Nisbet, E. K., Zelenski, J. M., & Murphy, S. A. (2009). The nature relatedness scale: Linking individuals' connection with nature to environmental concern and behavior. *Environment and Behavior*, 41(5), 715–740.
- Norberg-Hodge, H. (2021). 18 - Alternatives to the global food regime: Steps toward system transformation. In A. Kassam & L. Kassam (Eds.), *Rethinking Food and Agriculture* (pp. 399–412). Woodhead Publishing.  
<https://doi.org/10.1016/B978-0-12-816410-5.00018-9>
- O'Brien, K., & Sygna, L. (2013). Responding to climate change: The three spheres of transformation. *Proceedings of Transformation in a Changing Climate*, 16, 23.
- Ostrom, E. (2008). Tragedy of the commons. *The New Palgrave Dictionary of Economics*, 2, 1–4.
- Oudman, T. (2022, October 5). *Het kán: De stikstofcrisis oplossen en de landbouw perspectief geven*. De Correspondent.  
<https://decorrespondent.nl/13824/het-kan-de-stikstofcrisis-oplossen-en-de-landbouw-perspectief-geven/1107570309120-c61c154c>
- PBL Planbureau voor de Leefomgeving (PBL). (2022, July 4). *Prognose: In 2035 vooral meer inwoners in en om grotere gemeenten* [Text]. PBL Planbureau voor de Leefomgeving.  
<https://www.pbl.nl/nieuws/2022/prognose-in-2035-vooral-meer-inwoners-in-en-om-grotere-gemeenten>
- Pittelkow, C. M., Liang, X., Linquist, B. A., van Groenigen, K. J., Lee, J., Lundy, M. E., van Gestel, N., Six, J., Venterea, R. T., & van Kessel, C. (2015). Productivity limits and potentials of the principles of conservation agriculture. *Nature*, 517(7534), Article 7534. <https://doi.org/10.1038/nature13809>
- Rahmann, G., Reza Ardakani, M., Bärberi, P., Boehm, H., Canali, S., Chander, M., David, W., Dengel, L., Erisman, J. W., & Galvis-Martinez, A. C. (2017). Organic Agriculture 3.0 is innovation with research. *Organic Agriculture*, 7, 169–197.
- Raworth, K. (2017). *Doughnut Economics: Seven Ways to Think Like a 21st-Century Economist*. Chelsea Green Publishing.
- Redman, E., & Larson, K. (2011). *Educating for Sustainability: Competencies & Practices for Transformative Action*. <https://keep.lib.asu.edu/items/141010>
- Reganold, J. P., & Wachter, J. M. (2016). Organic agriculture in the twenty-first century. *Nature Plants*, 2(2), 1–8.
- Ritchie, H., Rodés-Guirao, L., Mathieu, E., Gerber, M., Ortiz-Ospina, E., Hasell, J., & Roser, M. (2023). Population Growth. *Our World in Data*.

- <https://ourworldindata.org/population-growth>
- Robinson, G. M. (2018). Globalization of agriculture. *Annual Review of Resource Economics*, 10, 133–160.
- Sempik, J. (2010). Green care and mental health: Gardening and farming as health and social care. *Mental Health and Social Inclusion*, 14(3), 15–22.
- Smit, M. (2018). *De duurzaamheid van de Nederlandse landbouw: 1950–2015–2040*.
- Standal, K., & Westskog, H. (2022). Understanding low-carbon food consumption transformation through social practice theory: The case of community supported agriculture in Norway. 7-23. <https://doi.org/10.48416/ijaf.v28i1.452>
- Sumner, J., Mair, H., & Nelson, E. (2010). Putting the culture back into agriculture: Civic engagement, community and the celebration of local food. *International Journal of Agricultural Sustainability*, 8(1–2), 54–61. <https://doi.org/10.3763/ijas.2009.0454>
- UNCTAD (United Nations Conference on Trade and Development). (2013). *Wake Up Before It Is Too Late: Make Agriculture Truly Sustainable Now for Food Security in a Changing Climate*. 341.
- United Nations Department of Economic and Social Affairs (UN DESA). (2019). *World Population Prospects 2019 | Population Division*.  
<https://www.un.org/development/desa/pd/news/world-population-prospects-2019-0>
- United Nations General Assembly (UNGA). (2015). *Transforming our World: The 2030 Agenda for Sustainable Development*. United Nations Population Fund.  
<https://www.unfpa.org/resources/transforming-our-world-2030-agenda-sustainable-development>
- URGENCI. (2016). *European CSA Declaration*.  
[http://urgenci.net/wp-content/uploads/2016/09/Urgenci\\_3EUM\\_CSA.pdf](http://urgenci.net/wp-content/uploads/2016/09/Urgenci_3EUM_CSA.pdf)
- Van Kampen, S. (2020). *Niet makkelijker, wel leuker—Lokale voedselgemeenschappen in Nederland*. Transitiecoalitie Voedsel.  
<chrome-extension://efaidnbmnnnibpajpcglclefindmkaj/https://www.duurzaamdoor.nl/sites/default/files/2021-01/Lokale%20voedselgemeenschappen%20in%20Nederland.pdf>
- Van Oers, L. M., Boon, W. P. C., & Moors, E. H. M. (2018). The creation of legitimacy in grassroots organisations: A study of Dutch community-supported agriculture. *Environmental Innovation and Societal Transitions*, 29, 55–67.  
<https://doi.org/10.1016/j.eist.2018.04.002>
- Van Oers, L. M., Feola, G., Runhaar, H., & Moors, E. (2023). Unlearning in sustainability transitions: Insight from two Dutch community-supported agriculture farms. *Environmental Innovation and Societal Transitions*, 46, 100693.  
<https://doi.org/10.1016/j.eist.2023.100693>

- Veldboer, L. (2022). Samenleven. In L. Veldboer, R. Engbersen, E. Hooghiemstra, J. Jansen, L. Koeter, L. Repetur, J. Rözer, & A. Sprinkhuizen (Eds.), *Lexicon nabijheid en sociaal werk* (pp. 96–100). Movisie en de Werkplaatsen Sociaal Domein.
- Verschuren, P., Doorewaard, H., & Mellion, M. (2010). *Designing a research project* (Vol. 2). Eleven International Publishing The Hague.
- Vincent, O., & Feola, G. (2020). A framework for recognizing diversity beyond capitalism in agri-food systems. *Journal of Rural Studies*, *80*, 302–313.  
<https://doi.org/10.1016/j.jrurstud.2020.10.002>
- Volz, P., Weckenbrock, P., Nicolas, C., Jocelyn, P., & Dezsény, Z. (2016). *Overview of community supported agriculture in Europe*. European CSA Research Group.
- World Bank. (2021). *Employment in agriculture (% of total employment) (modeled ILO estimate)—Netherlands | Data*.  
<https://data.worldbank.org/indicator/SL.AGR.EMPL.ZS?contextual=default&locations=NL>



# Appendix A

## Interview guides (in Dutch)

### Interviewguide farmers

**Deel 1 (SQ1):** vragen gericht op het vinden van de ecologische en socio-economische duurzaamheid van CSA's en hun vermogen om problemen aan te pakken in het Nederlandse voedselsysteem.

#### Algemene informatie deelnemer

Uw naam? Leeftijd? Met welk voornaamwoord wenst u aangesproken te worden? Land van herkomst? Opleidingsachtergrond? Waar woont u? -> *Op de boerderij?* Relatie tot of functie binnen de CSA? Sinds wanneer bent u betrokken bij CSA? Heeft u een andere baan?

#### Algemene informatie CSA

Naam van de CSA? Locatie? Startjaar? Hoeveel hectare? Wie is de **eigenaar** van het land? Plan voor **uitbreiding/aankoop** van meer land in de toekomst? Welke **producten** produceert de CSA (*fruit, groenten, dieren*)? Welke **diensten** worden er aangeboden (*zorglandbouw, boerderijwinkel, educatie, agritoerisme, kinderopvang*)? Is er sprake van eventuele **opvolging**?

#### Ecologische duurzaamheid

Organische/biologische of andere **certificering**? *Nee?* -> *gebruik externe inputs?: fossiele brandstoffen/pesticiden/kunstmest?*. **Hernieuwbare energie**? Andere **landbouwmethoden of activiteiten** die duurzaamheid/biodiversiteit bevorderen? Zijn uw landbouwmethoden in de loop der tijd **veranderd**? *Ja?* -> *Welke verschillen merkt u (lagere opbrengsten, meer biodiversiteit, hogere/lagere inkomsten, enz.)?* -> *Wat vindt u van conventionele/gangbare landbouw?*

#### Economische duurzaamheid

**Inkomsten CSA-abonnementen?** **Andere inkomstenbronnen** (*zorglandbouw, agritoerisme, educatie, kinderopvang, boerderijwinkel, marktverkoop, subsidies*)? **Grootste inkomstenbron**? Wat verdient u **persoonlijk** aan de CSA? Hoe worden de producten aan de consumenten **geleverd** (box/zelf-oogsten, afhaalpunt)? **Hoe ver weg** vindt de distributie en consumptie plaats? **Hoe vaak** krijgen consumenten producten? Wat is de **prijs** die door consumenten wordt betaald? Betalen alle consumenten **dezelfde prijs**? Hoeveel **abonnementen/oogstaandelen**? Hoeveel mensen **voedt** de CSA? Waar/hoe **adverteert** u de CSA?

#### Social duurzaamheid

Met **welke mensen en organisaties** is de CSA verbonden (*werknemers/vrijwilligers, consumenten, zorgcliënten, distributeurs, leveranciers (van bijvoorbeeld zaden), banken, (lokale) overheid, kerk, universiteit, enz.*)? Hoe zou je de **consumenten beschrijven** die betrokken zijn bij deze CSA -> *aspecten om te overwegen: inkomen, etniciteit, leeftijd, gesproken taal, idealen/waarden, enz.* Beschrijf uw **relatie** met de consumenten en tussen hen (*functioneel, financieel, informatie delen, sociaal, idealistisch, enz.*)? -> *hoe vaak hebben jullie contact?* -> *Zijn er evenementen/activiteiten zoals oogstfeesten?* Zijn er dingen die u heeft **geleerd** of die u hebben **geïnspireerd** tijdens uw tijd op de CSA? Zijn er dingen in uw leven **veranderd**? Denkt u dat u andere mensen heeft geïnspireerd? Hoe worden **beslissingen** genomen op de boerderij? -> *Zijn consumenten betrokken bij de besluitvorming?* Welke **informatie** wordt gedeeld met de consumenten (*financiën, productiemethoden, enz.*)? Hoe wordt dit gedeeld (*online, persoonlijk*)?

**Deel 2 (SQ2):** vragen gericht op het vinden van barrières en aanjagers voor (de ontwikkeling van) CSA in de drie sferen van 'The Three Spheres of Transformation'.

Uw **motivatie** om betrokken te raken bij CSA (*financieel, idealistisch/wereldbeeld/waarden, gezondheidsredenen*)? Uw **motivatie** om betrokken te **blijven**? Is uw motivatie in de loop van de tijd **veranderd**? Uw **ideaal** of **doel** voor de CSA? Is dit **veranderd** sinds de start van de CSA? Wat denkt u dat **consumenten motiveert** om betrokken te zijn bij deze CSA (*financieel, idealistisch/wereldbeeld/waarden(!), gezondheidsredenen*)?

**Problemen/belemmeringen** bij **opstarten** van de CSA? **Belemmeringen** voor **dagelijks** functioneren van de CSA? (*plagen, lage opbrengsten, misoogsten, aantrekken (genoeg/diverse) leden, verwachtingen consumenten (lage/seizoensgebonden productkeuze), verwerven van land, financiering, beperkend beleid/regelgeving/bureaucratie (voedselveiligheidsvoorschriften, beperkingen groepsevenementen tijdens Covid), Covid-19, Oekraïne oorlog, beperkende certificeringsschema's, idealisme versus pragmatisme*).

**Ondersteunende/faciliterende** aspecten bij **opstarten** CSA? **Faciliterende** factoren voor **dagelijks** functioneren van CSA? (*faciliterende beleids-/regelgeving, financiële/organisationele structuur van CSA, richtlijnen certificeringsschema's, hulp bij verwerven land, gemeenschapszin en creëren bewustzijn, solidariteit, vertrouwen, duurzame waarden en wereldbeelden, idealisme*).

Heeft u **veranderingen** opgemerkt in deze **barrières** en **bevorderaars** sinds u met de CSA **begon**? (*hogere/lagere prijzen, veranderde belastingen/subsidies, meer vegetarische mensen, meer politieke/maatschappelijke druk voor duurzame transitie, veranderende wereldbeelden, start van CSA Netwerk, stikstofcrisis*)?

Wat denkt u dat de **belemmeringen/barrières** zijn voor CSA om **wijdverspreid** te raken in Nederland? Vindt u dat CSA het **gangbare** type boerderij zou moeten worden in Nederland? Wat **houdt** producenten, consumenten en andere groepen **tegen** om betrokken te raken bij CSA? (*aantrekken verschillende/diverse groepen in samenleving, lage opbrengsten (kan iedereen gevoed worden?), hoge prijzen, verplichtingen consumenten (reizen afhaalpunten, jaarlijkse toezegging, eten met seizoenen, risico misoogst delen, verlangen naar gemak), opvatting dat CSA duur of elitair is, tegenovergestelde (onduurzame) wereldbeelden, schaars land, beleid/regelgeving/bureaucratie (subsidies conventionele landbouw, externe effecten niet belast), idealisme versus pragmatisme, vasthouden aan oude systeem en cultuur*).

Welke dingen/factoren zouden kunnen helpen om deze **barrières** voor wijdverbreide CSA in Nederland te overwinnen? Wat zou producenten, consumenten en andere groepen kunnen **aanmoedigen** om bij CSA betrokken te raken? (*faciliterende beleids-/regelgeving (externaliteiten belasten), marketing, gemeenschapszin en creëren bewustzijn, onderwijs, duurzame waarden en wereldbeelden, idealisme, actuele kwesties in huidige voedselsysteem -> toenemende vraag naar verandering/alternatieven, crises (zoals Covid-19 en de Oekraïne-oorlog), kennis-/vaardigheden delen tussen CSA's, (inter)nationale CSA-organisatie (CSA Netwerk), empowerment van producenten/consumenten/gemeenschappen, enz.*)

### **Afsluitende vragen**

Is er iets waar we het niet over gehad hebben dat u graag zou willen vermelden of bespreken? Wat vond u van het interview? Heeft u nog vragen?

Als u later nog vragen of opmerkingen heeft, kunt u mij mailen op: [hermengroenendijk@gmail.com](mailto:hermengroenendijk@gmail.com)  
Ik wil u nogmaals bedanken voor uw medewerking aan dit onderzoek!

## Interviewguide members

### Algemene informatie deelnemer

Uw naam? Leeftijd? Met welk voornaamwoord wenst u aangesproken te worden? Land van herkomst? Beroep? Opleidingsachtergrond? Waar woont u? Relatie tot of functie binnen de CSA? Sinds wanneer bent u betrokken bij de CSA? Hoe heeft u van de CSA gehoord?

### Ecologische duurzaamheid

Wat vindt u van **conventionele/gangbare landbouw** in Nederland? Hoe **verschilt** CSA daarvan? Heeft u **ontwikkelingen/veranderingen** op de CSA opgemerkt in de tijd dat u betrokken was?

### Economische duurzaamheid

Hoe **ontvangt** u de **producten** van de boerderij (*box/zelfoogst, afhaalpunt*)? **Hoe vaak** krijgt u de producten? Welke **prijs** betaalt u? Ontvangt u nog **andere producten of diensten** van de CSA? **Welk deel** van uw **boodschappen** is afkomstig van deze CSA?

### Sociale duurzaamheid

Omschrijf uw **relatie** met de **boer** (*functioneel, financieel, delen van informatie, sociaal, idealistisch, etc.*)?

**Relatie** met de **andere** betrokkenen (*consumenten, werknemers, vrijwilligers*)? **Hoe vaak** heeft u **interactie** met de boer en met de andere mensen? Wanneer (*tijdens ophalen pakketten, oogstfeesten, etc.*)? Hoe zou u de mensen die betrokken zijn bij deze CSA **omschrijven**? -> *Overwegingen: inkomen, etniciteit, leeftijd, gesproken taal, idealen/waarden, etc.* Bent u betrokken bij **besluitvorming** op de boerderij? Zijn er dingen die u hebt **geleerd** tijdens uw tijd op de CSA (*natuur, landbouwproductie*)? Dingen die u hebben **geïnspireerd**? Zijn er dingen in uw leven **veranderd**? Heeft u dingen **geleerd** van **andere** betrokken mensen (*duurzaamheidstips, recepten, minimalisme, etc.*)? Denkt u dat u andere mensen heeft **geïnspireerd**?

Uw **motivatie** om betrokken te raken bij deze CSA (*financieel, idealistisch/wereldbeeld/waarden, gezondheidsredenen*)? **Motivatie** om betrokken te blijven? Is uw **motivatie** in de loop van de tijd **veranderd**?

Was er iets dat u aanvankelijk **weerhield**? Moest u iets **veranderen/reorganiseren** in uw leven om betrokken te raken (*dieet, reisplannen, enz.*)? Zijn er nu **factoren/aspecten** van de CSA die u **moeilijk** vindt? (*vergen van flexibiliteit, tijd etc., beperkte productdiversiteit, financieel*). Wat denkt u dat de **motivaties** van de andere consumenten zijn? Heeft u van andere consumenten gehoord over dingen waarmee ze worstelen of die ze moeilijk vinden?

Wat denkt u dat de **belemmeringen/barrières** zijn voor CSA om wijdverspreid te raken in Nederland? Vindt u dat CSA het **gangbare** type boerderij zou moeten worden in Nederland? Wat **houdt** producenten, consumenten en andere groepen **tegen** om betrokken te raken bij CSA? (*aantrekken verschillende/diverse groepen in samenleving, lage opbrengsten (kan iedereen gevoed worden?), hoge prijzen, verplichtingen consumenten (reizen afhaalpunten, jaarlijkse toezegging, eten met seizoenen, risico misoogst delen, verlangen naar gemak), opvatting dat CSA duur/elitair is, tegenovergestelde (onduurzame) wereldbeelden, schaars land, beleid/regelgeving/bureaucratie (subsidies voor conventionele landbouw, externe effecten niet belast), idealisme versus pragmatisme, vasthouden aan oude systeem en cultuur*).

Welke dingen/factoren zouden kunnen helpen om deze **barrières** voor **wijdverbreide** CSA in Nederland te overwinnen? Wat zou producenten, consumenten en andere groepen kunnen **aanmoedigen** om bij CSA betrokken te raken? (*faciliterende beleids-/regelgeving (externaliteiten belasten), marketing, gemeenschapszin en creëren bewustzijn, onderwijs, duurzame waarden en wereldbeelden, idealisme, actuele kwesties in het huidige voedselsysteem -> toenemende vraag naar verandering/alternatieven, crises (zoals Covid-19 en de Oekraïne-oorlog), kennis- en vaardigheden delen tussen CSA's, (inter)nationale CSA-organisatie (CSA Netwerk), empowerment van producenten/consumenten/gemeenschappen, enz.*)

### Afsluitende vragen

Is er iets waar we het niet over gehad hebben dat u graag zou willen vermelden of bespreken? Wat vond u van het interview? Heeft u nog vragen?

Als u later nog vragen of opmerkingen heeft, kunt u mij mailen op: [hermengroenendijk@gmail.com](mailto:hermengroenendijk@gmail.com)  
Ik wil u nogmaals bedanken voor uw medewerking aan dit onderzoek!

## Interviewgide experts

**Deel 1 (SQ1):** vragen gericht op het vinden van de ecologische en socio-economische duurzaamheid van CSA's en hun vermogen om problemen aan te pakken in het Nederlandse voedselsysteem.

### Algemene informatie deelnemer

Uw naam? Opleidingsachtergrond? Beroep/functie? Expertise op het gebied van CSA? Eerste aanraking met CSA?

### Overzicht sector

Hoe **wijdverspreid** is CSA in Nederland? Zijn er **recente ontwikkelingen** in de sector? Hoe **groot** (in hectares) zijn de CSA's over het algemeen? Hoeveel **consumenten/abonnees** hebben CSA's gemiddeld? Hoeveel mensen worden gemiddeld **gevoed**? Zijn de CSA's vaak **eigenaar** van het **land** of huren ze het land? Welk **type producten** kweken de CSA's over het algemeen? Nemen ze vaak deel aan **andere activiteiten**/bieden ze andere diensten aan (*zorgboerderij, boerderijwinkel, onderwijs, agritoerisme, kinderopvang*)?

### Ecologische duurzaamheid

Hoe ecologisch duurzaam is de sector? Biologische/dynamische of andere **certificering**? Gebruik van **hernieuwbare energie**? Externe **inputs** (kunstmest, pesticiden etc.)? **Andere landbouwmethoden of activiteiten** die duurzaamheid/biodiversiteit bevorderen?

### Economische duurzaamheid

Hoe economisch duurzaam is CSA voor boeren/producenten? Hebben ze vaak **andere banen**? Zijn de CSA-abonnementen vaak het **belangrijkste inkomen**, of komt dit van andere activiteiten? (*zorgboerderij, agritoerisme, onderwijs, kinderopvang, boerderijwinkel, marktverkoop, subsidies*)? Zijn CSA-producten **financieel aantrekkelijk** voor alle consumentengroepen in de samenleving? Vergelijkbaar met supermarktprijzen? Zijn er CSA's die **prijzen differentiëren** voor bepaalde groepen in de samenleving? Wat is de meest voorkomende manier van **distributie** in de sector (box/zelfoogst, afhaalpunt)? Wat is de **straal** waarin producten worden gedistribueerd en **geconsumeerd**? Plannen CSA-boeren vaak een **uitbreiding**/het kopen van meer land in de toekomst?

### Sociale duurzaamheid

Met **welke mensen** en organisaties zijn CSA's over het algemeen verbonden (*werknemers/vrijwilligers, consumenten, zorgcliënten, distributeurs, leveranciers (van bijvoorbeeld zaden), banken, (lokale) overheid, kerk, universiteit, enz.*)? Hoe zou u de producenten en consumenten die betrokken zijn bij CSA **beschrijven**? -> *Aspecten om rekening mee te houden: inkomen, etniciteit, leeftijd, gesproken taal, idealen/waarden, enz.* Beschrijf de **relaties** tussen boeren en consumenten (*functioneel, financieel, informatie delen, sociaal, idealistisch, enz.*)? -> *hoe vaak is er contact?* -> *Zijn er evenementen/activiteiten zoals oogstfeesten?* Welke **sociale impact/voordelen** heeft CSA voor de betrokkenen, denkt u (*empowerment, sociale samenhang, gemeenschapsopbouw, bewustwording, sociaal leren, ondersteuning van duurzame beleidsmaatregelen, enz.*)? Hoe **democratisch** zijn de CSA's? -> *Zijn consumenten betrokken bij besluitvorming?* Hoe **transparant** zijn de CSA's in het delen van informatie (*over productie, financiën, enz.*)?

**Deel 2 (SQ2):** vragen gericht op het vinden van barrières en aanjagers voor (de ontwikkeling van) CSA in de drie sferen van 'The Three Spheres of Transformation'.

Wat denkt u dat mensen motiveerde/motiveert om betrokken te zijn bij CSA (*financiële, idealistische/wereldbeeld/waarden(!), gezondheidsredenen*)? Heeft u veranderingen hierin gezien in de loop der tijd?

In hoeverre denkt u dat CSA in Nederland in staat is om **problemen** in het Nederlandse voedselsysteem en de bredere samenleving **aan te pakken** (*stikstofcrisis, zoonose-uitbraken (zoals vogelgriep), beperkte ruimte, woningcrisis, broeikasgasemissies, ongezonde diëten, enz.*)? Hoe **toekomstbestendig** denkt u dat CSA is? Is CSA **veerkrachtig** (resilient) denkt u (*klimaatverandering, vereiste maatschappelijke/culturele verandering, enz.*)? CSA Netwerk heeft het doel dat in 2030 **25%** van de voedselproductie door CSA's wordt verzorgd. Is dit **haalbaar**, denkt u?

Wat denkt u dat de **belemmeringen** zijn voor het **starten** van een CSA? Heeft u gehoord over eventuele **belemmeringen** waarmee **bestaande CSA's** te maken hebben? (*plagen, minder oogst, misoogsten, voldoende (diverse) leden aantrekken, consumentenverwachtingen (beperkte / seizoensgebonden productkeuze), land verwerven, financiering krijgen, beperkende beleidsregels of regelgeving/bureaucratie (voorschriften voedselveiligheid, beperkingen bij groepsevenementen tijdens covid), Covid-19, Oekraïne-oorlog, beperkende certificeringsschema's, idealisme versus pragmatisme*).

Zijn er ook aspecten die het **starten** van CSA's **ondersteunen/faciliteren**? Voor **bestaande CSA's**? (*faciliterend beleid/regelgeving, financiële structuur van CSA, organisatiestructuur CSA, richtlijnen van certificeringsschema's, hulp bij landverwerving, gemeenschapszin en creëren bewustzijn, solidariteit, vertrouwen, duurzame waarden en wereldbeelden, idealisme*).

Heeft u **veranderingen** opgemerkt in deze **belemmeringen en bevorderaars** voor de CSA-sector in de loop van de tijd? (*hogere/lagere prijzen, gewijzigde belastingen/subsidies, meer vegetarische mensen, meer politieke/maatschappelijke druk voor duurzame transitie, veranderende wereldbeelden, start van CSA Netwerk, stikstofcrisis*)?

Wat denkt u dat de **belemmeringen/barrières** zijn voor CSA om **wijdverspreid** te raken in **Nederland**? Vindt u dat CSA het **gangbare type** boerderij zou moeten worden in Nederland? Wat **houdt producenten, consumenten en andere groepen tegen** om betrokken te raken bij CSA? (*Het aantrekken van verschillende/diverse groepen in de samenleving, lage opbrengsten (kan iedereen gevoed worden?), hoge prijzen, verplichtingen voor consumenten (reizen naar afhaalpunten, jaarlijkse toezegging, eten met seizoenen, risico delen bij misoogsten, verlangen naar gemak), de opvatting dat CSA duur of elitair is, tegenovergestelde (onduurzame) wereldbeelden, schaars land, beleidsregels en regelgeving/bureaucratie (subsidies voor conventionele landbouw, externe effecten niet belast), idealisme versus pragmatisme, vasthouden aan oude systeem en cultuur*).

Welke dingen/factoren zouden kunnen helpen om deze **barrières voor wijdverbreide CSA** in Nederland te **overwinnen**? Wat zou producenten, consumenten en andere groepen kunnen **aanmoedigen** om bij CSA betrokken te raken? (*faciliterende beleids- en regelgeving (externaliteiten belasten), marketing, gemeenschapszin en creëren bewustzijn, onderwijs, duurzame waarden en wereldbeelden, idealisme, actuele kwesties in het huidige voedselsysteem -> toenemende vraag naar verandering/alternatieven, crises (zoals Covid-19 en de Oekraïne-oorlog), kennis- en vaardigheden delen tussen CSA's, (inter)nationale CSA-organisatie (CSA Netwerk), empowerment van producenten/consumenten/gemeenschappen, enz.*)

### Afsluitende vragen

Is er iets waar we het niet over gehad hebben dat je graag zou willen vermelden of bespreken? Wat vond je van het interview? Heb je nog vragen?

Als je later nog vragen of opmerkingen hebt, kun je mij mailen op: [hermengroenendijk@gmail.com](mailto:hermengroenendijk@gmail.com)  
Ik wil je nogmaals bedanken voor je medewerking aan dit onderzoek!



# Appendix B

## Nvivo codebook

Themes Sub-themes Codes Child-codes	Description	Files	References
Sub-question 1	All information that aids in answering sub-question 1.	0	0
Change & development	Past, recent or future changes and development at a specific CSA or for CSA in general.	0	0
Changes at CSA	Perceived and/or observed recent developments/changes at a specific CSA since the involvement of the participant.	10	15
Development sector	Perceived and/or observed recent developments/changes for Dutch CSA as a sector.	4	7
Plans & goals	Plans or goals of farmers for their CSAs, such as buying/renting more land for expansion.	8	19
Conventional vs CSA	Opinions and views on conventional agriculture and the perceived difference between CSA and conventional agriculture in the Netherlands.	14	23
Ecological sustainability	Practices and activities at the CSA(s) that contribute to ecological sustainability or biodiversity.	13	70
Financial	Any financial information about a specific CSA or CSA in general, concerning income, prices, farmer salary etc.	11	48
Organizational	Any information that concerns decision-making or the legal or organizational structure of a CSA or CSAs in general.	0	0
Decision-making	How decision-making on a specific CSA or CSA in general is done, and if and how stakeholders are included in this process.	18	31
Legal structure	Information on who owns the land, what the legal function of the farmer(s) at the CSA is, and who owns the CSA and in what legal form.	10	33
Practical CSA information	Practical information that helps to give a general overview or description of a specific CSA or CSA in general.	0	0
Amount of CSAs	The amount of CSAs in The Netherlands.	2	2
CSA definition	Perceptions and/or remarks on what CSA entails in theory or in practice in the Dutch context.	4	10
CSA sizes	The size in hectares of a specific CSA or CSA in general in The Netherlands.	2	2
Distribution	How produce is distributed to members and in what radius in kilometers.	17	38
First acquaintance CSA	The first time a participant heard about a specific CSA or CSA in general, and through which source or channel this happened.	10	10
Marketing	The efforts that are done to promote (a) CSA.	8	11
Number of people	The amount of involved people at a CSA or in general in the sector.	5	6

Product quantity	The amount of produce the members are getting from a CSA and how this relates to the groceries they have to get somewhere else.	11	15
Services & other activities	Activities and services besides agricultural production and distribution that the CSA(s) or their farmer(s) are involved in.	15	62
Social	Any information about social processes and practices on (a) CSAs and the people that are involved in them.	0	0
Involved stakeholders	Information that aids in getting an overview of the social network of (a) CSAs.	9	32
Learning & inspiration	Processes of learning and inspiration amongst involved stakeholders and their interaction with the natural environment at the CSA(s).	13	57
Motivation for involvement	The motivation of stakeholders to get involved with (a) CSA in the beginning and to stay involved now.	18	84
Relations & interaction	The nature of relationships and interactions between people involved in (a) CSA.	0	0
General	General remarks about the interactions and relations between all the people involved in (a) CSA.	16	43
Member(s)-farmer(s)	The perception of relations and interactions between member(s) and farmer(s) at (a) CSA(s).	11	17
Member(s)-member(s)	The perception of relations and interaction between member(s) amongst each other on (a) CSA(s).	10	14
Transparency	The level of transparency in information-sharing with members at (a) CSA(s).	7	7
Social impact	The impact of the practices and interactions of (a) CSA(s) on the lives of people on and outside of CSA.	16	26
Solidarity	Information about (a) CSA(s) on the (attempt to implement) solidarity payment schemes to make CSA inclusive and available for wider groups in society.	9	16
Stakeholder description	How people involved in CSA are described in terms of demographics like income, level of education, ethnicity, age etc.	18	50
Sub-question 2	All information that aids in answering sub-question 1.	0	0
Barriers general	Barriers for the CSA sector in the Netherlands as a whole.	18	101
Barriers specific	Barriers that were mentioned for a specific CSA.	14	94
CSA as conventional	Beliefs and perceptions of participants if CSA should become the conventional way of food provisioning in the Netherlands and if this would be possible.	17	36
Enablers general	Enablers for CSA as a sector in the Netherlands as a whole.	17	104
Enablers specific	Enablers that were mentioned for a specific CSA.	14	82

# Appendix C

## Consent form (in Dutch)

### INFORMED CONSENT FORM



Universiteit Utrecht

Deze studie onderzoekt hoe community supported agriculture (CSA) in Nederland oplossingen kan bieden voor problemen in het conventionele voedselsysteem en welke barrières en facilitatoren/aanjagers er zijn voor verdere ontwikkeling van Nederlandse CSA. De studie wordt uitgevoerd door Hermen Groenendijk, een student Sustainable Development (Msc) aan Utrecht University. De studie wordt begeleid door Natalie Davis. Deelname aan dit interview is vrijwillig en u kunt op elk moment stoppen zonder opgave van redenen en zonder consequenties. Reageer alstublieft eerlijk op de vragen en voel u vrij om te zeggen of schrijven wat u maar wilt. Het interview wordt opgenomen voor transcriptie doeleinden. Audio-opnames worden verwijderd wanneer het verzamelen van data is afgerond en alle interviews zijn getranscribeerd. Gegevens worden vertrouwelijk verwerkt in overeenstemming met de wetgeving inzake gegevensbescherming (de Algemene Verordening Gegevensbescherming).

#### In te vullen door geïnterviewde:

Ik bevestig dat:

- ik goed geïnformeerd ben over dit onderzoek;
- ik op dit moment geen verdere vragen heb over het onderzoek;
- ik zorgvuldig na heb gedacht over deelname aan dit onderzoek;
- ik eerlijk zal antwoorden op de gestelde vragen.

Ik ben het ermee eens dat:

- de verzamelde data gebruikt zal worden voor wetenschappelijke doeleinden;
- de verzamelde data gedeeld kan worden en hergebruikt kan worden door wetenschappers om andere onderzoeksvragen te beantwoorden.

Ik begrijp dat:

- ik het recht heb om het eindrapport van dit onderzoek in te zien.

Naam van geïnterviewde: .....

Handtekening:

Datum, plaats: .../.../....., .....

#### In te vullen door onderzoeker:

Ik verklaar dat ik bovengenoemde deelnemer heb uitgelegd wat deelname inhoudt en wat de redenen voor gegevensverzameling zijn.

Ik waarborg de privacy van de gegevens.

Naam: Hermen Groenendijk

Datum: .../.../.....

Handtekening: