

# FINAL REPORT

## Community food gardens in The Netherlands: present and future challenges



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## Executive summary

The popularity of community food gardens in neighbourhood is continuously increasing. This report focusses on community food gardens that have existed for more than three years, to find out current conditions and what support they could use. With this information, we give recommendations to the Science Shop if further research is needed into the needs of the food community gardens and possible ways of support. In this report we aim to give answer to the question: *“What are the needs of maturing community food gardens to reach their own goals?”*. Therefore we combined qualitative research with quantitative research.

In five different gardens, we interviewed mostly initiators and board members and participated in gardening. With these approach, more insight was gained in different varieties and their specific conditions and needs of community food gardens. Furthermore, we sent out a questionnaire to 80 community food gardens that fitted in our definition, as well as to the gardens we visited. In total we got 36 responses. With the questionnaire, we got a broader and more general overview about the main goals and need for support of community food gardens.

The questionnaire complemented the interviews and observation. First, we analyzed the current conditions of community food gardens that have existed for longer than three years. In the questionnaire, most gardens respondents filled in that they have between 11 and 30 members who work at least every month in the garden. In the majority of the gardens, less than five people are working on organizational tasks. In the gardens we visited, most had a board with five to eight members and clear task divisions.

The biggest differences between the gardens is how they fund themselves: some ask for contribution by the members, others do not because it does not fit their vision and worldview. These gardens found other ways to arrange their finances, such as selling some of their vegetables (intern or extern) or they got subsidies and funding of foundations. Most of the gardens, both in the questionnaire and in the qualitative research, found the garden as a social meeting place important, just as food producing and knowledge sharing. It is interesting to see, how this fits with the values of the gardens we visited. Values such as commitment and reciprocity could be seen as important in the different gardens. This can be found in the way they organize the garden and what rules they have. Some of the gardens have strict rules that if you want to be a member, you need to do something for the garden. Other gardens are more open to all interested people but still expect them to work if you want to harvest.

In the questionnaire was asked, if people wanted to get help for the things that were hindering factors to reach their goals. Almost 60% of the respondents said they could use help, but they had mostly specific questions about technical gardening knowledge and funding. Some gardens in the questionnaire mentioned they could use more active participants. During our visits, many board members also stretched out the importance of active participants. Some of them shared some of their concerns about how it in the future might become, because the community food gardens rely on motivated and active people. From these conclusions, we create some recommendations.

We do not recommend to do further research into the needs and support of the community gardens because we find out that most gardens are willing to get some support, but not for big issues. Most of the gardens are happy the way it goes, but are sometimes concerned about the organization in the future and the funding. Based on the analysis and drawn conclusions, we find out that gardens are willing to share knowledge with other gardens. Therefore we think that future research could be done to find out how the gardens can transfer knowledge and build up a network they can use when needed. However, because many issues they mentioned are more practical, we also recommend to do research on hand on solutions. For example, a help desk where they can ask for their specific questions or help them to learn about how to motivate members.

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## 1. Introduction

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Like dandelion seeds that spread with the wind, community food gardens have popped up all over the Netherlands. In the past decades local residents have taken the initiative to set up their own local food gardens as a source for food and social bonding.

This dual purpose became very clear when we visited the Ghandituin in Rotterdam Noord. When we showed up in their garden unannounced, the gardeners immediately invited us for coffee and tea. While we were talking about the garden, one of the people explained to us: 'This is not only a garden, but it is also a meeting place. A place to discuss politics, religion, economics and whatever else. We are very leftist and we also take up legal and sometimes illegal actions to change society'. While he was showing us the garden, he explained that they wanted to be a garden of peace, being an inspiration to others. We were surprised to see that, besides the production of food, so many other activities were going on in the garden.

Producing local food has gained renewed attention during the last decade, also from environment organizations. Two of the latter, NatuurSUPER and IVN (Instituut voor Natuureducatie en duurzaamheid, 'Institute for Nature education and sustainability') were particularly interested in community food gardens as one manifestation of local food production. Together, they contacted the Science Shop of the Wageningen University with the request to start a research project about community food gardens. Both organizations have been involved in assisting several community food gardens in their start-up phase. Many gardens still exist after some years. However, the organizations had some indications that the gardens were in need of support. Therefore, NatuurSUPER and IVN are wondering whether there is a role for them in the current situation of the gardens.

The Science Shop, which aims to support nonprofit organizations by implementing research projects with a potential societal impact", assessed the request for research (WUR Science Shop, 2016). The Science Shop had some doubts whether the gardens really wanted support, since they could have approached NatuurSUPER and IVN themselves. Therefore, the Science Shop first wanted to explore whether further research on the needs and possible support for community food gardens is relevant and necessary. The Science Shop delegated their question to two scientists, Jeroen Klomp and Marcel Vijn.

This is where our project came in. Jeroen Klomp and Marcel Vijn commissioned the project '*Collective food production in the neighbourhood entering the next phase: much more than a trend!*' to our ACT group. In our research, we focused on identifying what community food gardens need to reach their goals. We did not assume that the gardens needed support, and instead left this open for investigation. Our central research question was:

*"What do maturing community food gardens need to reach their own goals?"*

In order to find an answer to this question, we first needed to identify what a maturing community food garden entails: how is such a garden typically organized, how many people are involved, and how do they manage to finance the project? We formulated a first subquestion that aims at giving an overview of the current conditions of community food gardens:

1. *How can the present conditions of maturing community food gardens be described?*

The next subquestion focused on clarifying how the participants of community food gardens are envisioning the garden's future:

2. *What are the maturing community food gardens' goals and visions?*

Finally, we wanted to identify what community food gardens need to reach these future goals, and whether they would want support to fulfil these needs. This is what the third and final subquestion is about:

3. *What are potential areas of support for the community food gardens to reach these goals and visions?*

We have used a combination of quantitative and qualitative research to answer these three subquestions. Together, this information contributed to our answer to the central research question. We have thus devised a general overview of the community food gardens in terms of physical structure, social relations and their networks, we found out how they envision the future, and whether they want to get support with achieving

this vision. These findings were then used for the formulation of several recommendations, both in terms of the type of support that gardens could use, and in terms of the potential for future research of the Science Shop.

The report is structured as follows. After this introduction, a literature review outlines the academic context in which this research project can be placed. It then uses international case studies to illustrate what kinds of goals and challenges can be found in community food gardens around the world. After that, we describe our methodology, explaining how we approached the quantitative and qualitative parts of our research and why it is valuable to combine them. This is followed by three chapters that use the collected data to answer each of the three subquestions. Subsequently, in the conclusion we return to the central research question in order to review our findings. Finally, based on this conclusion, we formulate recommendations. Since Science Shop questioned if further research was necessary, we are considering possibilities for further research and further actions.

## 2. Literature review

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In this section we will embed our project into the broader context of academic debates surrounding the phenomenon of urban agriculture. By doing this, we also offer a scientific reasoning for the way we conceptualized the commissioners' request.

In the following, we will first present an overview of scientific approaches to and insights about urban agriculture in general and community gardens in particular, pointing at the variety of theoretical conceptualizations and foci that are being used. Secondly, we will present an overview of international cases of community gardens, in order to integrate the situation to be found in the Netherlands in a global picture.

### 2.1. Urban agriculture - A theoretical background

Although there is a tendency to see present urban agriculture as a current trend, the attention of scientists towards urban agriculture had already been reanimated about two decades ago (Pudup, 2008; Teig et al., 2009).

Howe and Wheeler (1999), for example, talk about "the resurgence of urban food growth in developed nations" already in the year 1999. They aim at explaining this renewed attention by giving an historical overview of what they call *urban food growing*, using the example of Great Britain (ibid.:13). They describe the increasing disconnection of people from food production during the industrial revolution in the late 19th century, when people had to adjust to urbanization and "the lack of green space" (ibid.) While there was a tendency of reversing this disconnection during the two world wars, "[t]he period following 1945 witnessed a sharp decline in urban food production [...] The combined effect of the new welfare state, effectively full employment and increasing prosperity meant that people no longer needed to grow their own food" (ibid.:14).

During the following decades the popularity of urban food production continued to be subject to variation. In the 1970s there was a first upsurge of urban food growing, prompted by newly emerged environmental concerns. In this period of time, Howe and Wheeler argue, new forms of urban food growing evolved, amongst others community gardens. Another upsurge in the late 1980s and early 1990s was fuelled by the idea of sustainability, "provid[ing] a powerful rationale for the diverse activities of the growers of urban food" (ibid.:14).

Now, 17 years later, the interest of academics in what Howe and Wheeler referred to as urban food growing has not declined. What seems to have been increasing since then is the diversity of its manifestations, challenging the academic world to come up with an appropriate concept. Guitard et al. (2012) use a broad definition of community gardens by referring to "open spaces which are managed and operated by members of the local community in which food or flowers are cultivated" (p.364; Holland, 2004;



Pudup, 2008; Kingsley et al., 2009). Accordingly, “this broad definition [...] is clear, reflects other studies and captures the variety of community gardens in the literature” (Guitard et al., 2012: 364).

Esther Veen (2015), on the other hand, further carves out the nexus of community gardens and urban agriculture. According to her, urban agriculture is to be understood as “food production in urban areas” and refers to “a multitude of initiatives that differ with respect to scale, location, activities and goals” (Ibid.:18)<sup>1</sup>. Community gardens can then be seen as one possible expression of urban agriculture, defined as “a plot of land in an urban area, cultivated either communally or individually by a group of people from the direct neighbourhood or the wider city, or in which urbanites are involved in other ways than gardening, and to which there is a collective element”, like shared responsibility or collective ownership (Ibid.: 17). What becomes clear is that most authors assume that community gardens are linked to food (production).

But what caused this renewed upsurge of food (production) as a prominent topic? In an article by De Vré (2012) it is explained that the recent wave of popularity, which has come up in the 2010s, is inspired by people’s wish to reconnect with food production. Producing one’s own food allows people to regain control over what they eat. Against this backdrop, academic literature elaborates on two main reasons, which are considered to be closely intertwined: food security and the multifunctionality of food.

Morgan (2015) summarizes it very accurately: First, the concept of food security “was originally framed in productivist terms, as a supply-side problem, whereas today the accent is on access to food rather than the supply of food. Second, food security was initially conceived as a rural problem, whereas the urban dimension of food security commands most political attention today because of the confluence of rapid urbanisation[...]” (p. 1380). Thereby, Morgan highlights, the agri-food system is seen as having a “multifunctional character” that “is beginning to be viewed and valued anew because of its role in burgeoning public health costs, dwindling natural resources and escalating national security threats “ (ibid).

These elaborations on the multifunctionality of food reflect other academic voices, stating that food is far more than just a mean of nourishment and that community gardens arise for more reasons than just a demand for food. According to Howe and Wheeler (1999) “[u]rban food growing provides a powerful vehicle for helping to move towards more sustainable patterns of urban living. In this respect its outstanding quality [...] is its ability to simultaneously tackle a range of linked issues – environmental, social, and economic issues” (p.15). Hence, the authors state, “urban agriculture can reaffirm community identity, enable training, contribute to local economies, improve people’s health and diet, act as a source of leisure and contribute to biodiversity “ (ibid.:24).

Against this backdrop Teig et al.(2009) also point out that “[c]oncrete mechanisms supporting the development of collective efficacy within community gardens includ[e] volunteer, leadership, neighborhood engagement, and recruitment activities. Volunteer activities aim to improve the garden support, social connections and strengthen social norms. Leadership activity is vital to the functioning and health of many collective processes in the garden” (p.1121).

Interesting to mention furthermore is that there used to be a perceived clear-cut difference regarding the meaning of urban agriculture throughout the world: While in the Global North it was thought to be an expression of “recreational or aesthetic preference”, it was considered “a matter of economic necessity” in the Global South (Lewcock, 1996: 267). However, the lines of this clear-cut separation seem to be blurring, since “[c]ities in the Global North are increasingly confronting the problem of urban food security, a problem normally associated with their poorer counterparts in the Global South”(Morgan, 2015: 1379).

A last import aspect of urban agriculture, hotly discussed in the scientific arena, is the prioritization of the local per se. Kenis and Mathijs (2014), for example, argue that many social movements have localisation as the “nodal point” of their discourse, “around which other narratives are woven” (Kenis and Mathijs, 2014: 181). These movements risk “to fall into the local trap” (ibid.: 177), “referring to the tendency

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<sup>1</sup> As the Netherlands are member of the OECD, we stick to the its definition of the term urban as “artificial land with built-up area cover or urban use ” (OECD, 2013:5). The population size varies strongly throughout different geographical areas, starting below 200,000 and reaching more than 1.5 million inhabitants (OECD, 2013). In this research we focus on medium-sized urban areas, whereby a lot of gardens are situated at the urban-rural periphery of these areas.

[...] to assume that the local is a priori desirable over larger scales" (ibid.: 175), like the global. Presenting the local as a "as a panacea to virtually all societal ills" (Albo, 2007: 338), it is considered to positively influence "social justice, transparency, sustainability, democracy or (food) security" (Kenis and Mathijs, 2014: 180). This conceptualization of the local goes hand in hand with a particular conceptualization of "associated terms such as 'community' and 'rurality", as they "are socially constructed in such a way as to become strongly depoliticised. Power, conflict and exclusion are clearly absent from the way (...) [they are] depicted" (ibid.: 181). This phenomenon is called the post-political trap.

Community food gardens appear to fit into this debate quite well. They are often framed as a local phenomenon. Local production is conceptualized as the opposite of a globalized food production system, where fruits and vegetables travel many kilometres before they reach the consumer. Hendrickson and Heffernan (2002) see local food system movements as a way to reject a system in which "distant others can structure the shape and use of the locale" (p.349).

Gombay (2005) warns not to understand places or scales as discrete things, but "as events or processes that are embedded within one another and are in constant relationship, movement, and interaction" (p.430). This also applies to community food gardens, because they are simultaneously embedded in a larger 'trend' of local food production, while each initiative is also impacting upon this trend. Community food gardens have not arisen in isolation; they are connected in various ways and are therefore more than simply 'local'. In this sense it is important, Morgan (2015) argues, not to reduce movement which have started around the subject of food only to food and to acknowledge their political elements.

To recap, talking about urban agriculture and particularly about community gardens touches upon a broad scope of academic conceptualizations and perspectives and includes a great variety of actual manifestations. From a historical perspective the popularity of urban agriculture has always been liable to the broader developments of society. The recent upsurge should therefore be considered against the background of urbanization and globalization, simultaneously leading to both food security issues and socio-environmental concerns. In this sense the importance of urban agriculture is not only influenced by societal development, but also influences the latter. This is reflected in the conceptualization of food as being multifunctional and having a positive impact on all spheres of society. Eventually, debates about mechanisms which support this positive impact, such as leadership and volunteer recruitment, are as relevant as more critical debates which point at the idealisation of the local.

### **2.1.1. Embedding the Dutch context into the global**

As we pointed out in the previous section urban agriculture and community gardens are subject of a newly arisen interest of the academic arena - both in the Global South and in the Global North. However, as Guitard et al. (2012) put it: "Current research is disproportionately focused on gardens in low-income areas, upon gardeners with different cultural backgrounds, and in industrial cities in the USA, potentially biasing our understanding of the characteristics of the gardens, and their motivations, benefits and limitations" (p.370)<sup>2</sup>.

In our project we focused on another geographical area, the Netherlands. Here, there can be observed an emerging discussion about community gardens as well. Hereby, an increasing awareness of the phenomenon also touches upon a policy level. Exemplarily, this is reflected in the annual report of the Dutch National Institute for Public Health and Environment of the year 2015, in which Dutch urban garden initiatives are contextualised in a general trend to make cities greener, to consume organic and local food and to search for a closer relationship with one's living environment (RIVM, 2016). Furthermore, the Netherlands Environmental Assessment Agency found that 21 percent of the Dutch population occasionally works in either a vegetable garden, an allotment garden, or in a private garden or orchard which is linked to food production (Rood, 2014).

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<sup>2</sup> Guitard et al. (2012) make this point after having reviewed a broad scope of English academic literature on community gardens. By using the term 'disproportionately' they mean a majority of the reviewed literature. Accordingly, this argument does not interfere with former arguments of this report which were based on the article of Howe and Wheeler (1990), who take Great Britain as an example.

In this sense, referring back to Guitard et al.'s (2012) critique of the current disproportionate focus of academic literature, the results of our project should be seen as another 'pixel' added to the bigger, global picture of community gardens. In the following, we will give an overview of a selection of international community garden-cases. We do so, because our focus on a national level follows a territorially bounded, administrative perspective. However, as Doreen Massey (1994) has pointed out, place is also a social construct that can be considered an outcome of social relationships meeting at the particular locus. According to her, through this particular meeting at a point in time a unique place is created. Not as an opposite of the global, but as part of the people's broader network.

Place is thus set in relations and wider networks, embedded into a wider development: economic, political, cultural and social relations exist between any local place and the wider world, connecting the local with the global. This is also exemplified by the international cases we selected. Even though each community garden is unique in its constellation of relations and actual implementation of the urban agriculture idea, they are all part of a worldwide course. In this sense, the Netherlands is not unique regarding the surging popularity of local community gardens.

### **2.1.2. International cases**

In the following, we describe ten different community food gardens that were referred to in scientific articles, or that we encountered coincidentally in the course of information gathering for our project. We selected these cases with several considerations, such as the year of establishment (3 years ago or more) and their diverse geographical positions. However, the limiting factor was that the gardens had either a website or facebook page, which we could extract information from. Eventually, we found several cases in African countries, but we had difficulties with finding examples from Asian countries.

The table below summarizes information about the community gardens according to the three subquestions that we would like to address in this research.

## International Case Studies of Community Food Garden

No	Name of garden, location, and year of launch	Goals	Supporting Factors	Present Challenges
1.	Ubuntu Green in Sacramento, USA (2015) <i>Source: LGC, 2014</i>	Supporting residents in local food-desert communities	<ul style="list-style-type: none"> <li>Support from local government, local farms and nurseries in building and regulation</li> <li>Support from farmers' association in gardening workshops and technical assistance</li> <li>Local publisher promoting garden events</li> </ul>	<ul style="list-style-type: none"> <li>Increasing participation of local community</li> <li>Budget for maintenance</li> </ul>
2.	Added Value Brooklyn, New York, USA (2002) <i>Source: University of Michigan, 2009</i>	Educate younger children in urban farm and supply fresh food	<ul style="list-style-type: none"> <li>Support from local government in the soil material as a medium for raised bed garden</li> <li>Cooperation with local restaurants for selling their products</li> <li>Cooperation with elementary local schools for the students, who actively participated in gardening</li> </ul>	<ul style="list-style-type: none"> <li>Gentrification issue in the neighbourhood</li> </ul>
3.	Martineu Gardens, Birmingham, UK (2010) <i>Source: Martineau Garden, 2016</i>	Therapeutic community garden to help people with special health, social treatment and educational purpose for children	<ul style="list-style-type: none"> <li>Support from local hospital by providing technical expertise for patients and visitors with health problems</li> <li>Collaboration with other associations for nature conservation</li> </ul>	<ul style="list-style-type: none"> <li>Demand of the community garden to expand their area</li> </ul>
4.	Flanagan's field, Dublin, Ireland (2012) <i>Source: Brakkee, 2015</i>	Promoting community garden to the neighbourhood	<ul style="list-style-type: none"> <li>Support from local NGO in providing a greenhouse (dome shape) for the garden</li> <li>Grants from local banks</li> </ul>	<ul style="list-style-type: none"> <li>Financial issue for the garden maintenance</li> </ul>
5.	Spiral garden in Berkeley, USA (2003) <i>Source: Spiral gardens, 2016</i>	To improve community health and sustainability by providing access to nutritious and affordable produce	<ul style="list-style-type: none"> <li>Permit from local government to use a railroad right of way into the community garden</li> </ul>	<ul style="list-style-type: none"> <li>This garden does not selling their products, therefore the budget issue for their operationalisation may become a challenge</li> </ul>
6.	Logan City, South East Queensland, Australia (2006) <i>Source: Harris et al., 2014</i>	Connecting refugees through community food gardening	<ul style="list-style-type: none"> <li>Grants from local University, government and other NGOs</li> </ul>	<ul style="list-style-type: none"> <li>Demand for a larger area of land for the garden, to facilitate more participations from the migrants</li> </ul>
7.	Bulawayo Municipality, Zimbabwe (2008) <i>Source: Banda, (2008)</i>	Communal garden for local women to generate their income	<ul style="list-style-type: none"> <li>Support from local government in providing the area for gardening</li> </ul>	<ul style="list-style-type: none"> <li>Water shortage</li> </ul>
8.	Victory Primary School, New Zealand (2007) <i>Source: Allison, 2011</i>	To promote improved diet for local residents and to increase their capacity to grow their own food	<ul style="list-style-type: none"> <li>Funding from local government</li> <li>Support from local school in providing the land for gardening</li> </ul>	<ul style="list-style-type: none"> <li>Raising public awareness in gardening</li> </ul>
9.	Blikkiesdorp and Lavender Hill, South Africa (2013) <i>Source: WECF, 2013</i>	Food Garden to battle poverty, malnutrition, and providing opportunities participating in the community	<ul style="list-style-type: none"> <li>Support from international NGOs for the budget</li> </ul>	<ul style="list-style-type: none"> <li>Increasing awareness from local community</li> </ul>
10.	Siyakana Food Garden, Johannesburg (2006) <i>Source: Wills, et al., 2009</i>	Empowering the participants through education and training and creation of income generating opportunities	<ul style="list-style-type: none"> <li>Support from local university for the technical aspect in gardening</li> </ul>	<ul style="list-style-type: none"> <li>Need for more social interaction rather than food production</li> </ul>

Table 1 International case studies of Community Food Gardens. Elaborated by the authors based on literature

To sum up, the community food gardens differ in their goals, but show similarities both in the supporting factors and the challenges faced. These similarities may be caused by our focus on the particular typology of community food gardens. We assume that the differences may be caused by their particular location, their relation with external actors, or primary issues in their neighbourhood.

One similarity can be found regarding the supporting stakeholders. For example, support from local governments can be found in some cases, such as Sacramento, Brooklyn, Berkeley, Bulawayo, and Victoria. Support varies from issuing a gardening permit for the community, to providing funding for the implementation and assigning a land area for the placement of the community garden. Moreover, support also comes from educational institutes (Primary School and University) in the cases of Brooklyn, Logan City, Victoria, and Siyakana. Most of the support from the educational institutes consisted of providing land for the gardening activities. NGOs, both local and international in scale, were involved in supporting the gardens in Dublin, South East Queensland, and Blikkiesdorp and Lavender Hill. In the case of Birmingham, the garden was supported by the Natural Conservation Department. Other stakeholders involved were garden community organizations, banking institutions for grants, local restaurants and media for the promotion of events.

The most common challenge for community gardens lies in the funding. At least, this is the case for the projects in Sacramento, Dublin, Birmingham and Logan City. Increasing the participation for the local community is the challenge for gardens in Sacramento, Victory Primary School, Blikkiesdorp and Lavender Hill and Johannesburg. Different challenges linked to gentrification issues occurred in Brooklyn. In Zimbabwe, they experienced a water shortage problem.

Similarities in the gardens' goals can be found in Dublin, Victoria, Blikkiesdorp and Lavender Hill. These gardens basically would like to increase the participation of the community, and to raise the awareness of the advantages of community gardening. The goal to generate an income can be found in Zimbabwe, South Africa and Johannesburg. The Birmingham garden has a special goal, which is to support people with a particular health problem. Additionally, in South East Queensland they focus on connecting refugees through community gardening.

Even though these cases are located in very different localities, we can see that they are facing some similar challenges. For our own research, we will see to what extent community food gardens in the Netherlands show similarities and differences. Before presenting our research findings, we will describe our methodological approach in the following chapter.

### 3. Methodology

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#### 3.1. Mixed methods

In order to answer our question for this research project we used a mixed methodology. The methodology for this research project combines quantitative research and qualitative research. The methods include questionnaires that we sent to a sample of maturing community food gardens in the Netherlands, and semi-structured interviews and participatory observation in five community food gardens. By mixing these different methods, we think we get the best insight in what goals and needs specific selected cases have. We also see the bigger picture. Several authors have demonstrated that quantitative and qualitative research can be incorporated at different phases of research (Bryman, 2006). For the qualitative research, we combined interview and participatory observation.

Similarly, it was argued that interviewing is the most appropriate strategy for acquiring detailed information from a specific person or a group (Driscoll, 2011). With the semi-structured interviews, we aimed at getting answers to the questions we prepared before, and an indication of importance of different topics. Another tool we used is participatory observation, which helps to understand what is going on in the gardens and to create space for more spontaneous interactions. This gives us a deeper understanding of what the gardens need.

### **3.1.1. Typology**

First, it is important what kind of community food gardens we are looking at. There are various kinds of community gardens. We used the typology of Esther Veen (2015), which was mentioned in the literature review, to define our research topic and main interest. In the spectrum of community food gardens, the definition of Community Gardens fits best with the trend of local food initiatives. The definition of Veen (2015) is: gardens located in neighborhoods and cultivated by residents from the neighborhood. Since it is difficult to determine if all participants in a garden are residing in the neighborhood, our working definition is a bit less strict. We will focus on gardens that were initiated by people from the neighborhood and mainly cultivated by resident from the neighborhood.

### **3.1.2. Semi-structured interviews and participatory observation**

We prepared the questions for the questionnaire and topics for the interviews taking into consideration current literature about community food gardens, recommendations of academic experts and the discussions with IVN and NatuurSUPER and the Ph.D thesis from Veen (2015). For the qualitative research, five community food gardens were selected to conduct participatory observation and semi-structured interviews. The aim was to select diverse cases from different urban settings, but we were limited by time and accessibility to the gardens. For a more effective and complete data collection given the time limit, the visits to the field would be carried out by pairs, with one Dutch native speaker in each pair. The value of going into the field to visit the gardens is derived from the opportunity to get a more nuanced, in-depth understanding of the dynamics around these initiatives.

### **3.1.3. Questionnaire**

With the questionnaire we aimed at gaining an overview of the present conditions, the goals and visions and the potential areas of support in community food gardens in the Netherlands. It was meant to complement the case studies and to get a broader overview of the different goals and difficulties in community food gardens. The procedures for our questionnaires was as follows. First, we included five general questions about the name of the garden, the location, number of participants and most active participants, which provided information about the present condition of community food gardens. Then, to tackle the goals and visions, as well as the potential areas of support, we distinguished multiple possible goals of the community food gardens when starting the project, and made a list of factors that may influence the current functioning of community food gardens.

We sent our questionnaire to gardens throughout the Netherlands (see Appendix A). Looking at the map in Appendix A, we conclude that our respondents are mainly located in the urban area and dominantly in the middle of The Netherlands. There are also several community food gardens in the northern area of the country who responded to our questionnaire.

We distinguished four different categories regarding the motivations of the gardens: social, education, food production and healthier lifestyle. The specific concepts for each different areas are described in Figure 1 below.

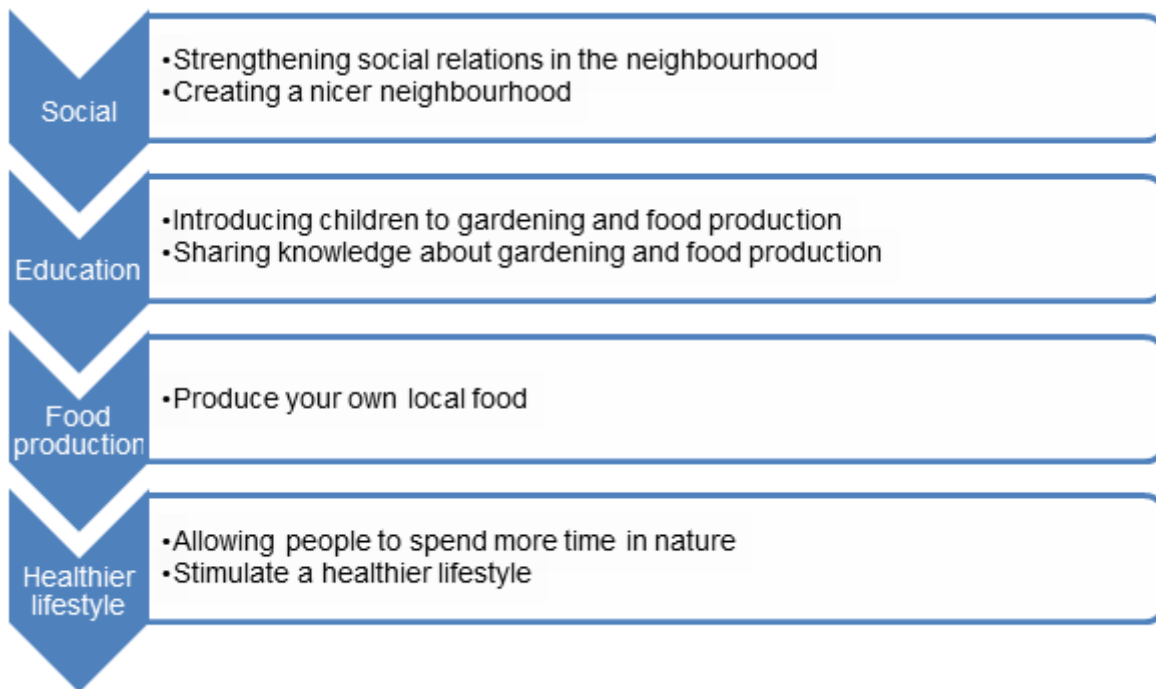


Figure 1 Categories of motivations used for the questionnaire. Elaborated by the authors based on Knapp, 2013

The categories of motivations served to identify the goals of community food gardens. To look into the potential areas of support, we looked for an overview of the different factors that may influence the functioning of community food gardens. The potential areas of support might be in line with the most relevant hindrances of community food gardens and the key factors of their development. The master thesis by Ladina Knapp (2013) was very useful for compiling a list of factors that may influence the functioning of a community food garden. Taking her thesis as start point, we distinguished between (a) Site related factors, (b) Governmental and Institutional related factors and (c) Procedural related factors. The following figure illustrates the main categories and the concepts included.

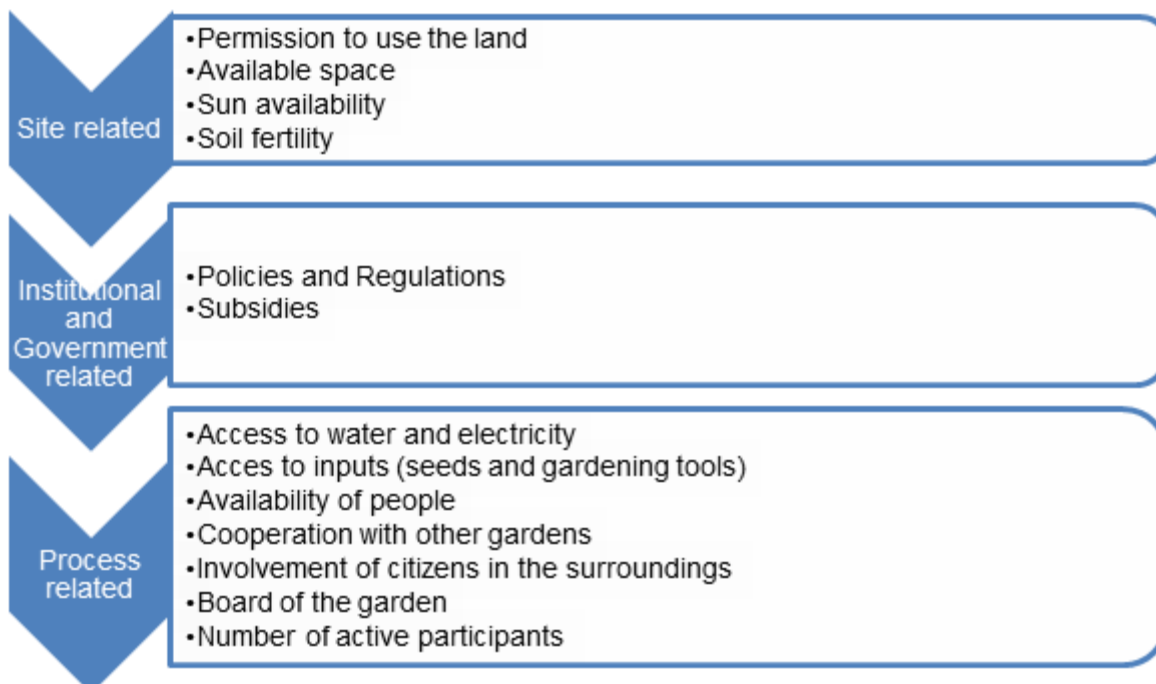


Figure 2 Categories of hindering factors used for the questionnaire. Elaborated by the authors based on Knapp, 2013



Finally, to achieve as many responses as possible, the questionnaire was kept relatively short, consisting of eight questions that directly addressed our research subquestions. The questionnaire, which we translated to Dutch for our respondents, can be found in its entirety in Appendix B. We used Qualtrics for distribution and initially sent it to 80 cases with a personalized email or a Facebook message. Later on, after visiting the five cases we also sent the questionnaire to them (although one case already got a questionnaire before our visit). In total, we sent 84 questionnaires and got response from 36 different gardens. The e-mails were sent to each initiative individually, trying to make the e-mail personal and to let them know we needed their help and our results could also be interesting for them. We tested the survey by filling it in ourselves as if we had a community food garden.

#### **3.1.4. Case selection Qualitative Research**

The sample was made from the database received from our commissioners, which included 798 local green initiatives. This database was largely based on the information from Groen Dichterbij, they have a website where everyone can list their green initiatives. We looked up every initiative who was in the category of 'moestuin' (vegetable garden), which were 221 out of 798 of the initiatives. For all these initiatives, we visited the website of Groen Dichterbij, their own website or their Facebook page to find out if the garden fitted our criteria.

We used the following criteria:

- the garden exists for at least three years (started in May 2013 or earlier)
- it is an initiative from people who lived in the neighbourhood where the garden is located
- the garden produce vegetables
- it is feasible to contact them by email, Facebook, phone number or website contact form

We choose to define 'maturing community food gardens' as gardens that already exist for three years and more. We do so, as this was the scope of age that NatuurSUPER took as a time-related basis for former research on and work with community food gardens. And because many of the initiatives do get support in their initial start-up phase.

From the 221 gardens categorised as 'moestuin', we selected 84 gardens which were fitting all criteria and therefore were relevant for our case study and questionnaire. The summary of our questionnaires can be found in Appendix C.

The cases to visit for semi-structured interviews and participatory observation were selected based on diversity and specific features of the different gardens. Due to of lack of time, small places in the North of the Netherlands were excluded, as it would take much time to reach these villages by public transport. From the other gardens, we made a list with specifications to find interesting differences between the gardens. Out of 84 gardens, we chose 11 that we wanted to contact and inquire if we could visit them for in-depth case studies. One day after, some initiative responded that they didn't exist anymore or that they were too busy and wanted to have something in return. From the others we looked up phone numbers so we could call them. We could only find three phone numbers and called them all. One did not reply, the other two were responding and willing to make an appointment for the next week. We called one community food garden in Rotterdam, but the woman said she was board member from another garden than we thought. However, she was willing to help us and said that we could also visit a garden that was next to her garden. Therefore we decided to visit two gardens at once. The other person that responded was from a garden in Dordrecht. We wanted the last case to be in Brabant, because the Brabant's initiative has experienced working together with NatuurSUPER and we thought that it would give us a different perspective than any other selected cases. Therefore we contacted one garden that Marije from NatuurSUPER recommend us. They were willing to help and we could make an appointment straightaway. After making the appointments with the four different gardens, we sent out the questionnaire to 80 people. One person from a community food garden e-mailed that he was really enthusiastic about our project and that he was open for visits or calls. It was a special case because the garden already existed since 1978. We decided that it could be interesting for us and made an appointment to visit this garden as well.



### 3.1.5. Selected cases

For the semi-structured interviews and participatory observation, we visited five community food gardens: Gandhитуin and Hof van Noord in Rotterdam, De Rijke Sterrentuin in Dordrecht, Boschveldtuin in 's Hertogenbosch, and Milieuvriendelijke garden in Uitgeest. We will now provide an overview of the gardens.

#### ❖ *The Gandhитуin*

The first garden we visited was the Gandhитуin. The Gandhитуin is located in Rotterdam and is founded by The Foundation Peace Garden. The garden has a core group that are working regularly in the garden, and around 30 people that are coming regular, and then there are 100 who come a few times a year. We met one of the leaders of the garden. The leaders are responsible for the managing and operationalisation of the garden. Additionally, people with different backgrounds work in the Gandhитуin. The Gandhитуin rents 2000 square meters land of another garden, Hof van Noord, which we visited afterwards. The land of the Gandhитуin is divided in six plots. They have a greenhouse and a herb garden and experiment with permaculture and different ways of growing vegetables. In addition they are very activist leftist group of people, as they say themselves and are also involved with some protest action against and try to change society by clandestine actions such as guerilla gardening. Their land is also used for a variety of different purposes, for example a foodbank, but also religious rituals and a meeting place for the neighbourhood. They try to be climate neutral by using for example a sun panels to support the heating facilities for their office.

When we arrived there, we offered to help gardening. They were surprised and we could help them with harvesting mushrooms. During this participation we talked about their garden. After a lot of talking and information sharing, the woman who we called was there to show us the garden next to the Gandhитуin: Hof van Noord.



Figure 3 Gandhитуin



Figure 4 Location of Gandhituin and Hof van Noord

#### ❖ *Hof van Noord*

The garden Hof van Noord is also located in Rotterdam. It used to be a school garden and a garden for the elderly, but this was closed due to a lack of funding. After this Hof van Noord was founded to be able to continue with the gardens. Besides renting a large portion of land to the Gandhituin, the garden consists of 65 plots of lands that are rented out to people who live in Rotterdam Noord. Furthermore some welfare organizations rent a plot of land. In total they have around 55-60 members. The plots are used mainly for the produce of food. The small plots are mostly open, some are really closed off with a fence, to be decided by the person renting the garden. Building a house on the plot is not allowed. There is a yearly waiting list of people who want to rent it, at the moment 7 or 8 people. Besides the plot of lands there is also some forestry a mud pool for toads and recently they are starting with beekeeping. Together with the Gandhituin they are working on being as climate neutral as possible. We met the initiator and chair of the board, she is thus mainly responsible for the operationalisation of the garden.



Figure 5 Hof van Noord



### ❖ *De Rijke Sterrentuin*

De Rijke Sterrentuin is located in Dordrecht. It was opened in 2013, when some people from the neighbourhood suggested to start a community food garden on an empty plot owned by the municipality. The garden is placed within a larger neighbourhood park. The land had first been used as a school garden, then it became a wasteland with horses on it. For the last three years it has become a garden again, with 43 members who all own a plot of land. All participants live in the neighbourhood, and most of them also have a garden at home. People from all generations are involved in the garden. De Rijke Sterrentuin has an area with grass and some flowers. The centre of the garden is divided neatly into around 60 plots of 5x2 metres. The gardens in the middle are for individual use and the gardens on the sides are to adopt: the harvest is going to the community. The individual and adopted gardens differ a lot per plot: some are very structured, others less. One side is for food, the other for flowers. They don't pay any rent nor any side costs. They have access to infrastructure: water and sewage system, but no electricity. For watering the garden they use water from the ditch that is right next to it. We met three of the board members and also spoke to a member who comes to the garden often. To announce our visit, one of the board members had put an announcement on the website, encouraging people to join them on the morning that we would visit.



Figure 6 Location of De Rijke Sterrentuin



Figure 7 De Rijke Sterrentuin

### ❖ *Boschveldtuin*

In 2012 the Boschveldtuin was started on a wasteland in a neighbourhood in Den Bosch. The location was only available temporarily. In March 2016, they had to leave the original place and they moved the garden a couple of meters. When we visited them, they were still busy with moving parts of the gardens and rearrange everything. We could help them immediately with bringing bricks to the garden, and do the talking more in an informal way. They were willing to share a lot of information.

They have a core group with 8 people who are responsible for all the organizational tasks. We mostly talked with three of the board members. Furthermore there are between 60 and 90 members that come from time to time, in summer more than in winter. Most of the people are from the neighbourhood but also a couple of people that come from villages surround. In the Boschveldtuin, most of the ground is for common use and people are expected to take care of the common area. There are also a couple of individual wooden boxes where people can produce their own food. Most of the people who work in the garden know that these boxes are personal properties and will not interfere with it. The garden has a rectangular shape and is surrounded by a black, metal fence. At the entrance of the garden, there is a sign with logos of supporters. They have a lot of berry shrubs, herbs, fruit trees and a hotel for insects, which is good for fertilizing the flowers. The paths are made with bricks and wood chips and there is a small box with sand for children. There is a small shed with a small kitchen and storage space for tools.



*Figure 8 Location of Boschveldtuin*



Figure 9 Boschveldtuin

### ❖ *Milieuvriendelijke tuin Uitgeest*

The Milieuvriendelijke tuin, located in Uitgeest, has existed since 1978 and became an official association in 1982. This garden was not in our sample for field visits. However, we received a very elaborate e-mail from one of the initiators, as a response to the questionnaire. We appreciated his enthusiastic response and we decided it would be valuable to get an additional perspective, from one of the founders of an already mature CFG. We talked with the person that contacted us, who is still actively involved and had a lot of information to share. In the Milieuvriendelijke tuin Uitgeest, they rent land from a farmer now for 30 years. There are 25 members, 2/3 of them are women. This is stable because they are limited by amount of land, however they now rented a new piece of land. The members are from all ages. In the Milieuvriendelijke tuin Uitgeest they have a flower section and three other section that take different groups of vegetables each year, using a rotating system. Every year, different vegetables will be plant because it is good for the soil. They have an entrance-gate because of the concerns of the members about theft.





*Figure 10 Location of Milieuvriendelijke tuin Uitgeest*



*Figure 11 Milieuvriendelijke tuin Uitgeest*

### 3.1.6 Results

The questionnaires had been sent to 84 of the community food gardens. From a discussion with the academic expert assigned to our project, we expected the response rate to be around 20%. However, we got a response rate of 42,8 % (36 responses). Based on the response, we made a recapitulation as an input for our analysis (see appendix C.)

We went to five different community food gardens to conduct a semi structured interviews. We explained the goal of our research to every respondent before we were starting to interview them. We also invited the community food gardens to attend our final presentation. Moreover, we will send an summary in Dutch with our main findings to the community food gardens we visited: in that way we can also do something for them in return.

### 3.2 Limitations of research

In general, social research methods face two main obstacles: the lack of sample and the non-representativeness of the sample (Sigelkow, 2007). These two problems can influence the validity of the research. Therefore, researchers should consider an appropriate approach that suitable with their goal and method. Yet, combining the questionnaire provides us with a broad overview of the community food gardens, and the case interviews and participatory observations give us a more in-depth understanding of the dynamics in and around the gardens.

While we were using the methods as we described above, we faced some limitations of these methods. First of all, during the sampling, we only looked at the category 'moestuin' in the database. Every garden was signed to only one category while some might have overlap with other categories. Some gardens that were in the category of 'moestuin' were not producing food and some gardens who did produce food were in a different category, for example in 'jong en oud' (young and old). Therefore our selection did not cover every garden that fitted our criteria.

Second, when we sampled our cases first on their specific features, but also on practicalities (such as easy to travel to, opening times that fit in our schedule and open for visitors). We visited the gardens we could get in contact and could make an appointment with easily and in short-term. Therefore there might be other community gardens that were more diverse or different from the cases we choose, but because lack of time we could not visit them. Another issue that adds to this was that not all gardens had their own website. Some community had a small "chapter" on a website from a bigger foundation.

For the questionnaire we contacted sometimes people from the foundations with the assumption they could get in contact with the people from the actual garden and share the questionnaire. Therefore it could be a problem that the questionnaire was filled in by the wrong person or that the right person was not receiving the questionnaire. Except for practical issues, there could be a bias that we focused on the "maturing" stage and set three years as a minimum requirement. However, each of community food gardens can vary in their time to reach mature stage. Therefore, we need to keep in mind that every initiatives are different and might be not all exactly in the same phase.

Last, while doing and analysing the interviews, we are limited by our own observations and interpretations. Everyone has another perspective and we all visit one garden. This could be a limitation, but because we went in pairs, also a strength because with two people you perceive more than with one person. Another point is that we are not native English speakers, nor are our interviewees. There might be occurred some language misunderstandings. However, even though we are aware about these limitations, we still think that this methods give us the best insight to get an answer on our question. We focus on the perspective of the gardens and what their needs are and let their tell their own story instead of doing top-down research.

## 4. Data Analysis

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### 4.1. Present conditions

To find out what the future needs of maturing community food gardens are, it is useful to first explore what the present conditions of the gardens are. In this chapter, we will therefore answer our first subquestion:

#### *I. How can the present conditions of maturing Community Food Gardens be described?*

To find out the present conditions of maturing Community Food Gardens, we asked some general information in the questionnaire. Furthermore, the four different maturing community gardens and one garden that already exists since 1978, gives a more in-depth and enriched answer to this question. To give an overview about the different aspects from the gardens, we created the table below. Afterwards, we will get more in detail and use examples to show what the current conditions the maturing community food gardens are.



Overview of selected case for fieldwork visits.

Name of the garden	Place	Existing since	Access to land	Organization	Members	Plots of land	Contribution
Gandhituin	Rotterdam	2011	Rent it from Hof van Noord	Foundation Peace Garden	30 core members, 100 that coming now and then	Round, common plots	No
Hof van Noord	Rotterdam	2012	Rent it from municipality, rent common space from landlord	Board of 5 people	55-60 members	65 individual plots of 35 square meter + common space	2 euros per square meter + 15 euros per year
De Rijke Sterrentuin	Dordrecht	2013	Got it for free from municipality	Board of 5 people	43 members	40 individual plots of 10 square meter, 20 collective plots	25 euros per year
Boschveldtuin	's Hertogenbosch	2012, in March 2016 moved	Got wasteland from municipality	Board of 8 people	60-90 participants	Common land, wooden boxes for individual use	No
Milieuvriendelijke tuin	Uitgeest	1978	Rent it from farmer	Board of 5 people (rotating every three year)	25 members	Teams of 4-5 people responsible for collective plots	10 euros per year

Table 2 Overview of selected cases for fieldwork visits

As shown in the table, the cases differ a lot in both how they use their land and in their membership. In the following, we are going to compare the questionnaire with the interviewed cases to find out some general information and conclusions about the present conditions. Firstly, the length of the existence of the different gardens will be shown. Secondly, the amount of members and differences within the cases will be explored. Eventually, the cases will be analysed regarding the variation in organization, funding and building networks.

Existence ( in years) of Community Food Gardens

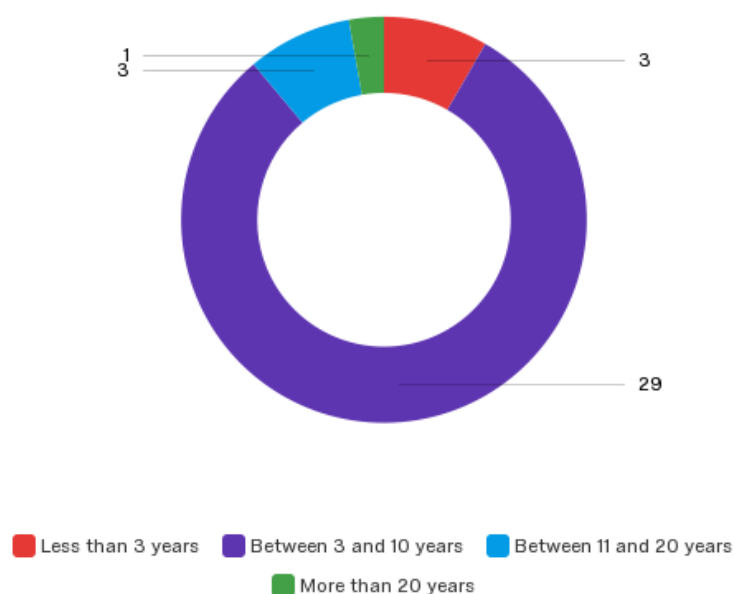


Figure 12 Existence (in years) of Community Food Gardens. Based on questionnaire results.

From quantitative data, on the question: “How long does your garden exist?”, we got responses from 29 different gardens that exist between 3 and 10 years and fit within our criteria. Three of them have been open less than three years. Our original sample was supposed to consists of gardens that exist for at least three years. However, during the sampling, we got responses of three cases existing for less than three years. We decided to include them separately in order to compare whether they have different goals than the older gardens. Four of our cases have existed between five and three years and fit to our definition of ‘maturing’ gardens. One of our cases, the Milieuvriendelijke tuin, is a special one and exists for already 38 years: the only one that filled in in the questionnaire ‘older than 20 years’.

## Members

Size of Community Food Gardens

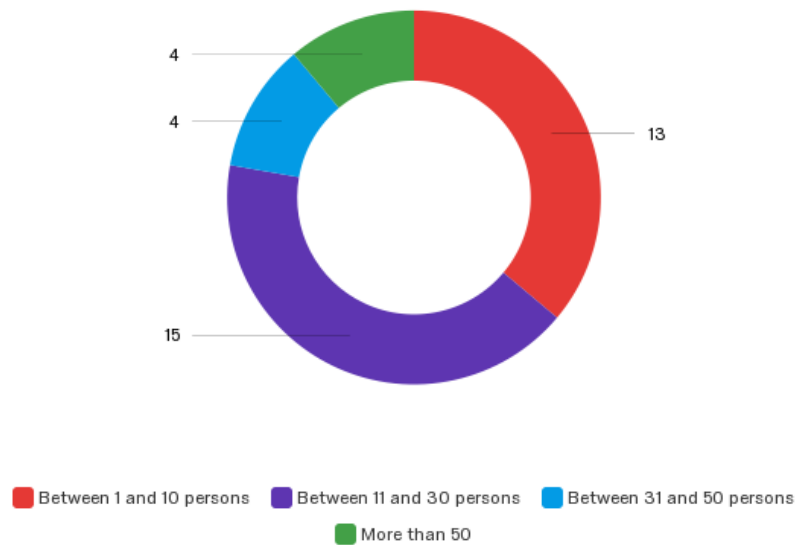


Figure 13 Size of Community Food Gardens. Eased on questionnaire results

As you can see from the questionnaire, 15 respondents filled in that there are 11-30 people working every month in the garden, and 1-10 people was given as a second answer. The gardens we visited, all said that they had more than 30 members or participants working in the garden, except for the Milieuvriendelijke tuin. In the questionnaire, besides the Milieuvriendelijk tuin, Boschveldtuin and Hof van Noord filled in 11-30 persons. The question more defined in the questionnaire, explicitly mentioning that people have to work there every month. In the interviews of the case studies, the question was more general and more open to interpretation. Therefore it can be concluded that the gardens do have more people working or helping in the garden than mentioned in the questionnaire, but not on a regular base (monthly).

In the cases, we saw that most people who worked in the garden were from the neighbourhood. There are some differences: in Hof van Noord they have the rule that only people from Rotterdam Noord can rent a plot. In contrast, in the Boschveldtuin also people from surrounding villages are joining the garden and everyone is welcome.

## Organization

### Amount of people involved in organizational tasks in Community Food Gardens

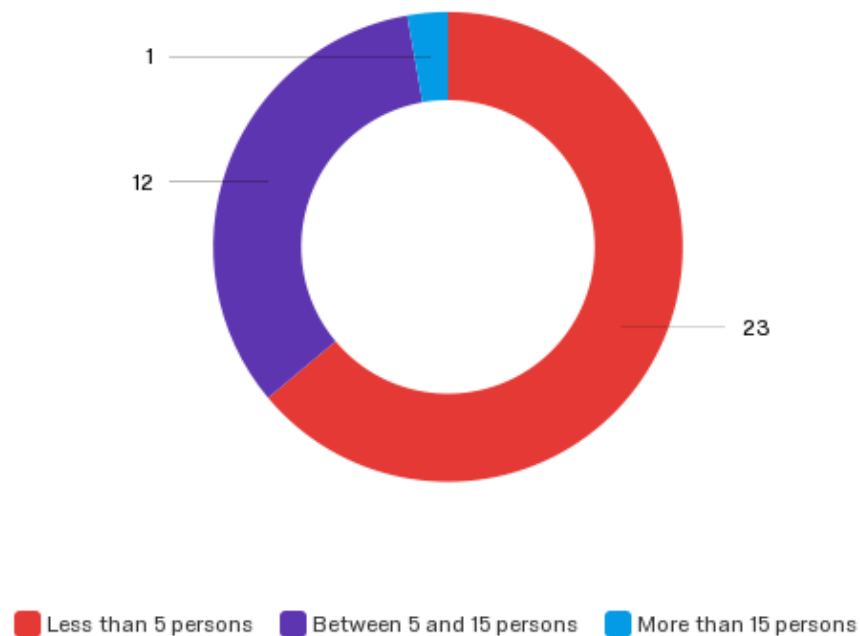


Figure 14 Amount of people involved in organizational tasks. Based on the questionnaire

In the results of the questionnaire, as you can see in the pie chart above, most gardens have less than five people who are involved with organizational tasks. Only a small part has more than fifteen people who are organizing. In our case studies, four out of five gardens have a real board, an exception the Gandhitsuin. The board of the gardens consist mainly of 5-8 people who are responsible for organizational tasks. We interviewed mostly the board members of the gardens, who were also initiators of the gardens. These board members explained that there are clear distinctions between what board members do and what general members are supposed to do. Board members know what they are responsible for and were also clear in what they expected from general members. Most boards consist different functions, such as chairman and treasurer. In the long-existing Milieuvriendelijke tuin we talked with one of the initiators and nowadays coordinator and team leader. They have a board of five people, but he is not in the board anymore. He believes it is good to share responsibility and knowledge, to make sure that, if he would stop, the garden could go on. The boards of the gardens have meetings where they make decisions. Nitai from the Gandhitsuin says that they are democratic on their website, but the person we interviewed said that this does not work in practice. Democratic would mean that everyone, even if he or she only joins a garden once a year, has a say in the decision making process, which is difficult. Thus in practice everyone can give suggestions, but the leaders will take the decisions.

In the questionnaire we asked about the amount of members and organizers, and in the case studies we got more insight in how every garden has its own organizational structure and regulations. In most gardens they work together with most of the participants on certain days. In de Rijke Sterrentuin, they organize mutual working days to maintain mutual areas of the garden, four times a year. Members have to come to two of them. Other gardens have weekly moments when most people work in the garden. For example in the Boschveldtuin, they meet every Friday and in the Gandhitsuin, they work every Tuesday and Sunday. During those days, the garden is open to

everyone, who wants to join. During our fieldwork we joined some of these working days and meetings. We could see that the people who worked together had personal relations; they asked about each other's private lives. For example in the Gandhituin, we had discussions about politics and personal interests when we were joining them for a cup of herbal tea and cake. They also had a vegan meal for the neighbourhood twice a month. In the Boschveldtuin they organize parties in the garden often, it is indeed social meeting place.

We could see that there are differences in land use between the cases: some gardens do only have common plots, like the Gandhituin and the Milieuvriendelijke tuin. However, the system to use these plots is different. They both have rules about who is responsible for what part, but in the Gandhituin this is less strict. In the Milieuvriendelijke tuin, teams of 4-5 people are responsible for one plot, with a coordinator who checks how it is going. Everyone who wants can join on the days that they meet for gardening, but there are some people particularly responsible for some parts. Hof van Noord on the other hand consists of individual plots, which vary greatly: some are open and some of the gardeners put a fence around the plot. In De Rijke Sterrentuin and Boschveldtuin they have both individual and common plots, with a clear distinction between what common is and what is private. In the Boschveldtuin, wooden boxes are for individual use, and in De Rijke Sterrentuin 1/3th of the land on one side is for collective food production. Also these individual plots differ a lot, some are very structured and others not.

Looking at the results of the questionnaire and the visited community food gardens, we got more insight in the way the gardeners garden. The gardens we visited all tried to garden organically, without pesticides and experimenting with natural solutions to for example bugs. Only in De Rijke Sterrentuin mentioned that they had no overview on what people use for their land so they are not sure if all food that grows there is organic. In the questionnaire, two people explicitly mentioned in the open space about their goals that they do permaculture/organic gardening.

Beside the way they garden, all the visited gardens have their own rules and regulations about gardening. In growing season De Rijke Sterrentuin uses a system. If a garden plot is not maintained, the owner gets a yellow card, then two yellow cards and finally a red card. With a red card they advise the owner to leave. In Hof van Noord some similar system in place as people first get a warning when they do not take good care of their plot, then they get a fine and in the end the lease agreement will be terminated.

### **Funds and external actors**

In the questionnaire we did not ask about how they are funded because this is broad and specific for every garden. In the case studies, these differences became clear. As you can see in the table, three out of five gardens have to pay rent for their land. The relations with the municipality also differ, one garden has to pay rent to the municipality for their garden while two neighbourhoods got their land for free from the municipality. Hof van Noord is the one that has to pay the municipality for their land, as this land is part of city development (stadstontwikkeling). Gandhituin rents land from Hof van Noord and are therefore interconnected. They started the garden at the same time and had therefore organizational things in common, like their building and use of water and the sun panels. While we visited the garden, both interviewees actually took pride in the sun panels, as if they were the ones who constructed it.

Hof van Noord got a subsidy to start up from a subdivision of the municipality and people pay contribution and rent. This start up subsidy covered the initial start-up costs. The renting that has been paid for the plots covers the rent that has to be paid to the landowner. However, the cost for the common parts are not covered by the tenants pay to Hof van Noord, as they try to keep the rent low and easy accessible to people. Therefore they get subsidized by the municipality and also some by Oranje Fonds and others funds. The Boschveldtuin also got funded by Oranje Fonds. They organized workshops about gardening for everyone in order to get funding. They received a lot of money from Oranje Fonds and still buy things with it, for example recently a new water pump. They have good relations with the municipality, for example they received a fence from them. Their members don't have to pay contribution because they want to be equally open for everyone. In

another garden, De Rijke Sterrentuin, it is the contribution that covers the costs. In the Milieuvriendelijke tuin, they don't have contact with the municipality and they don't pay that much contribution. They use a different system to finance themselves. The collective vegetables from the garden are sold to participants for internal prizes. The members have to write down what they harvest in a book with all the internal prizes for everything, and once a month the members get a bill. This money can finance the land rent, the seeds, manure, tools, etc. In other gardens they sell their food to buy tools or they received it for free by sponsors or members. The Gandhi tuin rented space in one of the buildings from Hof van Noord. Decorated this rooms and rented it out for workshops and organizations that are in line with their ideology, as a source of money to maintain the garden and to build up their network from which they receive a lot of materials. In addition they have some sponsors that they called well-wishers.

Most gardens don't have many contact with other gardens but do come to open days, for example, to get ideas and inspiration.

### *Concluding remarks*

In this chapter, the focus was to get an overview about the current conditions of the different gardens we visited or researched with the questionnaire. In the questionnaire, the most important finding was that most of the gardens have 11-30 members that garden every month. In the gardens we visited, they mentioned that there are more than 30 members who come garden now and then. Three of our cases had a board with 5-8 people in it. In the questionnaire, most people filled in that they had less than five people doing organizational tasks. Therefore it might be that we visited gardens that are more formal organized than the gardens in general. Beside these findings about the amount of people, we got a lot more insight with the participatory observation and in-depth interviews. Most of our visited gardens had a board with 5-8 people in it. The boards have clear rules about what their tasks are and what tasks the members have. All the gardens had some rules about what they expect from members, that they have to show up or keep up with their part of the garden. The board members we talked with, were also one of the initiators. Only in the oldest garden the initiator was not in the board anymore. This is one example for how it might go if the gardens will exist longer.

The main conclusion about the present conditions of the gardens is that all the gardens vary a lot. The gardens have some similarities, in particular in age and that they have a board and organizational structure, with people taking responsibility also about how many people are involved regularly. Yet there are also some very big differences in the way they are organized and how they deal with funding. For example in how they get funded and how they pay their needs. They all find some different solutions to this. Some gardeners did not have to pay for the land and are funded by for example Oranje Fonds. This has influence on that they don't have to ask for contribution. Other gardens pay rent to the municipality or a farmer, they also get subsidies or have a strategy to sell their vegetables. Every garden we visited organizes in their own way and has their own rules, but all manage it in these years to keep existing. Our overall impressions is that despite their differences that they are doing well and are finding creative solutions to the problem they are facing and that is probably as well a good reason why they still exist.

## 4.2. Goals and visions

In this chapter, we will answer our second subquestion:

### *II. What are the maturing community food gardens' goals and visions?*

The goals and visions of Community Food Gardens are useful to have an overview about the motivations and the purposes of the participants joining Community Food Gardens. From quantitative data, questions 6 and 7 of the questionnaire were designed to provide information about subquestion II. Question 6 refers to the goals in the initial phase of the garden, while question 7 asked if the gardens think they have reached their own goals. It is interesting that the data collected from qualitative and quantitative methods for this question points in the same direction. The categories used for the questionnaire are very similar to the codes that emerged from the field notes. Moreover, the comparison between qualitative and quantitative data illustrate that the motivations of the community food gardens seem to have continuity in time. Despite the questionnaire asked for the goals and motivation in the initial phase of the garden, the results were very similar to the qualitative data, in which we asked for the current goals and motivations.

First, we identified that community food gardens cover multiple motivations, mainly strengthening social relations, sharing knowledge as well as food production. According to the questionnaire, social and educational motivations are the most popular when starting a community garden. From the polled Community Food Gardens, 88% recognized "Strengthening social relations in the neighbourhood" as very important or quite important, and 82% identified "Introducing children to gardening and food production" as quite important or very important. In addition 82% of the respondents deemed "Sharing knowledge about gardening and food production" and "Creating a nicer neighbourhood" as quite important or very important. In the next figure the results of the questionnaire are shown.

## Principal motivations when starting a Community Food Garden

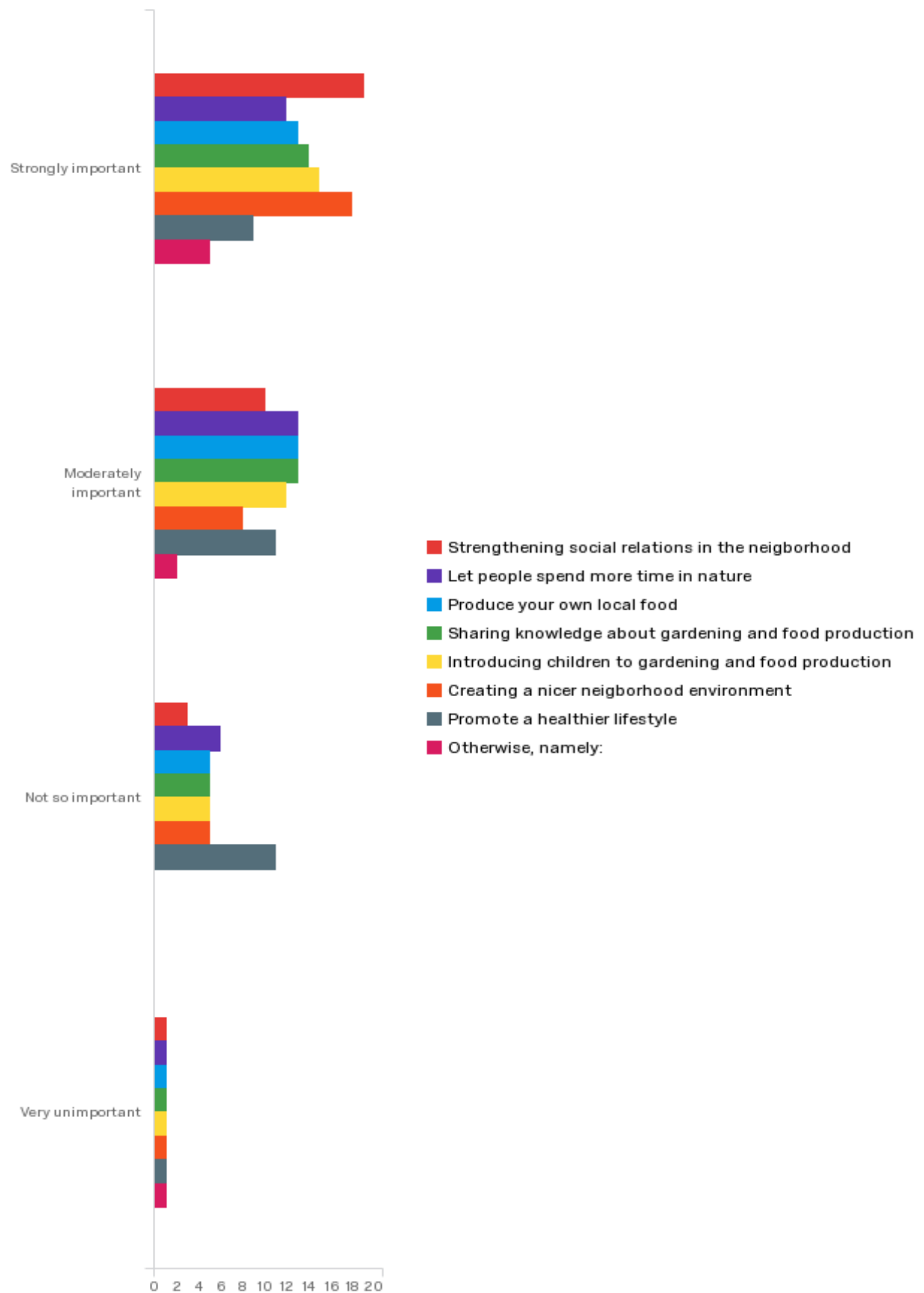


Figure 15 Principal motivation when starting a Community Food Garden. Based on questionnaire results



On the same line, from the qualitative analysis, the garden is recognized by the participants as a *space of meeting* and as a *source of knowledge*. For instance, all the visited gardens organize social activities besides the gardening such as dinners, parties or drinks and food as a break for gardening: the Gandhituin is conceived by the members as an inclusive space where people from different backgrounds and religions can gather together. They meet for meals, have discussions during the coffee break which they call the 'open table' and have made space in the garden for religious rituals, shamanic, buddhist hinduist, everyone is welcome to join.

In the Boschveldtuin and in the Milieuvriendelijke tuin they have fixed days to work in the garden, and participants bring drinks and food to eat during and after gardening. In addition, De Rijke Sterrentuin always leaves space for a social activity such as a BBQ after the their biannual errands' days. Finally, a board member of Hof van Noord recognizes the garden as a place where people living in the city of Rotterdam Noord can enjoy gardening as a hobby, especially those who don't have a garden themselves. They require active participation of their tenants and therefore they made a rule that only citizens living in the north of Rotterdam can become tenants.

The social interaction is very much related to knowledge sharing. Community Food Gardens are seen as a way of sharing knowledge about food production, living organically and gardening. The participants appreciate knowledge gained by joining the garden, and usually they learn from each other, or as said by one member of Hof van Noord, they "exchange information". For example, the Gandhituin is meant to be an example for how to live organically and peacefully for the whole of the society. It is also a place where one can learn how to wild picking, beekeeping or mushroom growing. The board members explained that the garden has helped people to build up their social networks in this way, which in a few cases even led to new employment opportunities and thus got out of social welfare.

Moreover, some of them give a lot of importance to the way of producing the food and gardening. In the questionnaires, in three cases they explicitly add sharing and spreading permaculture practices as one of their motivations. Very much in this line, Milieuvriendelijke tuin aims to increase the awareness and knowledge of beauty; and the Gandhi tuin follow permaculture practices and respect natural life cycles. Underpinning the source of knowledge relies the philosophy of taking the initiative to experiment, learn by themselves and "help the others rather than ask for help" as one board member of Milieuvriendelijke tuin said.

Thirdly, food production is not the prime objective, but it is well appreciated according to the questionnaire and the interviews. Producing your own local food is related to sharing food production and gardening knowledge, but also to cultural inheritance and connecting with nature. In the questionnaire, "Produce your own local food" is identified as important by thirteen respondents, and thirteen more identify it as very important. From the five interviewed gardens, none of them recognized food production as a sole objective, but the Milieuvriendelijke tuin highlighted the importance of balancing well the social activities with the work in the garden to produce something to eat and prevent tensions between the most hard-workers and the others.

On the other hand, in the Hof van Noord explain that "most people don't come there to produce food. It is more for people who don't have garden, that they can enjoy gardening as a hobby". Finally, "stimulating a healthier lifestyle" appears as strongly important for 9 respondents (29%). Eleven (35%) marks it as important, and the other 35% describes it as neutral.

In addition, in all the gardens there is an underpinning ideology or worldview, but the qualitative research reflects that there are differences on the relevance of the political view for the purposes of the garden. The Gandhi tuin was the visited garden where the leftist political view is more important when organizing activities and defining their identity. They define themselves as a peace garden, which promote a self-sufficient lifestyle by practicing permaculture and working for the change they want to see in society. For them, being independent is very important, and they are coherent with their ideology when collaborating with external contacts. Despite they want to invest 90% of time on constructive and positive things, they also dedicate time to attend to demonstrations against TTIP for example. On contrast, the other gardens were not as explicit when talking about political views. However, the values of commitment and reciprocity are repeated in all the gardens.

Commitment refers to the engagement of the participants in the activities of the garden as well as to show initiative and take responsibility. One board member of Milieuvriendelijke tuin highlighted that commitment is crucial for the success of the garden, as they need engaged people who wants to work and come to the garden regularly. For that, the contribution of new members to the group is assessed during one pilot-year before getting the official membership.

In the the Rijke Sterrentuin, they encourage people to become responsible citizens and fend by themselves. This philosophy of taking responsibility and solve your own problems it is also highlighted in the Milieuvriendelijke as well. On the other hand, reciprocity refers to the balance between what the member offer to the gardens and what they give back. In all the gardens they expected members contributing to the common tasks besides the individual ones, and they have developed different mechanisms to achieve it. The De Rijke Sterrentuin can sanction with yellow and red cards when the participants are not in charge of their duties.

Finally, equality and inclusion are values mentioned explicitly in the Gandhituin and the Boschveldtuin. Both gardens are open to everyone who wants to join and there is not monetary fee for being member. These shared values reflect the inherent contradictions of urban agriculture highlighted by McClinton (2014) in which community food gardens can represent a radical alternative to neoliberalism or fill in the gaps cut by the withdrawal of the state.

To finalize the chapter, the majority of the polled community food gardens (55%) are satisfied with their own performance, as they affirm “they have reached their goals completely”. None of the 33 polled gardens indicated they haven’t reach any of their goals, but 45% recognize they have achieved the their objectives partly. For the gardens existing for less than three years, all of them say they have reached their goals completely.

### *Concluding remarks*

The quote of one of the members of Gandhi Garden “the garden is more than a garden” illustrates how Community Food Gardens nest multiple motivations. It is not only about food production, but strengthening social relations and sharing knowledge are at the core of the gardens. Furthermore, the political view also plays a role deciding the focus of the activities, but every garden gives different importance to that. Besides the political view, commitment and reciprocity are shared values that reinforce the achievement of the goals, and in some cases also equality and inclusion is explicitly taken into consideration. The qualitative and quantitative methods gather similar results, which contribute to provide light about the reasons for participating a community food garden . In the next section, the hindering factors and potential areas of support are discussed.

#### **4.3. Potential areas of support**

In this chapter, we will look into the potential areas of support, answering our third question:

#### *III. What are the potential areas of support for community food gardens to reach their own goals?*

We use data from the questionnaire and our field notes to identify where the community food gardens could use help to reach their goals for the future.

Two questions in the questionnaire aimed at identifying potential areas of support. The first of these, question 8, was: “Can you indicate how far the following factors have a positive or negative influence at the functioning of your garden at this moment?” The purpose of this question was to identify the principal factors hindering the general functioning of gardens, as well as to have an indication of the factors that influence the garden in a positive way.

The factors that respondents recognize as strong negative influences on the functioning of the garden can be seen as the central points of attention. At the same time, the factors that are seen as strongly positive by many respondents are also of interest, as they can be seen as prerequisite for the general well-being of the garden.

As explained in section 4.3.2, three different categories of influential factors were recognized after literature review: site related factors, institutional and government related factors and procedure related factors (Knapp, 2013), which result in 13 different variables (listed above as well). The respondents were tasked to rate these thirteen factors, from 'strongly positive [influence on our garden]' to 'strongly negative [influence on our garden]'.

### Do you need support on the aspects that are hindering your Community Food Garden?

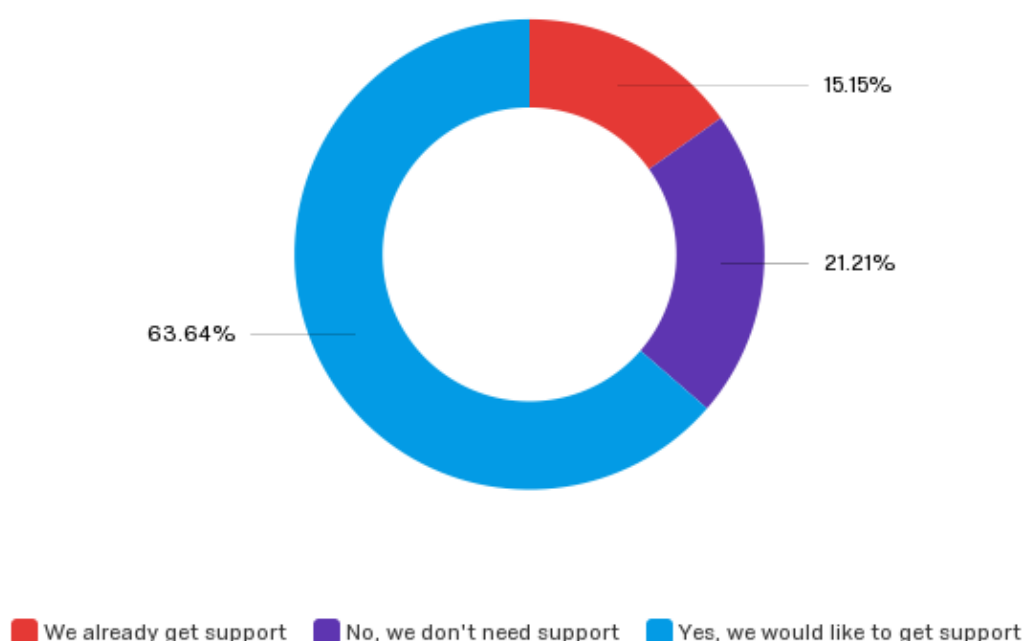


Figure 16 Support on hindering aspects for Community Food Gardens

Following question 8, respondents were asked whether they would like to get support with the factors that they felt were having a negative influence on the garden. There were three possible answers: "No, we already receive support with these factors", "No, we do not need help" and finally "Yes, we would like to get support with..." - which the respondents could then elaborate on. Twenty-one gardens, 64% of the respondents, indicated that there was something that they would like to be supported with.

As for question 8, an interesting result is that only nine respondents rated one or more factors as having a 'strongly negative' influence. The option 'strongly positive' was used much more often. Thus, the attitude in general seems to be on the positive side. However, this does not mean that the gardens would not like to receive some support, as is shown by the response to question 9. The suggestions that respondents gave for areas of support in question 9 will now be elaborated upon, and compared to findings from the qualitative research and question 8 in the questionnaire.

Five respondents of the questionnaire said that they would like support with funding in one way or another, for example with subsidies or sponsoring. We also found this in one of the gardens we visited, the Hof van Noord in Rotterdam. Karin, the initiator, listed several things that the garden could do with more money as their income now only covers the basic cost. For example, they could

pay for professional gardeners to give some advice and assist with the pavement and right now they actually need money to isolate the building. Her idea is that crowdfunding may be a way to raise funds, but she does not have a lot of knowledge about how that works. This is something she would like to be supported with. In the other cases from our qualitative research, funding was less of a concern. While Hof van Noord has to pay rent for the land they use, the Boschveldtuin and the Rijke Sterrentuin do not have to pay any rent, and the Milieuvriendelijke Tuin Uitgeest is able to cover the costs with the sale of the harvest. The Gandhi garden is renting out the building on their plot as a source of income. They also have sponsors and a network of supporters who supply them with funds and free products.

In question 8 of the questionnaire, respondents were asked to what extent subsidies were a positive or negative influence for the functioning of the garden. Fourteen gardens (44%) said that subsidies were a somewhat positive or strongly positive factor. Eleven (34%) said it was a neutral factor. Seven said it was somewhat negative or very negative. Thus, there is a strong variance in the experience with subsidies. This mirrors the experiences of the gardens we visited, some of which received funding from several external actors, while others have found a way to cover the costs by themselves, and one is somewhat concerned about ensuring enough financial resources.

A factor that relates with the gardens' ability to receive subsidies is their communication with the municipality. Improving the relationship with the municipality was mentioned a few times by the respondents of the questionnaire as an area that they would like to get support with. In question 8, we asked them to indicate to what extent policy and regulations formed a positive or negative influence. The variance in terms of ratings is similar to the variance in respondents' experience with subsidies. Policy and regulations are experienced as a somewhat positive or strongly positive factor by twelve respondents (36%), another thirteen said that it was a neutral factor, and eight (24%) experienced it as somewhat negative. Only one respondent rated this factor strongly negative. In question 9, about receiving support, one respondent expressed a need for different municipal policy in terms of selling land. Another respondent indicated that the communication of the garden's plans to the municipality could be better, "so that [the landlord and the municipality] can no longer ignore us".

In comparison with the results from the questionnaire, the gardens that we visited for qualitative research seemed to have more positive experience with the government, except for Hof van Noord in Rotterdam. The initiator of this garden explained that the subsidies were constantly changing, and that there was a lot of bureaucracy involved. While Hof van Noord rents their land from the municipality, part of this rent is also subsidized by a different part of the municipal government, so that the municipality is essentially subsidizing itself. For the board member of Hof van Noord, dealing with the municipality was thus a bit complicated. The Gandhituin, which is renting land from Hof van Noord, said that they did not want to deal with the government at all - and since they do not rent from the municipality, they do not need to. The two other maturing community food gardens, the Boschveldtuin and the Rijke Sterrentuin, both were happy with the municipality's support. They are both using municipal land for free, and the municipality has helped them financially. As for the Milieuvriendelijke Tuin Uitgeest, this garden is operating independently from the municipality. The garden is registered with the city, but there is no contact.

Commitment of participants is very important for keeping the gardens going. Maintaining the gardens requires people to work regularly on watering plants, removing weeds and taking out snails, for example. Occasionally, there are also larger tasks that need attention, such as renovating a common area of the garden. Finally, organizational tasks also require energy - organizing activities, keeping track of the members, and so on. For these reasons, board members of the gardens that we visited were very concerned about making sure that people are involved and take responsibility. In the Rijke Sterrentuin, the board members put a strong emphasis on the importance of individual initiative. The members do not show as much initiative as the board members would like. Some respondents to the questionnaire are also concerned about having enough people involved in the garden. However, the majority was positive about the availability of people. 62% said the availability of people was somewhat positive to very positive for the functioning of the garden. 19% found it a

somewhat negative factor, while only one respondent indicated that the availability of people was a strongly negative factor. Of the 21 respondents that indicated that they would like support with something, six of the answers had to do with finding participants and/or increasing the commitment of the participants. An example of a response that illustrates this concern:

*“In particular we need more people, who want, and are able to, organize and who have some more time to garden. But every time we need to consider what we want to focus on: do we want to use our time to recruit new people or are we going to garden? Then everyone wants to go gardening, because that is the reason that they joined. So it is a vicious cycle ;-(“*

All gardens rely strongly on the involvement of the board members. There is some concern about how this will work out in the future. The Milieuvriendelijke Tuin in Uitgeest has found a way to deal with this: all participants have been part of the board at some point, and they continue to rotate board membership. In the other gardens that were included in the qualitative study, all the interviewed board members had been involved with the garden from the very beginning. Two board members of the Boschveldtuin mentioned that in the future, they would like to have some other people that could take over some responsibilities from the organizing part: that the existence of the garden will not only rely on them. The board members of the Rijke Sterrentuin were also hoping that other people, from a younger generation, would join the board in the future. But, as already mentioned, they are not seeing a lot of eagerness from their members to take more initiative.

As mentioned in the introduction to this chapter, the factors that respondents of the questionnaire considered to be very positive are also interesting to look at. ‘Permission to use the land’ and ‘Available space’ were rated somewhat to strongly positive by 78% and 84% of the respondents respectively. These factors are, of course, prerequisites for any garden to start up. ‘Access to seeds and garden materials’ was also rated very positively. The respondents were also highly positive about the board of the garden, but it should be noted here that most of the respondents were likely part of the board themselves.

Cooperation with other gardens might be an interesting source of support for community food gardens. This is also a factor that respondents were asked to rate in question 8 of the questionnaire. More than half of the respondents perceive this as neutral factor to the functioning of the garden. Nine (27%) perceived it as somewhat positive, and seven (21%) perceived it as somewhat negative. Thus, cooperation with other gardens does not seem to be very influential. In the gardens that were part of the qualitative research, this seems to be the case as well. Only the board members of Gandhituin in Rotterdam said that they had exchanges with other gardens. They are actively working on creating a network of likeminded people, and the foundation that is behind the Gandhituin is also looking to start new gardens elsewhere in Rotterdam. The other gardens in the qualitative research had not focused their attention on exchanging with other gardens, although Hof van Noord is of course interacting with the Gandhituin. They could not exist without each other.

### *Concluding remarks*

Combining the data from the questionnaire and our field visits gives an indication of potential areas of support for maturing community food gardens. The main concerns for the future endurance of the gardens relate to funding and commitment of people. Different gardens have different ways of covering their costs, and some are managing perfectly on their own. But assistance with increasing funds was mentioned most often as a suggestion in our questionnaire. Subsidies are one source of funding, applying to trust funds was another. Community food gardens have very mixed experiences with this. Another concern is the availability of committed people. Successful gardens require members that maintain their gardens well in general they need to take care of their own lands, but

also for the common good or something like this, this is particular for gardens with no common plot, as well as a few people who dedicate time for organizational tasks. The recruitment of people and motivating them form a second potential area for support, although it is a bit difficult to define what support in this area would look like.

## 5. Conclusions

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Having considered the three subquestions, we now return to the main question of our research project:

*What are the needs of maturing community food gardens to reach their own goals?*

We will use our findings from each subquestion to construct the answer to this central question. We first wanted to get a better idea of how maturing community food gardens are currently doing. From the questionnaire, we got an overview of the scale of community food gardens in our sample. An overwhelming majority is between 3 and 10 years old, which fits with the criteria we set. Most of them have 11-30 people who come to garden monthly, though there is also a large amount of gardens in which less people are working as frequently.

In a large majority of the gardens, less than five people are responsible for most organizational tasks. In the gardens that we visited, there are over thirty people who garden from time to time, and most of them have boards with 5-8 people. From our field visits, we got more insights into the various ways in which the gardens are organized. They are all aiming to produce their food organically. Additionally, each garden has some rules about what participants are expected to do, although the extent to which this is formalized varies greatly. In the four maturing food gardens we visited, the board members we spoke to all have been involved from the very beginning. Only the older garden in Uitgeest has seen a lot of board rotations already.

There is great variation in how the gardens cover their costs - some have paid membership, some don't; some are receiving subsidies, some are not. This is related to the external actors with whom the gardens deal with. In some cases, the municipality has made the land available for free, making costs less of a concern, while in other cases, rent needs to be paid. In short, the gardens are all different, but what they have in common is that they have managed to continue their activities for over three years.

The next question, then, is what goals community food gardens have for the future. In the second analytical chapter, we described the goals and visions. The questionnaire results gave insight into the goals that were set at the start of the gardens, and to what extent the gardens were managing to achieve these goals. Goals in this sense can also be understood as the intended functions of the gardens. These functions include providing a social meeting place, improving the neighbourhood, producing food, and sharing knowledge about nature. The respondents of the questionnaire all said that these goals had been reached at least partially. Our qualitative data gives an indication of how these initial goals relate to the goals for the future.

The interviewees in the five gardens we visited also perceived their gardens as social meeting places, places for food production and knowledge sharing. These functions were underpinned by the way the interviewees look at the world and which values they find important. Values such as commitment and reciprocity matter to them, and this is reflected in how they organize their garden and what they want to achieve with it. Asked how they envision the future of the garden, they mainly emphasized their hope that their garden could continue to function as well as it is functioning now. Based on the interviews and participatory observations, we can conclude that the strengths of the gardens are that they have a board who takes organizational responsibilities and have active participants, with a balance between social aspects and gardening. At the same time, this informal structure is a matter of concern regarding future uncertainty. During the fieldwork, many people

expressed concerns about not having anyone to take over the organizational responsibilities after them.

For each garden, there are some specific needs attached to this goal of continuity. In the gardens that we visited, the main concerns revolved around commitment from participants and funding. Funding was also mentioned most often by respondents of the questionnaire as something they would like to be supported with. Some of these specifically highlighted subsidies as a source of funding. The second concern that we found in the gardens, commitment of people, was also echoed in the suggestions made by the questionnaire respondents. Several respondents indicated that they would like support with finding new participants and motivating people to stay committed. Thus, while the gardeners find it highly important that their garden is a place for social interaction, the social aspect is also a challenge. There seems to be some tension between wanting to be open to everyone and demanding that participants are actively involved.

Despite the fact that we were able to identify some clear needs/concerns, it is also good to remember that not all gardens want support. In our field visits, we could observe a sense of pride in each of the gardens. Part of what seems to make community food gardens attractive as social meeting places is the opportunity to organize something together, on the community's own terms. Some of the interviewees explicitly talked about the importance of managing the garden independently, without interference from external actors. Thus, some gardens are reluctant to welcome external support. As for the respondents which did indicate that they would like support, many of their suggestions were very specific. Therefore, it seems that they have a clear idea of what they still need, while they are happy to manage the rest by themselves.

## 6. Recommendations

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At the start of this project we were commissioned to do a research project on the needs of the community food gardens and whether or not they would need support. Based on our research and the drawn conclusions, we will give recommendations about how to provide support to community food gardens. Furthermore, we will give an indication whether further research on this topic is needed.

- A. The community food gardens have very different present conditions and depend on their context. Therefore, a general overall solution for all the gardens is not appropriate.

*We recommend involving the participants of the community food gardens when designing strategies of support.*

- B. The community food gardens targeted in this study are considerably satisfied with their performance. They present a high grade of own initiative and appreciate their independence towards external actors. However, some board members expressed their concern regarding funding, technical knowledge and reinforcing commitment of participants.

*We recommend supporting community food gardens in a way that their skills and capabilities are acknowledged. For example, building upon networks of mutual support or creating spaces to share experiences and learn from each other.*

*We recommend to pay especial attention to funding, technical knowledge and funding. In this three cases, it is recommendable to appreciate what is already there and how to improve it.*

- Funding: Exploring new ways of funding or making more accessible the ones already existing such as subsidies.

- Technical knowledge: Investing in strategies to reinforce and spread the technical knowledge already existing in community food gardens. It can be a digital platform where members share their challenges and their experiences; but also boosting participants to visit other initiatives and share their experiences.
- Lack of commitment: Give special attention to ways to overcome lack of commitment in community food gardens. For example, work on different forms of leadership sharing experiences between board members.

C. The concerns of participants are similar between gardens and refer to uncertainty of future and daily challenges.

*We recommend creating a space where they can ask for practical help and specific questions without much intervention in their initiative. For instance, creating a help desk or enhancing network of mutual support.*

*We recommend paying special attention to the areas of communication, structure and organization.*

In line with the recommendations regarding the support, further research could be focused on how gardens can learn from each other and how knowledge between gardens could be transferred. The long-existing Milieuvriendelijke tuin explicitly mentioned that they are willing to share their knowledge and that they are in favour of duplicating their case.

Furthermore, something to explore is, if networks are useful to get support. Paradoxically, networks could also be an obstacle or could reinforce the problems of the gardens, if they face the same problems. People in the community food gardens are only spending their leisure time in the garden, so they might not have time to exchange knowledge and network with other gardens. In this context, we found interesting to explore the gap knowledge regarding hands on solutions rather than more theoretical approaches. For example, an idea could be to compare different cases in order to find out which strategies are more useful for the development of community food gardens.

Our research has illustrated that community food gardens are a blooming topic. They are being researched being researched from multiple disciplines and perspective. We suggest a more practical approach in order to both complement the theoretical findings and contribute to the daily challenges of community food gardens.



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# APPENDIX

## APPENDIX A. Information about the samples

### Location of initiatives for questionnaires

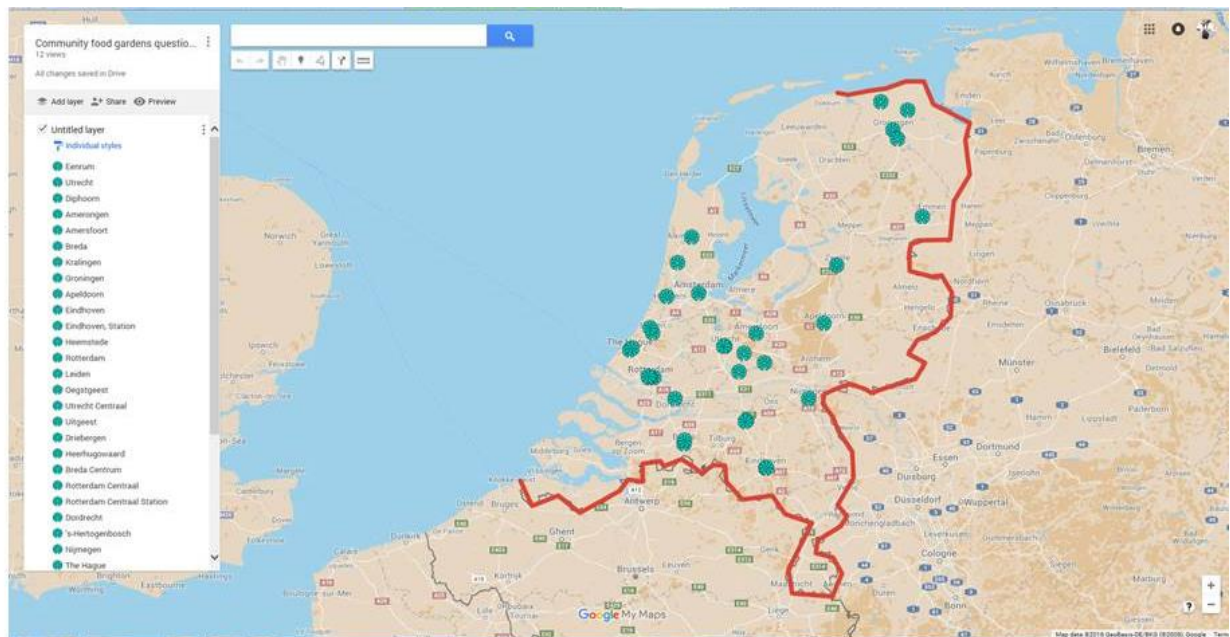


Figure 17 Location of initiatives for questionnaires

## APPENDIX B. Email and Questioner Form

### Email for respondents

Beste Moestuinder,

Natuurlijk is deze mooie dag ideaal om lekker in de tuin te zijn. Toch zouden we u willen vragen of u tussen de 5 en 10 minuten vrij kunt maken om een enquête in te vullen over het succes van uw tuin.

Wij, zes studenten van de Wageningen Universiteit, doen een onderzoek naar buurtmoestuinen die al een aantal jaar bestaan, om te zien wat hen succesvol maakt en wat er nog nodig is om hun doelen te bereiken. We denken dat uw moestuin relevant is voor ons onderzoek. Daarom hopen we dat u ons hier wat meer over kunt vertellen en de enquête wilt invullen:

[https://wur.az1.qualtrics.com/SE/?SID=SV\\_eqBoVLuQtPOIR5j](https://wur.az1.qualtrics.com/SE/?SID=SV_eqBoVLuQtPOIR5j)

Deze enquête wordt verspreid onder 80 andere buurtmoestuinen door heel Nederland, waardoor we inzicht krijgen in de meest belangrijke succesfactoren en uitdagingen. We denken dat dit wellicht ook interessant is voor u! Daarom zullen we u op de hoogte houden van de resultaten als u de enquête heeft ingevuld.

We kijken uit naar uw ingevulde enquête. Mochten er onduidelijkheden zijn, dan kunt u vragen sturen naar dit e-mailadres.

Alvast bedankt,

Susanne Conradi

Emma Vogt

Inge Buurma

Andy Aryawan

Maike Schmoch

Maria Aurell

## Questioner Form

### Enquête Buurtmoestuinen

Beste moestuinder, Heel erg bedankt dat u even tijd neemt om deze enquête in te vullen, hiermee helpt u ons enorm!

1. Wat is de naam van uw buurtmoestuin?

2. In welke plaats ligt uw buurtmoestuin?

3. Hoe lang bestaat uw moestuin al?

- ☐ Minder dan 3 jaar (1)
- ☐ Tussen de 3 en 10 jaar (2)
- ☐ Tussen de 11 en 20 jaar (3)
- ☐ 20 jaar of meer (4)

4. Hoeveel mensen werken minstens 1 keer per maand in en om de moestuin?

- ☐ Tussen de 1 en 10 mensen (1)
- ☐ Tussen de 11 en 30 mensen (2)
- ☐ Tussen de 31 en 50 mensen (3)
- ☐ Meer dan 50 (4)

5. Kunt u aangeven hoeveel mensen hiervan bezig zijn met organisatietaken?

- ☐ Minder dan 5 mensen (1)
- ☐ Tussen de 5 en 15 mensen (2)
- ☐ Meer dan 15 mensen (3)

6. Welke doelen waren het belangrijkste bij het oprichten van uw buurtmoestuin? Geef alstublieft aan hoe belangrijk u de volgende aspecten vindt voor uw moestuin, van 'heel belangrijk' tot 'heel onbelangrijk'.

	Heel belangrijk (1)	Redelijk belangrijk (2)	Niet zo belangrijk (3)	Heel onbelangrijk (4)
Sociale contacten in de buurt versterken (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mensen meer tijd laten doorbrengen in de natuur (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Zelf lokaal voedsel produceren (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kennis delen over tuinieren en voedselproductie (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Kinderen laten kennismaken met tuinieren en voedselproductie (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een fijnere buurtomgeving creëren (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Een gezondere leefstijl stimuleren (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anders, namelijk: (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

7. Denkt u dat deze doelen bereikt zijn?

- ☐ Nee, geen enkel doel (1)
- ☐ Een aantal doelen wel, een aantal niet (2)
- ☐ Ja, volledig (3)

8. Kunt u aangeven in hoeverre de volgende factoren op dit moment een positieve of negatieve invloed hebben op het functioneren van uw moestuin?

	Sterk positief (1)	Enigszins positief (2)	Neutraal (3)	Enigszins negatief (4)	Sterk negatief (5)
Toestemming om grond te gebruiken (1)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beschikbare ruimte (2)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Hoeveelheid zon (3)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Vruchtbaarheid van de grond (4)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beleid en regelgeving (5)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Subsidies (6)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Toegang tot water en elektriciteit (7)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beschikbaarheid van zaden en tuinmateriaal (8)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Beschikbaarheid van mensen (9)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Samenwerking met andere moestuinen (10)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Betrokkenheid van de omwonenden (11)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Bestuur van de moestuin (12)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Het aantal actieve deelnemers (13)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Relevante kennis van deelnemers (14)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Andere factor, namelijk: (15)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

9. Zou u het fijn vinden om hulp te krijgen bij de aspecten die volgens u een negatieve invloed hebben?

- ☐ Daar krijgen we al hulp bij (1)
- ☐ Nee, we hebben geen hulp nodig (2)
- ☐ Ja, namelijk bij: (3) \_\_\_\_\_

10. Bedankt voor het invullen! Zou u bereid zijn om eventueel vragen telefonisch toe te lichten, mocht er iets onduidelijk zijn? Vul dan alstublieft uw telefoonnummer hieronder in.



## APPENDIX. C. Results on the questionnaires

Name	Place	How long does it exist	How many people work in the garden at least once a month?	How many people are involved with organizational tasks?	Most important goals when garden was established (respondent rated goals 'very important')	Other goals, filled in by respondents	Did garden reach these goals (Yes, completely, completely; Some of them of them; none)?	Factors rated 'strongly positive' for the functioning of the garden	Factors rated 'strongly negative' for the functioning of the garden
Stichting Dorpsmoestuin Eenrum	Eenrum	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	1,3,4,5		Some of them	A	
de Voortuin	Utrecht	Between 3 and 10 years	Between 1 and 10 people	Between 5 and 15 people	1,3,6		Some of them	A,B	
Dorpstuin van Diphoom	Diphoom	Between 3 and 10 years	Between 11 and 30 people	Less than 5 people	1,3,4,5,6,7		Yes, completely	A,B	
Dorpsakker De Parel	Amerongen	Between 3 and 10 years	Between 11 and 30 people	Less than 5 people	1,6,8	Possibilitys of reintegration	Some of them	A,B	
Tuinpark Laakzijde	Amersfoort	Between 3 and 10 years	More than 50 people	Between 5 and 15 people	1,2,3,4,5,6,7		Some of them	A,B,C	
Warmoezerij Wolfslaar	Breda	Between 3 and 10 years	Between 11 and 30 people	Less than 5 people	2,3,4,5,7,8	Realizing a closed cyclus in the garden	Yes, completely	A,B	
Voedselbos Kralingen (= dus geen moestuin...)	Kralingen	Less than 3 years	Between 11 and 30 people	Less than 5 people		all goals were reasonably imprtant	Yes, completely		
Tuinindestad	Groningen	Between 3 and 10 years	Between 11 and 30 people	Less than 5 people	6		Yes, completely		i,ii
Transitietuin	apeldoorn	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	4,5,7,8	Making permaculture known	Some of them	A,B	
Stadsakkers Eindhoven	Eindhoven	Between 3 and 10 years	Between 31 and 50 people	Between 5 and 15 people	1		Some of them		
Doortuin	Eindhoven	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	1		Some of them	A,B	<input checked="" type="checkbox"/>
Kom In Mijn Tuin	Heemstede	Between 3 and 10 years	Between 31 and 50 people	More than 15 people		All goals were unimportant/ the goals is to keep the cultural inheritance of gardening and make it known to children and adults	Yes, completely	A,B	<input type="checkbox"/>
									<input type="checkbox"/>
Tuin aan de Maas	Rotterdam	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	1,4,5,6		Yes, completely	C	<input type="checkbox"/>
Stadstuinen Leiden	Leiden	Between 3 and 10 years	Between 31 and 50 people	Between 5 and 15 people	2,6		Some of them	A,B,C	<input type="checkbox"/>
Vrij Groen	Oegstgeest	Between 3 and 10 years	Between 11 and 30 people	Between 5 and 15 people	2,4,5		Yes, completely	A,B	<input type="checkbox"/>

<b>Wilgenhof</b>  <b>Milieuvriendelijke Tuin Uitgeest</b>  <b>Groentehoek</b>  <b>Buurtmoestuin 'De Middenmoes'</b>  <b>Buurtuin Breda</b>  <b>De Voedseltuin</b>  <b>Tuin op de Pier</b>  <b>De Rijke Sterrentuin</b>  <b>De Graafse Hof</b>  <b>t Aldenhofje</b>  <b>Mariahof</b>  <b>Hof van Noord</b>  <b>Boschveldtuin</b>  <b>Dorpstuin de heemen</b>  <b>Voedseltuin IJplein</b>  <b>buurtgroenteharen</b>  <b>Proeftuin Madestein</b>  <b>het pieterplaatsje</b>  <b>Zwartewatertuintjes</b>  <b>biologische proeftuin Oldeneel</b>  <b>akkers van de Eemhoeve</b>	Utrecht	Between 11 and 20 years	Between 11 and 30 people	Between 5 and 15 people	1,2,3,4,6,7		Yes, completely		
	Uitgeest	More than 20 years	Between 11 and 30 people	Between 5 and 15 people	1,2,3		Yes, completely	A,B	
	Driebergen	Less than 3 years	Between 11 and 30 people	Less than 5 people	1,2,5,6		Yes, completely	A,B,C	<input type="checkbox"/>
	Heerhugowaard	Between 3 and 10 years	More than 50 people	Less than 5 people	6		Yes, completely	A,B	
	Breda	Less than 3 years	Between 11 and 30 people	Less than 5 people	1,3,5,6		Yes, completely	A,B	<input type="checkbox"/>
	Rotterdam	Between 3 and 10 years	More than 50 people	Less than 5 people		All goals were reasonably important, except educating children	Yes, completely		<input type="checkbox"/>
									<input type="checkbox"/>
	Rotterdam	Between 3 and 10 years	Between 11 and 30 people	Between 5 and 15 people	1,3,6		Some of them	A,B	<input type="checkbox"/>
	Dordrecht	Between 3 and 10 years	More than 50 people	Between 5 and 15 people	1	Bringing together totally different people	Some of them	A,B	<input type="checkbox"/>
	Den Bosch	Between 3 and 10 years	Between 31 and 50 people	Between 5 and 15 people	1,2,5,6		Yes, completely	B	<input type="checkbox"/>
	Nijmegen	Between 3 and 10 years	Between 11 and 30 people	Less than 5 people	1,2,4,5,6		Yes, completely	A,B	<input checked="" type="checkbox"/>
	Den Haag	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	1,5,6		Yes, completely	A,B	
	Rotterdam (noord)	Between 3 and 10 years	Between 11 and 30 people	Less than 5 people	3		Yes, completely	B	
	's-Hertogenbosch	Between 3 and 10 years	Between 11 and 30 people	Between 5 and 15 people	1,4,5,6		Yes, completely	A	
	Stedum	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	1,2,5,6,8	Supporting of the concept of farming and in particular care farms	Yes, completely	A,B	
	Amsterdam	Between 3 and 10 years	Between 11 and 30 people	Between 5 and 15 people	1,2,3,4,5,6,7		Some of them	B	
	Haren (GN)	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people		All goals are reasonably important, except 5,6	Some of them		
	Den Haag	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	3,4,7,8	education permaculture	Some of them		
	Culemborg	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	5,6		Some of them	A	
	Zwolle	Between 11 and 20 years	Between 1 and 10 people	Less than 5 people	3,4		Yes, completely	A,B	
	Zwolle	Between 3 and 10 years	Between 1 and 10 people	Less than 5 people	2,3,4,7		Yes, completely	A,B	
	Zwolle	Between 11 and 20 years	Between 1 and 10 people	Less than 5 people	1,2,5,6,7		Some of them	A	



## Appendix D. Qualitative research: Topic list and codings for data analysis

### Codes for data analysis

- General network
- General info (size, technical approach, location)
- Physical structure garden
- Hindering factors
- Organizational structure
- Funding
- Garden as source of knowledge
- Garden as meeting point
- Food production function
- Ideology, worldview
- Inspiring other projects
- Current external supporters
- People bring knowledge in garden
- Secondary functions
- Success factors
- Hobby

### Topic list

#### Introduction

- The project & us
- The method (structure of interview, timing)
- Permission to record?
- Why are you active in this garden?

#### Getting to know the garden: People, Activities, Organization( Formality?)

- What's your favourite thing/place/ activity in the garden?
- "How would you describe the garden?" & your favorite thing?
- This garden could not exist without.....?
- How do you feel your garden has developed over time? (#of participants, enlargement)
- Happy with current situation? Going well or not?

Make sure you know about...

- Initiator(s), initial purpose
- Overview of the participants
- Overview of the activities
- Task division

#### Future *goal -> purpose-> what do you want to reach*

- 5 years from now
- Specific goals? Most important?
- Needs to reach future goals: What do you need to get to this goal?

- Helping & hindering factors in achieving vision: This garden would work better, if ...

#### Stakeholders

- Do you have contact to external actors? With whom?
- What kind of contact? Network?
- How do you benefit from the contacts? Or not benefits at all?
- Happy/ Satisfied about the contact?

#### Support

- Potential places to go for support?
- Ideas: How should support look like?

Fieldwork notes available upon request