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How to communicate change:
communication between municipalities
and community gardens

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Abstract

Community gardens are cooperative garden plots, which are located all throughout the Netherlands. People can rent a part of these gardens and cultivate their own vegetables, fruits, and flowers. The gardens are said to have a positive impact on the social interaction, financial state, nutrition, and amount of exercise in the lives of these gardeners. Often these gardens are directly rented from the municipality. This rent-relationship and the need to comply with municipality policies and laws make that the gardeners of these gardens need to communicate with the municipality. Even though this communication is vital for the existence of these gardens, not much is known about this communication. To create an image of what this communication looks like an online survey was held, which was filled in by 540 Dutch gardeners from different urbanization levels. The non-urban group consisted of 144 gardeners, the slightly urban group of 61 gardeners, the urban group of 253 gardeners, and the densely urban group of 82 gardeners. The results of this research show that the gardeners are not specifically satisfied or dissatisfied with the communication with their municipality. They do wish for the municipality to take on a more assisting or facilitating role. Concerning the communication itself the main recommendations of the gardeners were for the municipality to respond quicker, keep their promises, and have a specific contact person for the community gardeners. The gardeners also noted that they would like to be updated in case the municipality has other development plans on their land.

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1. Introduction

The Netherlands has about 240.000 community garden plots, this includes both communal gardens and individual gardens. (Diederick, 2016) In these gardens, people have the possibility to cultivate all kinds of plants; from decorative flowers to edible fruits and vegetables. Aside from this focus on plants, community gardens contain a social aspect. The gardens give an opportunity for creating a community. There are several reasons why people get involved in community gardens: the gardens can help people exercise more, eat more vegetables and fruits, and gardening is seen as a pleasant activity. The gardens are seen as spaces that can improve health and quality of life for the people using them and living in their surroundings. As noted by Quested (2018 - 173): *“These include improvements in health, access to fresh foods, money-saving, education, reduced crime, increased safety, environmental sustainability, improved life satisfaction, environmental equity, and increased biodiversity, and social cohesion.”*

Next to the impact community gardens have on gardeners, community gardens are also noted to have an effect on the surrounding area. According to the literature, this is especially the case in urban environments. Due to urbanization, there is a decline in the quality and quantity of greenery in the area, which impacts biodiversity (Zhou & Wang, 2011). The more urbanized the area is, the more nature needs to make place for built environment. In areas like these, community gardens can add greenery to the built environment. It has been shown that greenery in built areas increases the happiness of the residents and decreases their impact on the environment (van Leeuwen, Nijkamp, & de Noronha Vaz, 2010).

Community gardens are often managed by the local community and other people who participate in them, however, they still need to interact with the municipality. There are certain policies and rules the gardens have to follow, especially concerning the land they use and how to use it.

Communicating on this topic can be quite complex since municipalities often prefer building homes on lots instead of having community gardens since homes generate income (Wildschut, 2012). In addition, the municipality often does expect that this communication will be used only in essential cases since municipalities prefer community gardens to be autonomous due to budget cuts on the government side (van der Stoep, 2014). It can be said that the municipality expects the community gardens to be autonomous, but the gardens do need some kind of guidance concerning obtaining their lot and how they have to use it. These different expectations can be a source of conflict between the municipality and community gardens (Borup, Brown, Konrad, & Van Lente, 2006). If the gardeners have certain expectations and these are not met, their attitude towards the municipality can become more negative, starting future communication off at a lower expectation and a more negative note, which in turn, can increase conflict.

What exactly these differences in expectation between the gardeners and the municipality are is unclear. Information is not only lacking in regards to these expectations, but also concerning the communication that takes place between municipalities and community gardens. This is a problem since information concerning this communication is essential in understanding both the social and the policy processes that take place in this context. Therefore, this research aims to create an understanding of the experiences the gardeners have with communication with their municipality.

1.1 Main research question

As mentioned before, not much is known of the communication process between municipalities and community gardens. This is an issue since the communication between the gardeners and the municipality is of importance for the gardeners to make the garden fit in the municipal political landscape. If the communication is lacking, the gardeners might not be aware of the rules and

policies for the garden. To adapt this communication process so both sides can benefit, more should be known about this communication.

This research focuses on the community gardeners' side of the communication since the communication makes that they can keep on using their garden, and a lack of communication presumably has less of an effect on the municipality. Before wanting to improve this communication, it should be known whether the current situation is experienced as a problem, or whether the communication experience is satisfactory. Bringing us to the main question of this research:

What are community gardeners' experiences with municipality communication?

2. Theoretical framework & Research Questions

2.1 Community Gardens

History

Communal gardens have a long history. There is evidence of 2000-year-old communally managed agricultural plots in Cornwall (United Kingdom) (Lovell, Husk, Bethel, & Garside, 2014). Not much is known about these plots. The more detailed information about community gardening stems from around the mid-1800s. Around this time there was an economic recession which increased unemployment. People would make plots of land accessible for the unemployed and the poor to cultivate their own food (Lawson, 2004; Wildschut, 2012). Giving plots of land to these people was seen as a form of charity, but sometimes low rent prices were asked (Wildschut, 2012). The families could use the land to cultivate enough food for themselves and sell the surplus. This surplus was often sold for relatively high prices, due to the freshness and quality of the produce (Lawson, 2004). The gift of these plots of land was only of a temporary nature, and the landowners made the families sign agreements that if they needed the land back they could take it, with no liability for the lost crops (Lawson, 2004).

Around 1891 the School Garden Movement was happening in the USA. This movement wanted to replace purely theoretical learning by observational and practical learning, partially by introducing gardening at schools (Lawson, 2004). Gardening was seen as a way to teach children, immigrants, delinquents, and disabled people appropriate social behavior. The school gardens were often supported by garden clubs, civic improvement societies, and women's organizations, and were located on vacant lots and parks close to the school. Next to education this way of gardening also had the advantage of living environment beautification (Lawson, 2004).

When World War I came around municipalities in the Netherlands freed big plots of gardening soil to combat the prolonged food shortage the war created (Wildschut, 2012). Often tools, seeds, and other resources were provided by the government. In these times there was a preference for community gardens as opposed to individual gardens, as they saved time, labor, and equipment (Lawson, 2004).

After the war, gardeners' associations were created and took over management of the gardening plots from charity organizations and municipalities (Wildschut, 2012). When the Great Depression struck in the 1920s gardens were again being used as a way to cultivated produce for families who were hit by poverty (Lawson, 2004). It was during this time that in the Netherlands a group of gardeners decided it would be beneficial to unite the gardening associations, this happened in December 1928. It was named the *Algemeen Verbond van Volkstuindersverenigingen* in Nederland (AVVN, National Bond of Gardeners' Associations in the Netherlands). (Wildschut, 2012)

When World War II hit, the gardens were again used as a war effort, to produce enough food for the people in the country and those serving abroad. (Lawson, 2004) However, during the cultivation of these war effort gardens, it was also noted that gardening as an activity has several benefits such as healthier diets, exercise, recreation, a distraction from worry about loved ones in the front lines, and civic beautification. (Lawson, 2004)

After the war, the AVVN tried to show people that gardening was not only a national effort during the war, but that it could also be an enjoyable pastime. (Wildschut, 2012) Gardens were not only seen as locations for the cultivation of produce, but also as spaces for recreation, relaxation, and beautification. Furthermore, the gardens were used to help the youth who grew up in WWII adjust to a post-war society. (Wildschut, 2012) Not only were those efforts focused on youth who grew up

during the war, but the mental health effect of gardening was seen and appreciated for people all throughout society. (Wildschut, 2012)

In the 1960s the beautification aspect became more important and women's associations and garden clubs started these kinds of projects in urban areas. (Lawson, 2004) Due to an increase in economic prosperity, the gardens lost a big part of their economic incentive and became more focused on the other aspects. (Wildschut, 2012) In the 1970s a more political and societal aspect was added to community gardens. Community gardens were seen as ways to counteract inflation, civil unrest, and develop abandoned properties. (Lawson, 2004) Furthermore, the gardens were used to satisfy the new environmental ethic of the time and fulfill the needs for open space citizens of an urban areas had. The gardens were also seen as a means to reclaim and even rebuild communities by managing a garden and working in it together. (Lawson, 2004)

Since the 1980s the interest in community gardening has stayed steady. Community gardens have become quite diverse phenomena. Currently, they are reaching different social-economic levels, from low-income to more high-income neighborhoods, they can be created by independent organizations or city agencies, and there are gardens with special focus groups, such as the homeless, at-risk-youths, university students, or ex-convicts. (Lawson, 2004) Something which is similar across the majority of the community gardens currently in existence is that they are often located on empty, abandoned land, and they nowadays have a more permanent vision. (Lawson, 2004)

Varieties of community gardens

Community gardens have a lot in common. As mentioned before they are used to grow and cultivate plants, food and flowers alike. Furthermore, they can be used as places for people to interact with each other and create a feeling of community.

However, even though the basics of a lot of community gardens are similar, they do come in a wide variety. One of the differences between community gardens is the location in which they are situated. Community gardens exist all over the Netherlands, both in rural and urban surroundings. Next to this difference in the environment, the municipalities in which these community gardens are situated differ in the size and way of governing. Also, the location of the garden itself can differ. Community gardens can be located in neighborhoods, school grounds, prison grounds, hospitals, etcetera. (Flachs, 2010) The goal of the garden differs per location. On school grounds, the goal of the garden will probably be to educate children and their families concerning healthy food, whereas on hospital grounds a goal can be to cultivate healthy local food for the patients.

Next to the location factor, there are other things in which community gardens can differ. For example, the way in which they organize themselves. Some of them consist of a big garden that is managed by the community as a whole and the harvest is shared among the gardeners. (Flachs, 2010) Another way of managing a garden is by dividing it into smaller plots that are managed separately by different people. (Flachs, 2010) In this situation, there is often a board that communicates with the independent gardeners to speak for the garden as a whole.

Another difference between community gardens can be the use of the garden. (van Leeuwen et al., 2010) Some of the gardens are used for production reasons, people want to cultivate their own vegetables, fruits, and herbs to use these for consumption. On the other hand, some gardens are used as an addition to the home. In more urbanized areas people often live in apartments where they do not have a garden. These people tend to use their community garden as one would their garden at home, placing outdoor furniture and decorative plants, and sometimes even smaller sheds to stay the night.

There are also different kinds of farming that can be categorized under the concept of community gardening. One of these types of gardening is community supported agriculture (CSA). In CSA, people subscribe to receive local harvest. With the money from the subscriptions, the farmer can manage the farm and buy the needed supplies and provide for their own needs. (Flachs, 2010) Even though CSA is a form of community gardening, it will not be considered as a type of community garden for the purpose of this research. This is due to how the gardening is done in these situations. In CSA the plot is used by one person or a small group and the community aspect is in the sharing of both the risk and the harvest, whereas this research focuses on community gardens as plots of land shared by different people.

Benefits of community gardens

Community gardens have different effects on the people that use them and the environment the community garden is located in. To create a better overview of the effects they will be categorized into four groups: economic, health, social, and environmental.

Community gardens can have positive economic effects: they can increase property value by enhancing the area with the greenery they provide (Flachs, 2010; van Leeuwen et al., 2010) and they can impact people on an individual level by decreasing food insecurity and poverty due to the cultivation of fresh food for the gardeners (from which the surplus can be sold). (Flachs, 2010; Lovell et al., 2014)

Healthwise, community gardens can affect both physical and mental health. Concerning physical health community gardens create a source of fresh, healthy, and affordable produce. (Flachs, 2010; Lovell et al., 2014) This effect is the biggest in low-income areas. Furthermore, the gardens motivate people to engage in the physical activity of gardening, which makes them spend more time outside. (Lenshoek, 2009; Lovell et al., 2014) Engaging people in physical activity decreases the risks for heart diseases, diabetes & obesity. (Flachs, 2010) However, the increase in exercise can increase local health inequalities, by giving some people the opportunity to exercise, while others can't (for example due to disability). (Lovell et al., 2014) The people who are not able to partake in gardening also miss out on the fresh harvest. Furthermore, an increase in exercise can also increase the number of injuries. People can force themselves to keep gardening when having physical issues, or become competitive and overexert themselves. (Lovell et al., 2014)

Concerning mental health gardens can increase mental wellbeing for gardeners. It is shown that gardening helps with mental issues ranging from being stressed, to burnouts, to helping provide ease with depression. (Lenshoek, 2009; Lovell et al., 2014) However, this also has a turning side. The management of the community garden, which is often done by the gardeners themselves, can create stress and in this way again have a negative effect on the gardener's wellbeing. (Lovell et al., 2014)

A big aspect of a community gardens is the community part. The gardens can help build relationships between gardeners, and even inhabitants of the surrounding area. (Lovell et al., 2014) Managing the gardens and maintaining their presence needs cooperation between different people, so it will create interaction. This interaction can also evolve into a source of activism. (Flachs, 2010) However, creating communities can have the downside of exclusionary behavior. (Lovell et al., 2014) Both between the ingroup of gardeners and the outgroup of non-gardeners, as well as in the group of gardeners itself, due to ethnicity, religion, and other factors. On the individual aspect, gardening can help shape personal identity by helping to discover your own preferences and ideas. (Flachs, 2010) A community garden can also give someone a sense of value and achievement. (Lovell et al., 2014) Finally, while gardening in a community garden someone can learn new skills. These skills can be learned either by experimenting, doing your own research, or learning from a fellow gardener. Some

of these skills may increase the chance of finding a job. (Lovell et al., 2014)

Community gardens also have an effect on the neighborhood as a whole. People living close to community gardens, especially those who make use of the garden facility, are more likely to engage in local politics and other civic activities. (Lovell et al., 2014) This is mainly due to both being part of a bigger group which is engaged with the local environment, as well as experiencing the benefits of local improvements firsthand in the community garden.

Lastly, community gardens have an impact on both the natural and built environment. The green space that is created by having a community garden helps moderate the negative consequences of human activities. (van Leeuwen et al., 2010) More plants mean more potential to absorb carbon dioxide and other pollutants from the air and they can help hold moisture. Moreover, this greenery plays a role in the conservation of flora and fauna, as plants can find a place to grow and smaller animals can take shelter in the community gardens. (van Leeuwen et al., 2010) Furthermore, community gardens create a safe space for children to play, since they often have facilities for children to use while the parents are gardening. (Flachs, 2010) Even though community gardens have a good effect on the environment, the environmental state of the garden can also impact people, especially when knowledge is lacking. The ground of the community garden can have metals and contaminants which can cause health issues if not handled properly. Next to this effect on people, overuse of the ground can also deplete it of minerals and other particles needed to keep the ground fertile. (Lovell et al., 2014)

Definition

After having explored the different aspects of community gardens in the previous parts of this chapter, this information can be used to create a definition for the concept of community gardens. One part becomes very clear throughout this chapter: an important part of a community garden is the community that uses and manages the garden. (Glover, Parry, & Shnew, 2017; He & Zhu, 2018; Jackson, 2017; Kingsley, Townsend, & Henderson-Wilson, 2009; Laycock Pedersen & Robinson, 2018) Throughout history, these gardens have been communal endeavors, and they still are today. It is also mentioned that community gardens are often organized and managed by the group of gardeners; they are self-organizing groups. (Glover et al., 2017; Jackson, 2017) By maintaining and managing the gardens themselves it keeps the decision-making progress close to the garden and gives the gardeners a sense of importance. (Burgin, 2018; Eizenberg, 2018; Glover et al., 2017; Laycock Pedersen & Robinson, 2018; Mwakiwa, Maparara, Tatsvarei, & Muzamhindo, 2018) However, not every garden is managed in the same way. Some gardens consist of communal plots where the labor and harvest are shared within the group, whereas other gardens consist of a communal part with smaller individual gardens. (Birky, 2009; Haedicke, 2017)

When looking at the location of a community garden, there is a great diversity. Community gardens can be located in urban, suburban, or rural areas. (Birky, 2009) They can also be located on the grounds of public buildings, such as schools or hospitals. (Flachs, 2010) The thing most community gardens have in common considering location is that they are often placed in empty or unused spaces. (Haedicke, 2017; He & Zhu, 2018; Mwakiwa et al., 2018) In rural areas, this often means places where it is inconvenient or not allowed to build. In urban areas those are mostly places where buildings have been torn down, but no action has been taken to place a new building on the lot.

When looking at the kind of activity in a community garden, there is no one certain crop that is being cultivated in all gardens. It is possible for the gardeners to either cultivate decorative flowers, (Solomon, Bamossy, Askegaard, & Hogg, 2013) vegetables and fruits, or sometimes plant small trees for nature conservation. (Birky, 2009; Braswell, 2018; Eizenberg, 2018; Glover et al., 2017;

He & Zhu, 2018; Mwakiwa et al., 2018; Queded, Thøgersen-Ntoumani, Uren, Hardcastle, & Ryan, 2018) However, cultivating edible plants is still the most common, due to their increase in food security.

Taking all of these different aspects into consideration, a definition of community gardens should highlight the importance of the community, its autonomy, and the cultivation of different kinds of plants. Furthermore, the definition should also take into account the differences that exist between community gardens. By using all of this information the definition of community gardens that will be used throughout this research will be:

Community gardens are gardens that are generally organized and managed by a group of gardeners. On these plots, a variety of plants can be cultivated ranging from decorative to edible plants. These gardens can be located in different contexts, such as rural and urban environments, and can differ in the way the community in it is shaped, ranging from a big communal plot to a plot split into different gardens.

2.2 Communication

According to Social Exchange Theory communication is an exchange of assets and information between different people or different groups of people. (Kanwal, Chong, & Pitafi, 2019) According to this theory, interaction creates obligations between communicating people. (Zhu, Sun, Wang, Sun, & Yu, 2019) This means that communicating with one another makes that people create expectations about the behavior, intentions, or plans of the other actor. According to this theory, communication has guidelines on how it should take place. (Zhu et al., 2019) When there is a difference between the expected communication, the expected outcomes, or the guidelines are not followed by one of the communicators, this can result in frustration between the communicators. (Zhu et al., 2019)

Expectations

As mentioned before, the communication between the municipality and the community gardens creates expectations on either side of the communication. Expectations are perceptions people currently have of a future situation. (Borup et al., 2006; Domingo & Beunen, 2013) Expectations are created both consciously and subconsciously.

Having expectations of something has the advantage that it can help to attract the interest of allies, divide roles, and create an agenda. (Borup et al., 2006) However, expectations can also create disappointments for the people having them. When there is a lack of sharing of knowledge between the groups that are communicating, unrealistic expectations can be generated. When these expectations are not fulfilled, problems can take place between the communicating groups and the trust in each other can falter. (Borup et al., 2006; Domingo & Beunen, 2013) One of these issues is the creation of a negative attitude towards the other group (in our case: the municipality). Attitudes are lasting evaluations and expectations of a specific person, group, object, or issue. (Solomon et al., 2013; Wong, 2013) Someone's attitude toward a certain subject has an influence on the way that person behaves with that subject, and in case of the subject being one or multiple people, how they communicate with the subject. The attitude is also the basis for favorable and unfavorable opinions and responses towards the subject. (Wong, 2013)

Since attitudes and expectations are tightly linked, failing to meet the expectations, or having unclear expectations of each other, will negatively affect one's attitude toward the communication partner. People have a preference for consistency in their thoughts, feelings, and behaviors. (Solomon et al., 2013) Meaning that if a person has a negative or unfavorable attitude towards something or someone, they will have a more negative feeling and a more negative idea of this thing or person. This effect is strengthened by the effect of the social judgement theory: people assimilate new

information on attitude objects in a way that keeps consensus with the attitude they already have. (Solomon et al., 2013) Thus, people with a negative attitude towards the municipality will keep finding information and conversations that will confirm their view. These people will behave according to that view. So it is of importance for the municipality to be aware of the expectations of the community gardens in both their wishes and how they want to communicate, to prevent the creation of negative attitudes towards the municipality since that will tarnish the communication process even more.

2.3 Land use planning

Since the topic of community gardens also concerns land use planning, this concept will be discussed. This part does not necessarily focus on land use planning itself, but on the shift that is currently taking place in the world of land use planning. The main challenge that concerns spatial planning is the addressing of collective concerns about the quality of living environments and focusing policy attention to the forces that create these environments. (van der Stoep, 2014) Not too long ago planning was considered an activity done by the government for the citizens. (van der Stoep, 2014) However, this made that policies concerning land use were often not well understood by citizens or met with resistance of citizens. This was due to governments having assumptions about citizen nature and how the environment should suit the citizens, with which the citizens did not agree. (Lee & Schachter, 2018) To remove this conflict and other deadlocks that made the policies difficult to enact, governments decided to take on a more self-organizing approach concerning land use planning. (van der Stoep, 2014) This shift in organization happened internationally and also spread to the Netherlands. In the Netherlands there was also an additional reason as to why this shift was taking place: there were budget cuts on the topic of spatial planning. (van der Stoep, 2014)

Participation

Participation as a concept focuses on the use of collaborative efforts of different groups that are impacted by the project, subjected to the decision-making process, or interested in the project to try and create better understanding and reach a certain goal. (André, Enserink, Connor, & Coral, 2006; Buono, Padiaditi, & Carsjens, 2012; van der Stoep, 2014) The aim of participation practice is to enhance the sustainability of projects, such as policies or planning projects, by making stakeholders collaborate on the project and enhancing their understanding. (Odunola, Odunsi, Awodele, & Diriyai, 2018) Participation can be done in several ways and in several stages of the planning process, which is shown in Figure 1 below.

Level of participation	Methods	Number of people who can be reasonably involved	Timing of the decision-making process
Extended involvement	Participants are able to contribute to the formation of a plan or proposal and to influence a decision through group discussions of activities	Small	Early
Involvement and consultation	Formal or informal dialogue to identify issues of concern		
Information feedback	Dissemination of information with a request for feedback to supplement knowledge and gain better understanding of issues		
Education and information provision	Use of leaflets—newsletters—press releases—adverts—TV—radio	Large	Late

Figure 1: Levels and methods of participation (Buono et al., 2012)

The timing and method of participation used in a project needs to suit both the goal of the project and the way in which this goal will be reached. (Buono et al., 2012) So, to utilize participation in the most efficient and impactful way, it is necessary to know what needs to be done. Therefore participation needs to be carefully planned. (Buono et al., 2012) It is also important to note that more participation does not necessarily mean a more suitable outcome of the project, it all depends on the context. Participation is also not a magical solution to conflict in a planning process since there are reasons why participation might not work; such as an unsuited legal framework, a lack of awareness of the situation, and stakeholder apathy. (Buono et al., 2012)

Urbanization

In recent years there has been an increase in the amount of people living in urban areas. (Worldbank, 2018) Due to the amount of people migrating to more urbanized areas, these areas need to develop more buildings to house these people. Until a few years ago green space in urban areas would be sacrificed for the sake of city expansion. By this way of expanding, urbanization decreases the amount of greenery in the area. (Liu, Wang, Gu, Liu, & Zhou, 2019) However, in recent years more and more urban residents are becoming concerned about the quality of their residential environment. This change is due to an improvement of education, wealth, and the quality of life. Greenery in urbanized areas is now valued to such an extent that people will pay more to live in a house in a greener environment. (Liu et al., 2019)

Research has shown that having a greener residential environment has several positive impacts on the lives of people living in such environments. Having more greenery in the close proximity of residential buildings increases both physical and mental health of residents. (Elsadek, Liu, & Lian, 2019; Ma, Zhou, Lei, Wen, & Htun, 2018) Green areas, such as parks, create space and possibilities for residents to engage in more recreational and physical exercise, which in turn increases happiness. (Ma et al., 2018) Concerning mental health, more greenery increases relaxation and helps reduce stress and fatigue. This increase in relaxation and reduce of stress and fatigue can help prevent mental complications, such as burnouts. (Elsadek et al., 2019; Ma et al., 2018) Overall, more greenery improves the residents' mood and makes them perceive their quality of life higher.

Greenery in urbanized areas does not only have a direct positive impact on the residents. It can also help decrease the environmental issues that exist in urban spaces. Adding greenery in urban built environments can help regulate the microclimate of the area, improve regulation of (rain)water runoff and provide other ecosystem services, like an increase in biodiversity. (Dubová & Macháč, 2019) Due to their focus on plantlife and vegetation, community gardens can have a similar impact on the urban environment. (Dubová & Macháč, 2019)

2.4 Implementations of theory

In this chapter, the concepts of communication, expectation, and urbanization were mentioned. We explored the ideas and theory behind these concepts to establish an understanding of them. Now we will mention their place in this research.

Urbanization is important in the context of community gardens due to the effects of greenery, such as community gardens, on the residents of the area. Since the lack of greenery is a bigger issue in more urbanized areas, community gardens are likely to have a different impact on non-urban and urban areas. (Ma et al., 2018) To acknowledge this difference in impact the community gardens will not be treated as a homogenous group in this research. The gardens will be split into categories depending on their urbanization level. With this approach the potential differences between more and less urbanized areas can be taken into account while analysing and reflecting on the data.

The focus of this research will be on the communication between the community gardeners and the municipality. When looking at the communication process the expectations and experiences of community gardeners will play a central role. The concept of expectation will be used as a way to measure satisfaction with the communication process. Expectations play a key role in communication, since communication between actors is an interaction in which expectations of the other actor and their actions are formed. (Borup et al., 2006; Domingo & Beunen, 2013) Expectations in turn help form attitudes concerning the process. Which can be measured giving an indication of the gardeners' opinions on the communication process.

2.5 Research Questions

Earlier in this thesis, the main research questions and the goal of the research were stated. The main research question is:

What are community gardeners' experiences with municipality communication?

The answer to this question will create a better understanding of the communication process between municipalities and community gardens. To find the answer to this main research questions several sub-questions need to be answered.

First, it is important to know on what topics the municipalities and the community gardens communicate. This can show the reasons behind the communication process and what future communication should focus on. The research question concerning this topic will be:

What are the topics that community gardens and the municipality communicate about?

Second, it is important to know what the process and frequencies of communication between the municipality and the community gardens look like. This is important since the new *omgevingswet* puts focus on participatory processes. To create an understanding of how they currently work the following question will be answered:

In what way do community gardens and the municipality communicate and how is this communication valued?

Finally, to create advice for the municipality on how to adapt the communication process. It is important to know what the community gardens want from of this communication. Also, it is useful to know whether the expectations of the gardeners are fulfilled. Thus, the last sub-question will be:

To what extent does communication between community gardens and municipalities fulfill the expectations of the gardeners?

3. Methods

The research done in this thesis is explorative. The goal of the research is to create a better understanding of the communication process that takes place between municipalities and community gardens. The reason to choose an explorative research approach is the current lack of insights in the form and evolution of the communication between community gardens and the municipality.

This research focuses on the gardeners' perspective of the communication between the community gardens and the municipality. The community gardens that were contacted to participate in this research were all Dutch and located across the Netherlands. I chose Dutch gardens specifically, since this research is heavily related to the municipal context of the Netherlands and it decreased any cultural and linguistical differences between the respondents. Since greenery and community gardens have different impacts on areas with different levels of urbanization, the community gardens were categorized into four groups according to the dataset *Gebieden in Nederland 2018*. (Centraal Bureau voor de Statistiek, 2018b) In the dataset five different groups were used, but for this research they were narrowed down to four. This research used the categories: non-urban, slightly urban, urban, and densely urban. These categories are based on the address-density (omgevingsadressendichtheid), which is the number of addresses within a 1 km radius from a certain house. For the non-urban group this has a value from < 500 to 1000, for slightly urban group it is 1000 to 1500, for the urban group it is 1500 to 2500, and for the densely urban group the density is > 2500. The non-urban group exists out of 144 gardeners, the slightly urban group of 61 gardeners, the urban group of 253 gardeners, and the densely urban group of 82 gardeners.

Data collection

To collect data for this research an online survey was done. The goal of the survey was to gather data concerning the current communication process between municipalities and community gardens and to gain insight to the expectations and experiences gardeners have of this communication. The language of the survey was Dutch to prevent a language barrier between the survey and its respondents. The boards of different community gardens were contacted and asked to spread the survey in their community of gardeners. The survey contained both closed and open questions (Appendix 1), this made for a combination of quantitative and qualitative data as an outcome of the survey.

For some of the closed questions the survey used a 5-point Likert scale. On these questions gardeners had to give a grade on (an aspect of) the garden, the municipality, and the communication process. The idea behind these questions was to measure the gardeners' expectations. Since met expectations create a positive attitude and unmet expectations give a negative attitude, I expected to see these values shown in the use of this scale. (Borup et al., 2006; Domingo & Beunen, 2013) The Likert scale is suitable to measure attitudes and expectations. (Joshi, Kale, Chandel, & Pal, 2015) Furthermore, the validity of the Likert scale increases if the topic on which the scale is used applies to the respondents of the survey. Since the survey focuses on community gardens and the respondents are gardeners, the topic applies well, increasing the scale's validity.

The Likert scale in this research went from 1, meaning very dissatisfied, to 5, meaning very satisfied. I wanted to use an uneven scale, since attitudes can also be neutral, so gardeners needed the opportunity to opt for a neutral answer. I am aware of the possibility for respondents to use the neutral option as a "no opinion" option, however I do believe the use of a neutral option is important to not lose nuance in this case. (Willits, Theodori, & Luloff, 2016) Using a Likert scale with between 4 to 7 options increases the internal consistency and reliability of the scale. (Joshi et al., 2015; Willits et

al., 2016) Above 7 the amount of options becomes abundant, potentially confusing respondents and decreasing the internal consistency and reliability. (Willits et al., 2016) When adding more than 5 options, the increase in reliability is less per option. (Willits et al., 2016) The Likert scale itself was visualized in the survey as a bar on which a block could be dragged to the chosen place. Visualizing the scale in such a manner gives the respondents more of a sense what their grade on the scale means and can help increase the sensitivity of the scale. (Willits et al., 2016)

The most important questions using the Likert scale were:

- Can you grade your overall satisfaction concerning the garden?
- Can you grade your overall satisfaction with your municipality?
- Can you grade your satisfaction with the amount of input you have in your municipality?
- Can you grade your satisfaction with your contact with the municipality?

Next to the questions using the Likert scale, there were closed questions that used multiple choices. These questions were used to create the context for the grades given on the Likert scale. Part of these questions focused on the topic of communication. They focused on topics, methods and the communication process. Since communication creates expectations on either side of the interaction, I believed it useful to look at the way this process is shaped and what the different factors at play are during this expectation-shaping interaction. (Zhu et al., 2019)

Each of these questions gave respondents the opportunity to select the “I don’t know” option, to prevent giving random answers when unsure or lacking experience. If applicable the questions gave the option “Other, namely..” to give respondents the opportunity to add options that differed from the options given in the question.

Examples of multiple choice questions are:

- How often do you interact with other gardeners from the garden?
- What topics were discussed during your contact with the municipality?
- Via which communication method did you have contact with the municipality?
- What role do you think the municipality should have in the improvement of the garden?

Finally, the survey also contained open questions. These questions focused on both creating context surrounding the grades given on the Likert scale and giving the respondents the opportunity to add examples and arguments for answers given to closed questions.

Examples of these questions are:

- Can you describe the ambiance of the garden in three words?
- What topics were discussed during your contact with the municipality?
- Can you specify your answer to the previous question? [changes to municipality contact]

The survey was parted in different sections. This was done to prevent overwhelming the respondents with questions, as they only saw the current section on screen. The sections of the survey are: introduction, concerning the garden, concerning the municipality, municipality specifics, concerning the future, and demographics.

Data analysis

The data that came out of the survey was both quantitative and qualitative. To analyse the qualitative data most of it was quantified by categorization. Some of the qualitative outcomes were used as examples in the written thesis. The data analysis was done in SPSS.

For the questions using the Likert scale the mean grade was calculated per urbanization group. These mean grades were then compared to find similarities and differences between the groups. Generally a gardener will give somewhat consistent grades and not switch between the opposites of the scale,

to make sure the grades were consistent the Cronbach's alpha was calculated using SPSS. If the Cronbach's Alpha has a value lower than 0.5, it is unacceptable, 0.5 is poor, 0.6 is questionable, 0.7 is acceptable, 0.8 is good, and above 0.9 is excellent. (Gliem & Gliem, 2003) Thus, a higher Cronbach's alpha shows a better internal consistency.

Furthermore, a regression was done for the grade given to the garden, as well as the grade given to the municipality. The regression shows whether the grade given for garden satisfaction is influenced by the activity of the gardener in a committee or board, their education, their age, or their satisfaction with the municipality. The other regression shows whether the grade for municipality satisfaction is influenced by a gardener's role in a board or committee, their education, their age, or the communication method used.

The output of the multiple choice questions were frequencies. The answers respondents had given with the "other, namely.." option were either added to existing categories, or added as a new category. To be able to compare these frequencies they were reformed into relative frequencies, into percentages. These percentages were then made visual in graphs using Excel to ease comparison between groups.

To analyse the answers of the open questions, the data was made quantitative by categorization. Then the relative frequencies of these categories were calculated, and again made visible in graphs. In the written part of this thesis some of the outcomes of the open questions are used as examples and arguments on results from the survey.

The results of this research can be generalized to few other areas. The majority of results can be applicable to self-organized and self-managed projects, like grassroots projects, on a municipal level. Especially with similar communication patterns. However, it is unsure whether the experiences of participants in similar projects are similar to the community gardeners'. The results are not generalizable to international contexts with different municipal systems, as this research relies heavily on the Dutch municipal context.

Ethics

During this thesis there was no bias in selection of certain community gardeners concerning age, social standing, etc. A list of community gardens throughout the Netherlands was used to spread the survey to the gardeners. The survey was sent to the board of the garden and the board forwarded it to the gardeners.

While filling the survey the gardeners were anonymous by default. They did have the option to leave their e-mail address to receive the results of this research. These e-mail addresses will only be used for that purpose. The gardeners also had the possibility to opt out of the survey at any point of progress.

4. Results

The survey that was spread among the gardeners was split into several sections, which will be used to present the results in this chapter. The sections will end with a discussion of the presented data.

4.1 Demographics & Introduction

To create a clearer understanding of the gardeners, this paragraph will look at who the gardeners are and how they use their garden.

4.1.1 Demographics

The first results that will be presented are the demographics of the gardeners. In the survey, they were asked to give their age group, highest completed education, and whether they were part of a board or committee in the garden.

Table 1: Mean age group and highest completed education level of the respondents

	Non-urban	Slightly urban	Urban	Densely urban	Total
Age	50 - 59	50 - 59	50 - 59	50 - 59	50 - 59
Education	medium/high	high	high	high	high

In table 1 it can be seen that the mean age group of the gardeners, regardless of urbanization level, is the group between 50 and 59 years. The mean age of the Dutch population in 2018 was 41.8 years of age. (Centraal Bureau voor de Statistiek, 2018a)

Thus, the mean age of the gardeners, in each urbanization level and in total, is higher than the mean age of the general Dutch population.

It is interesting to note, that the densely urban group has no respondents under the age of 30, even though the group of people between 30 and 49 is bigger than in the other urbanization levels. The non-urban group is the only group that has a respondent under the age of 20.

Concerning education, the mean of the gardeners is a high education level (HBO or University). In the Netherlands, the mean education level in 2018 was middle education. (Centraal Bureau voor de Statistiek, 2019) This means that the gardeners in this research are generally higher educated than the general Dutch person.

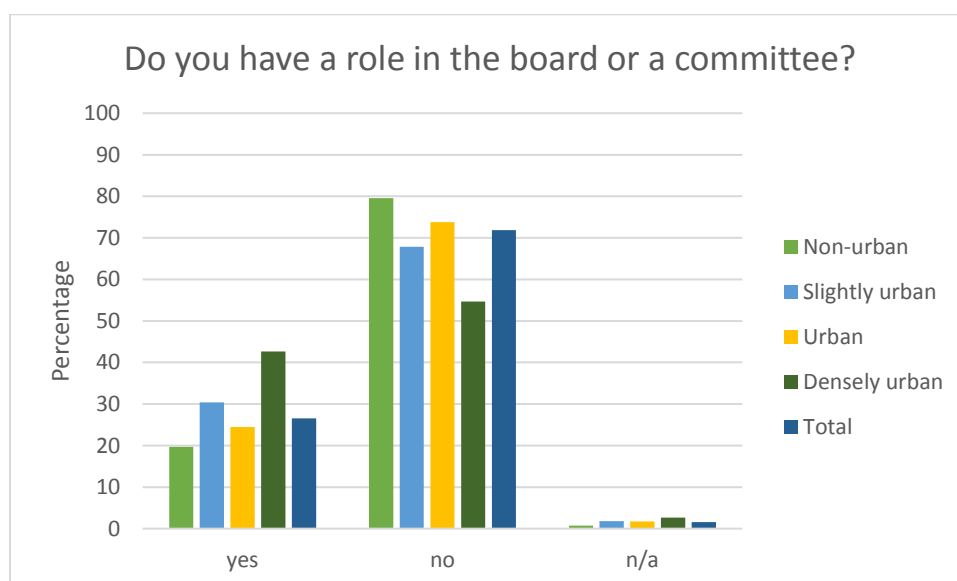


Figure 2: Gardener activity in boards & committees

In the figure above it can be seen that the majority of the gardeners do not have an active role in a board or committee. In the densely urban group the amount of respondents that do have such an active role is the largest, with about 39%.

4.1.2 Introduction

The introduction part of the survey contained some questions to understand the relationship between the gardeners and their gardens better.

For what reason(s) did you join the garden?

This question is meant to create an insight into why people join gardens. The reason why someone joins a garden can change the expectations they have surrounding the garden, and what they find important in a garden.

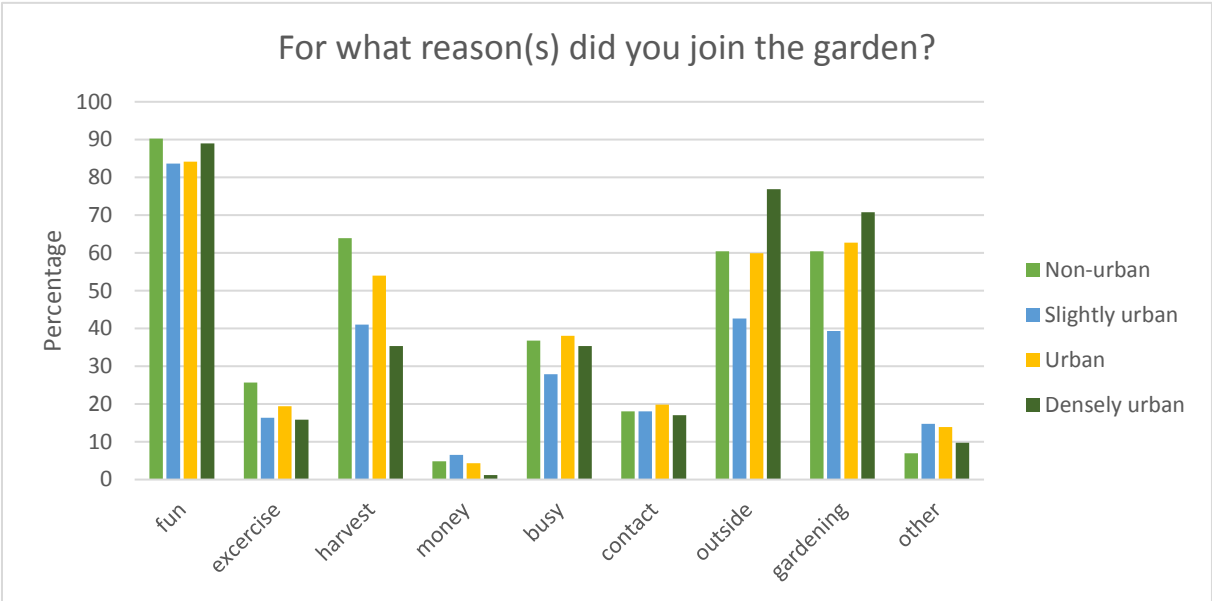


Figure 3: Reasons for gardeners to join the garden

The figure above shows that the most popular reason why gardeners choose their garden is that they consider it fun. Non-urban gardeners more often join a garden to make use of the harvest than any other group. Non-urban, urban, and densely urban gardeners mention “being outside” and “gardening” as important reasons to join a garden. With densely urban gardeners “being outside” is most popular. This can be explained by looking at the environment of the gardeners. In densely urban areas there often is less greenery around. Though, green areas are important for people’s mental and physical health. (Tzoulas et al., 2007) Since greenery makes people feel happier, they are likely to search for greenery in their area to enjoy, in this case, the community garden.

In the figure it is also clearly visible that the least frequent reason that is mentioned for joining a garden is money. It is unclear whether this is due to the lack of importance of this reason for gardeners, or whether they expect negative financial impact of the garden since it needs investment.

When filling the survey, gardeners had the possibility to pick the “other” option when mentioning their reasons. The most frequently mentioned reason in this category is the wish to have organic or at least a pesticide-free harvest. Some gardeners mentioned relaxation and clearing their head in the garden. There were also other reasons mentioned for joining the garden, such as: educating their children on nature, giving workshops in herbology or art, meditating, cultivating forgotten

vegetables, keeping bees, and using the garden as an experimental garden for their gardening architecture job. It is interesting to see that these activities do not only necessarily use the community garden for cultivating produce, but also for extra space, a source of education, and even experimentation for daytime jobs. It can thus be said that gardeners use their gardens for a plethora of different reasons, not all focussing on the gardening aspect.

For how long have you been using this garden?

This question was asked to find out whether the gardeners were already using their gardens for years or whether they had just started, this could give insight into how much experience the responding gardeners have.

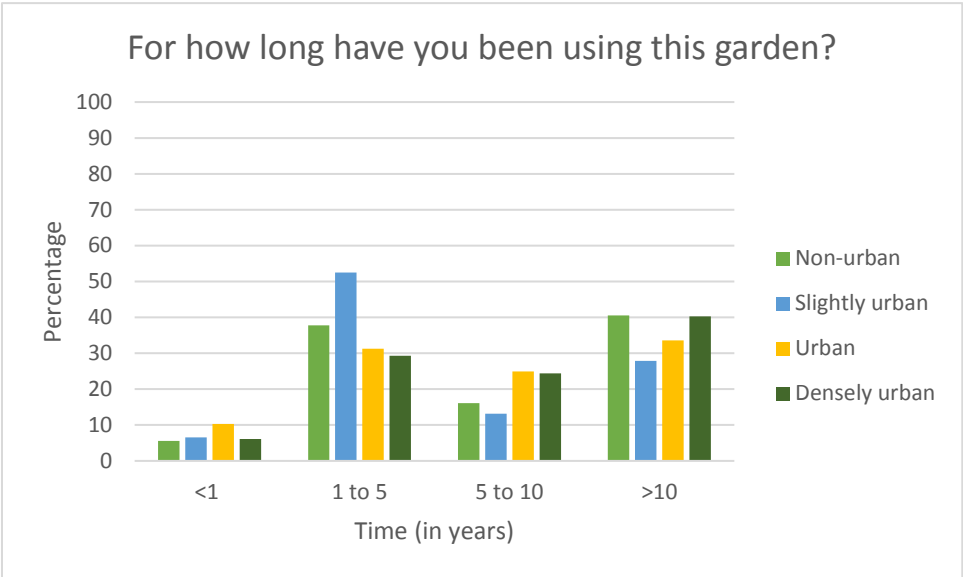


Figure 4: The duration of the gardeners’ joining of the garden

The figure above shows that most of the gardeners have had their garden for more than a year. More than half of the slightly urban gardeners have had their garden for between 1 to 5 years. There are not many gardeners that have had their garden between 5 to 10 years. Whereas there is a relatively large group of gardeners, especially in the non-urban and densely urban areas, that have had their garden for over 10 years. This data shows that the majority of the gardeners has more than a year of experience with their garden and the affairs that are part of owning a garden.

In what way is the garden managed?

Community gardens are managed in different ways which can be categorized as either individual (every gardener has their own small garden on the plot), shared (the whole plot is cared for communally), and partially shared (a combination from both individual and shared management). Even though these different ways of management exist, in all different urbanization levels around 90% or more is managed individually.

4.2 Concerning the garden

This section of the survey asked the gardeners about different aspects of the garden, such as the impact of the garden on the gardeners and the kind of social activities that take place in the garden.

Does the garden have a positive or negative impact on the following aspects of your life?

This question existed out of four categories: food, exercise, social contact, and finance. The goal of the question was to create a clear image of the impact of the garden on the gardeners' lives.

Table 2: gardeners' grades of the garden's effect on nutrition

Group	Grade
Non-urban	4,20
Slightly urban	3,83
Urban	4,06
Densely urban	3,68

The first category that will be discussed here is nutrition. Overall gardeners seem to note that their garden has a positive effect on their nutrition. In the case of densely urban areas, the garden's impact is given the lowest grade, whereas in non-urban areas the garden's impact receives the highest grade. It can be said that overall gardeners give a high grade to their garden's impact on their nutrition.

Table 3: gardeners' grades of garden's effect on exercise

Group	Grade
Non-urban	4,20
Slightly urban	4,34
Urban	4,14
Densely urban	4,19

The next category is exercise. Overall gardeners seem to grade the garden's impact as a positive one. In all different levels of urbanization, the grade for the impact on exercise is higher than the grade for the impact on nutrition. The highest graded impact on exercise is in slightly urban areas, whereas the effect is lowest in urban areas. The difference in grade is not much between urbanization levels.

Table 4: gardeners' grades of garden's effect on social interaction

Group	Grade
Non-urban	3,65
Slightly urban	3,57
Urban	3,56
Densely urban	3,66

The next category is social interaction. Generally, gardeners from all urbanization levels graded the garden's impact on social interaction lower than the impact on nutrition and exercise. Still the grades indicate a positive impact on the social interaction in the gardeners' lives.

Table 5: gardeners' grades of garden's effect on finance

Group	Grade
Non-urban	2,73
Slightly urban	2,47
Urban	2,74
Densely urban	2,70

The last category is finance. This category scored the lowest grades over all.

What effects, positive or negative, do you believe the garden has on its surroundings?

For this question, the gardeners were asked to grade four possible effects of their garden on its surroundings: environment, biodiversity, social interaction, and appreciation. The goal of this question was to find out whether the gardeners felt that their garden had an impact on the surrounding environment.

Table 6: gardeners' grades of the garden's effect on the environment

Group	Grade
Non-urban	4,00
Slightly urban	4,02
Urban	3,94
Densely urban	4,27

The first category is the environment. It is clearly visible that most of the gardeners in all categories grade the effect of the garden on the environment with an above-average grade. It is also visible that the gardeners in urban environments grade the effect of the garden on the environment the lowest, whereas the gardeners in the densely urban areas grade this effect highest. The latter can be explained by the community garden adding more greenery to the area, and greenery is often seen as environmentally friendly.

Table 7: gardeners' grades of the garden's effect on biodiversity

Group	Grade
Non-urban	3,88
Slightly urban	3,95
Urban	3,87
Densely urban	4,12

The second category is biodiversity. Overall this category is voted positive. Again, the grade is highest in the densely urban areas. This higher grade can be the result of the gardens adding greenery to the densely urban areas, where they attract insects and other kinds of critters, which are not found in the built environment of the city itself.

Table 8: gardeners' grades on the garden's effect on social interaction

Group	Grade
Non-urban	3,79
Slightly urban	3,49
Urban	3,65
Densely urban	3,82

The third category is social interaction. The previous question also mentioned the social interaction category. The difference in this category is the scale. In the previous question social interaction was focused on the inter-gardener contact, whereas with this question social interaction means the interaction between the gardeners and the people living in the surrounding environment. The grades given are slightly positive, and again the highest in the densely urban areas.

Table 9: gardeners' grades on the garden's effect on appreciation

Group	Grade
Non-urban	3,73
Slightly urban	3,41
Urban	3,51
Densely urban	3,83

The last category is appreciation. This category entails the appreciation of the people living in the surrounding environment of the gardens and the gardeners have on the appreciation of the environment overall. The grades given to the garden's effect on the appreciation of the environment are positive. Again, as seen by all the other categories, the densely urban gardeners have given the highest grade.

Can you describe the ambiance of the garden in three words?

The idea behind this question was to create insight into how the gardeners experience the ambiance in the garden. The ambiance in a place can influence the opinion someone has about the place and the people in it, as well as the interaction that takes place.

Overall, the words the gardeners used to describe the ambiance in the garden were very similar, and the words that were frequently used all had a positive connotation. In all of the urbanization levels the gardeners mentioned positive social feelings, such as *cozy*, *social*, *friendly*, and *attentive*. Next to a focus on positive social feelings there was also a focus on rest and relaxation with words such as *rest*, *comforting*, and *relaxing*. It is worth noting that the frequency with which words concerning relaxation were mentioned increased with the level of urbanization, meaning that the more urbanized an area is, the more people experience it as a place for relaxation.

How often do you interact with other gardeners from the garden?

To understand the social aspect of the community garden better, the gardeners were asked how often they interacted with other gardeners. The idea behind this question was to see whether the actual interaction matched the grades given for the social interaction categories in the questions above.

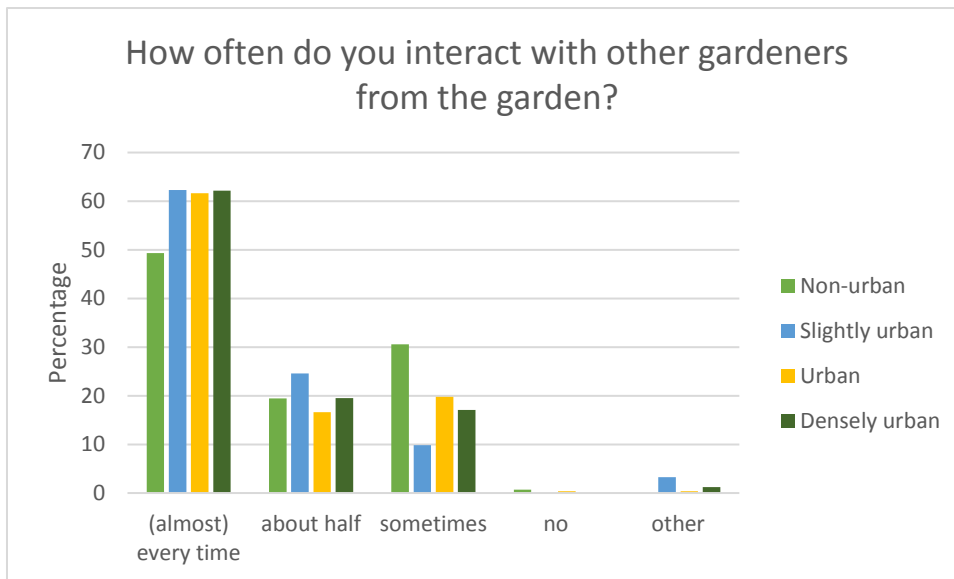


Figure 5: frequency of interaction between gardeners in community gardens

The graph shows clearly that most of the gardeners interact with their fellow gardeners (*almost every time*) they visit their garden. This percentage is somewhat lower in non-urban areas, where gardeners mentioned a higher frequency of *sometimes* interacting. There is also a portion of gardeners that interacts *about half* of the times they visit their garden. There are almost no gardeners that have no interaction with other gardeners, save for one gardener in the non-urban, and one gardener in the urban area.

The gardeners that noted *other* mentioned having superficial contact with others and always greeting each other, but no further contact. Another gardener mentioned having visitors in their garden since they used it for other purposes as well. There were also two gardeners (one slightly urban, and one urban) that mentioned more negative sentiment. One of them feels as if they do not belong in the group, whereas the other mentions the board forming a clique while the others do not belong in it.

Are there any shared activities taking place in the garden?

Since community gardens are not only seen as gardens, but also have a social aspect, it is interesting to understand the activities that take place in the garden. The results from the survey show that in the majority of the gardens activities take place. Especially in the densely urban areas, where a large majority of the gardeners (92%) mention activities taking place in their garden.

In the non-urban gardens this percentage is lower, but still a majority, with 68% of the gardeners. In slightly urban and urban areas the majority of the gardeners mention having activities, in both cases 89%. The gardeners that mentioned that activities took place in their garden were also asked what kinds of activities were organized.

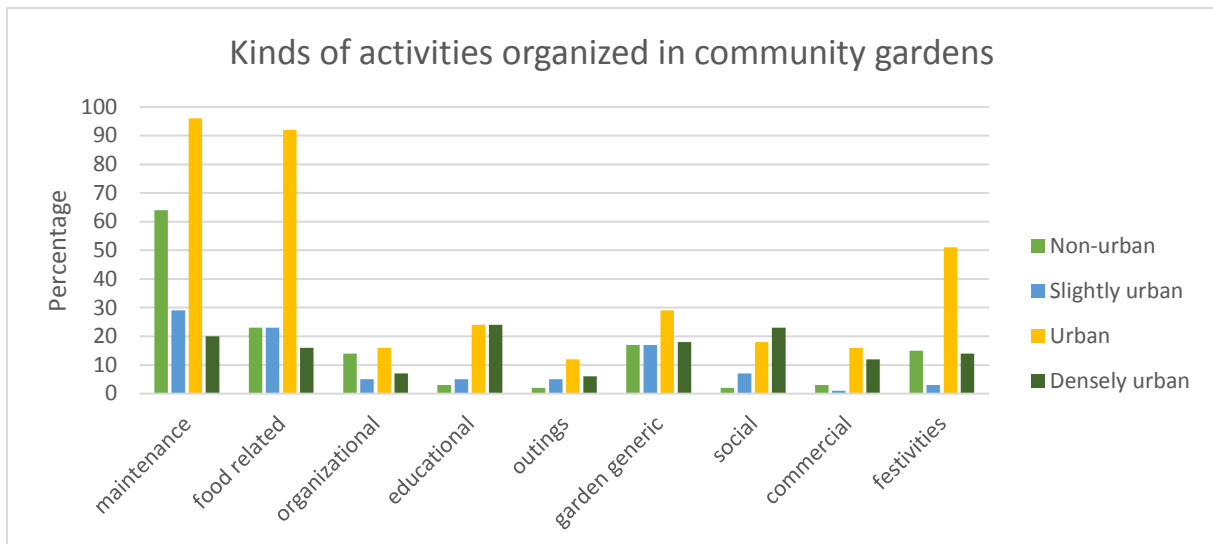


Figure 6: kinds of activities organized in community gardens

The image above shows that there are different kinds of activities that take place in community gardens. In both non-urban and urban areas *maintenance* activities are frequently mentioned. These are activities that entail maintaining the garden complex, such as mowing the common grass, cutting trees, and cleaning common buildings. In urban areas, *food-related* activities, such as dinners and barbecues, and *festivities*, such as a Christmas or New Year’s party, are also frequently mentioned. Overall *educational* activities (speakers or informative walks), *commercial* activities (markets or having an on-site store), and *outings* are mentioned least.

Can you grade your overall satisfaction concerning the garden?

The last question of this part of the survey gives a grade for the overall satisfaction with the garden. This grade entails the overall feelings and opinions the gardeners have concerning their garden.

Table 10: gardener’s grades for the overall satisfaction of their community garden

Group	Grade
Non-urban	4,32
Slightly urban	4,45
Urban	4,26
Densely urban	4,35

The table above shows that overall the gardeners give positive grades for their gardens. There is not much difference in grade between the urbanization levels.

To make sure the grades of the gardeners are consistent between the grading of the impact and the effects of the community gardens, the Cronbach’s Alpha (α) of these eight given grades was calculated. For the non-urban area $\alpha=0.82$, for the slightly urban area $\alpha=0.82$, for the urban area $\alpha=.81$, and for the densely urban area $\alpha=0.80$. According to literature (Gliem & Gliem, 2003), a value of around $\alpha=0.8$ is seen as good. This means that the grades given by the gardeners are consistent and reliable.

Discussion

This part of the survey started with the gardeners giving grades on the impact the garden has on their life. When looking at the mean grades given to these four categories there are some things that immediately catch the eye. First, it is clear that overall the impact of the garden on the financial situation of the gardeners is seen as the lowest. In the literature (Flachs, 2010; Lovell et al., 2014) it is mentioned that gardens do have a positive impact on the financial situation of the gardeners, however, it can be that the perception of the gardeners is different. This can be due to the investment you have to make in such a garden: when you start a garden there is a need for supplies and plants, whereas this is no longer needed later on. These investment gardeners need to make can feel like a higher price than the money the gardeners save by not needing to buy certain items of produce anymore. Furthermore, the assumption is made that the gardeners do not perceive the cultivated produce in an economic sense, whereas the article sees this produce as an economic benefit. Less produce needs to be bought, thus saving money. The second thing that catches the eye is the higher grades on the impact of nutrition as well as exercise. This is in line with the literature, where it is mentioned that the use of the produce cultivated in the garden makes that people have more fruits and vegetables in their eating pattern (Flachs, 2010; Lovell et al., 2014), and that the activity of gardening makes that people spend more time outside doing light physical activity. (Lenschok, 2009; Lovell et al., 2014) These higher grades for exercise are also in line with the reasons gardeners gave for joining a garden, since doing gardening is frequently mentioned as a reason to join a garden.

The findings that gardens impact the social interaction of the gardeners are described in research (Lovell et al., 2014) and is affirmed by the results of this survey. Gardeners often interact with one another and the majority mentions having activities available to join and socialize with other gardeners and people from outside the garden.

When looking at the grades the gardeners have given on the effects of the garden on the environment, biodiversity, social interaction, and appreciation of the environment, there are two things that stand out. First, even though the overall grades are positive, the gardeners give the highest grades for the effect on the environment. Second, the gardeners in the densely urban environment consistently give the highest grades. The reason for the first remark is unclear, it can be due to the gardeners feeling more positive about their environmental impact by having a community garden, or the gardeners could perceive this effect as the most impactful. The exact reason cannot be found in this data. On the second remark it can be noted that there is logic behind the consistently higher grade from the gardeners in the densely urban areas. Densely urban areas often have less greenery than less urbanized areas. This entails that a community garden adds a splash of green in an environment existing out of built area. This gives the garden a status of a desirable piece of green, giving the surrounding inhabitants a space for recreation and outside activity. (van Leeuwen et al., 2010)

The other questions presented in this data part focused on social interaction within the garden. The data gathered by this survey is consistent on the topic of social interaction. The gardeners' grades show that the community garden has a positive impact on their social interaction, the gardeners mention a high frequency of interaction with their fellow gardeners, and a majority of the gardeners mentions the availability of activities on their community garden. This only highlights the social impact of the garden as a meeting place and a community on its own, which has been mentioned by literature. (Lovell et al., 2014) The different kinds of activities also show that the gardens do not only cater to the interest in gardening, but also in educating other people. (Flachs, 2010) Another interesting similarity between the data found and the literature is the mention of exclusion within the garden community. One of the gardeners mentioned: *"[I interact] with some people, but the*

board is terrible and has their own clique, which is no fun.”. This quote stresses that where people engage in social interaction, there are also people being excluded. (Lovell et al., 2014)

To end this part of the survey, the gardeners overall give a positive grade for their garden. This is in line with the other findings. Aside from the grades on the financial impact, the grades given to the garden and its effects and impacts have all been positive. It is only logical that these different positive grades conclude in a positive perception of the community garden overall.

4.3 Concerning the municipality

Now an image is created concerning the gardeners and their experiences of the garden, the next step is to take a better look at the gardeners’ perceptions of their municipality.

Can you grade your overall satisfaction with your municipality?

This part of the survey started off by asking the gardeners for a grade to create an idea of their satisfaction with the municipality. This grade was asked, since it can influence the other grades that are asked for further on in the survey, such as the grade for the municipality’s way of dealing with the garden.

Table 11: gardeners’ grades for the overall satisfaction with their municipality

Group	Grade
Non-urban	3.23
Slightly urban	3.26
Urban	3.13
Densely urban	3.41

In the table above it can be seen that there is little difference in grades between the different levels of urbanization. Overall the gardeners have a neutral perception concerning the municipality as a whole.

Can you grade your satisfaction of the municipality’s interaction with the garden?

Whereas the former question created an understanding of the overall satisfaction of the gardeners with the municipality, this question focuses on the way the municipality deals with the garden. The gardeners also had the opportunity to give their reasoning behind the given grade.

Table 12: gardeners’ grades for the municipality’s interaction with the garden

Group	Grade
Non-urban	3.25
Slightly urban	3.25
Urban	3.04
Densely urban	3.24

Overall the gardeners give neutral grades concerning the satisfaction of the municipality’s interaction with the garden, as can be seen in the table above. This is similar to the overall grade for municipality satisfaction.

Can you mention experiences as the reasoning behind the given grades for the municipality?
 To get more insight into the grades given by the gardeners they were asked to give one or more experiences they have had with the municipality (directly or indirectly) that made them give this grade. These experiences can be both positive or negative.

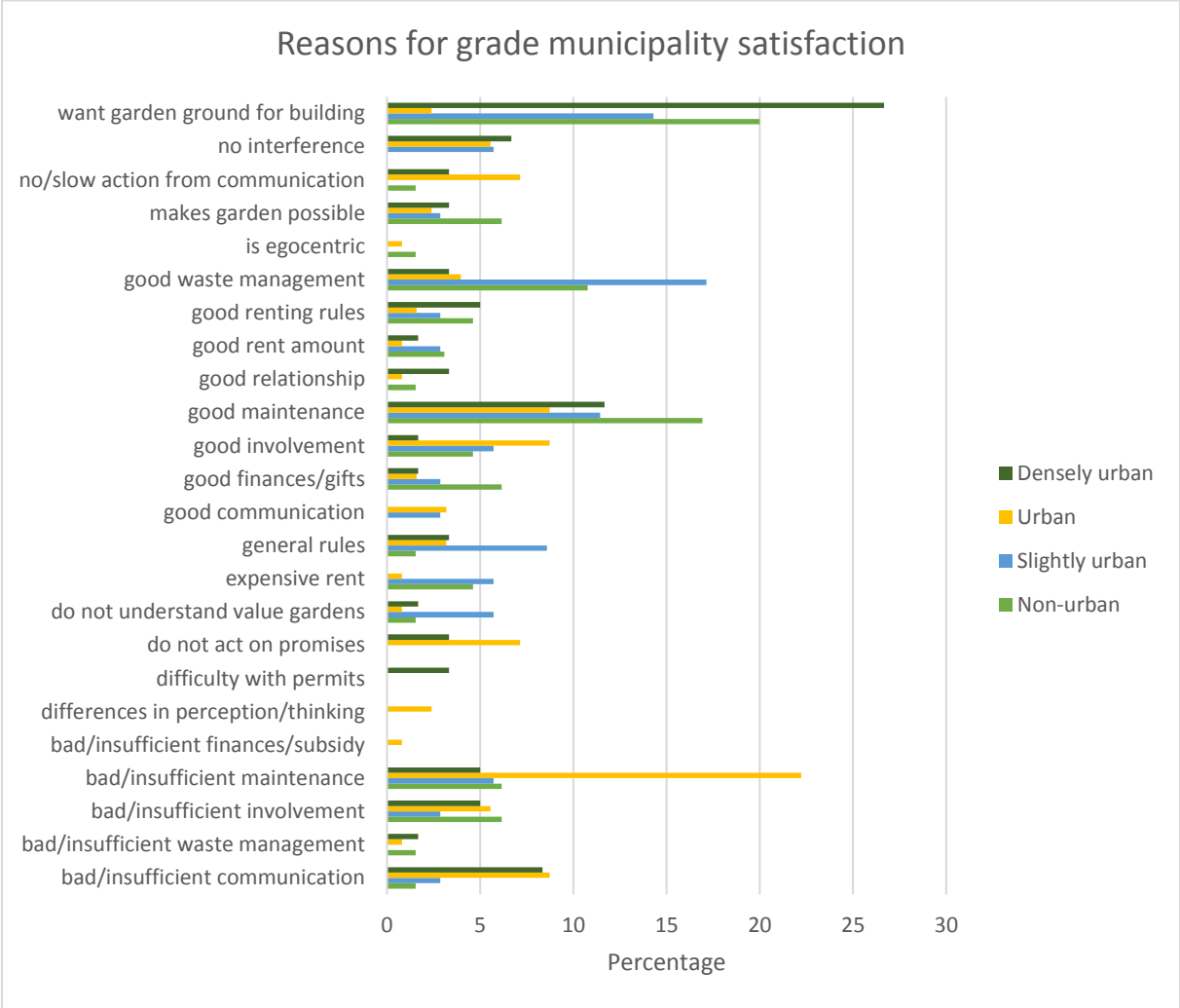


Figure 7: Gardeners’ reasons behind the grades concerning the municipality

The figure above shows that the reasons for giving a certain grade vary between the different levels of urbanization. In the Densely urban areas, the most mentioned reason is that the municipality wants the garden ground to build other buildings. Good maintenance is also mentioned as the reasoning behind the given grade.

In the urban areas, the most mentioned reason is bad or insufficient maintenance, meaning that the maintenance that needed to be done or managed by the municipality is not done or is done poorly. This is also a reason for the other urbanization levels, but with the urban areas it is by far the most frequent reasoning. Another result of urban areas that is clearly visible is that it is the urbanization level with the least frequent mentions of the garden ground being wanted for building.

In the Slightly urban areas there are four reasons that stand out. Firstly, the ground is wanted for other building projects. Secondly, the gardeners mention that the municipality has good waste management. Mentioning things such as facilitating bins on garden clean up days or creating the possibility for gardeners to dump their plant-waste free of costs. Third, the gardeners mention having good maintenance in their garden. Finally, with a bit lower frequency than the previous reasonings, the gardeners mention general rules. In this case general rules entail everything concerning rules the

municipality has for the garden, for example permits for building or adapting greenhouses and sheds. Often when these rules are given as reasoning, this is not done in a positive manner, but more as a restriction on the possibilities the gardener has in the garden.

In the case of the non-urban areas, again the municipality wanting ground for development, good waste management, and good maintenance are mentioned as the most frequent reasonings.

Can you grade your satisfaction with the amount of input you have in your municipality?

It is assumed that having the ability to participate can make people have more positive feelings towards a situation, group, or project. To gain insight into the level of participation gardeners feel they have in their municipality we asked them to grade it.

Table 13: Gardeners' grades for participation in their municipality

Group	Grade
Non-urban	3.00
Slightly urban	2.81
Urban	2.68
Densely urban	2.92

The table shows that, next to the non-urban area, the grades are all below neutral. Meaning the gardeners in the other areas are somewhat dissatisfied with the amount of participation in their municipalities.

Discussion

The first thing that needs to be noted is that the grades given are also influenced by indirect contact or non-personal experiences. Even if gardeners have no experience with the municipality, they can form an opinion by information given to them by the other gardeners or by stories they have heard from outside the garden. This means that the grades can also (partially) be based on rumors, which is something that cannot be prevented in research like this.

When looking at the grades the gardeners have given the municipality in these several accounts, it can be noted that the urban areas have, in each instance and overall, given the lowest grade. This is in line with findings that note that the satisfaction of the citizens decreases with the increase of the number of people in a municipality, and urban areas often contain more citizens (Hansen, 2014). In these situations the municipality has a lower amount of clergymen per inhabitant or project.

Meaning projects such as community gardens can count on less support from the municipality. However, this does not explain why the gardeners in the densely urban areas give overall higher grades. They might see the municipality in a higher standing since they allow the garden. Since the garden is an added bit of greenery in the otherwise concrete environment, this possibility will be appreciated more, thus the gardeners give higher grades for the municipality overall. (Liu et al., 2019) There is a possibility the gardeners find the existence of the garden more important than the contact with the municipality concerning the garden, giving a higher grade to the municipality. The gardeners in urban areas do have complaints concerning the municipality's way of dealing with the garden. They frequently mention bad or insufficient maintenance as a reason behind their grade. This can mean that due to the lack of maintenance, or the dissatisfactory quality of said maintenance, the urban gardeners have a more negative opinion of the municipality.

As another note for this section, the most pressing issue concerning the community gardens in densely urban, slightly urban, and non-urban areas will be discussed: the municipality wanting the ground of the garden for other development projects. In the data there have been different

examples of development ideas the municipality or other organizations had or have with the ground where the gardens are located. Some of the gardeners mention the municipality wanting to create a bike path through the community garden, others mentioned the municipality wanting to replace the gardens with a football field, and there were mentions of developers having plans for luxury homes on the location of a community garden. This is one of the dangers to the existence of community gardens and it is due to the economic nature of ground. Housing projects give more revenue to a developer or municipality than community gardens (Schmelzkopf, 2019). Meaning it is more profitable to build houses instead of having a garden on the valuable space. However, this is seen by the gardeners as a threat to their garden and the activity they enjoy, and it seems they hold the municipality responsible for the continuation of the existence of their garden.

Finally, the gardeners have issues with the possibility for participation in municipal projects. This can be seen in the low grades given to the participation aspect of the municipality. According to the literature the amount of citizen participation in municipalities is increasing. (van der Stoep, 2014) This trend has been going on for several years, so it is interesting to see that the gardener mention having little participation in their municipality. Another explanation than the gardeners having little participatory possibilities could be a difference in the idea of participation between the municipality and the gardeners. It can be that the gardeners see participation as a process in which they actively can help create policies concerning the gardens, but that the municipality sees the self-organised nature of the community gardens as a good amount of participation. Even though the gardeners note to have little participation opportunities, they do still have a neutral attitude towards the municipality.

4.4 Municipality specific

Since this research focuses on the interaction between community gardeners and the municipality, some questions concerned direct communication between the two groups. Using a survey question the gardeners were split into two groups (those who had and those who had not communicated with the municipality). There were 121 gardeners that had communicated with the municipality and they were asked several questions about the contact.

How long ago were you last in contact with the municipality concerning the garden?

This question was asked to create an image of how often the gardeners have contact with the municipality. This information can show us how often the gardeners need to communicate with the municipality.

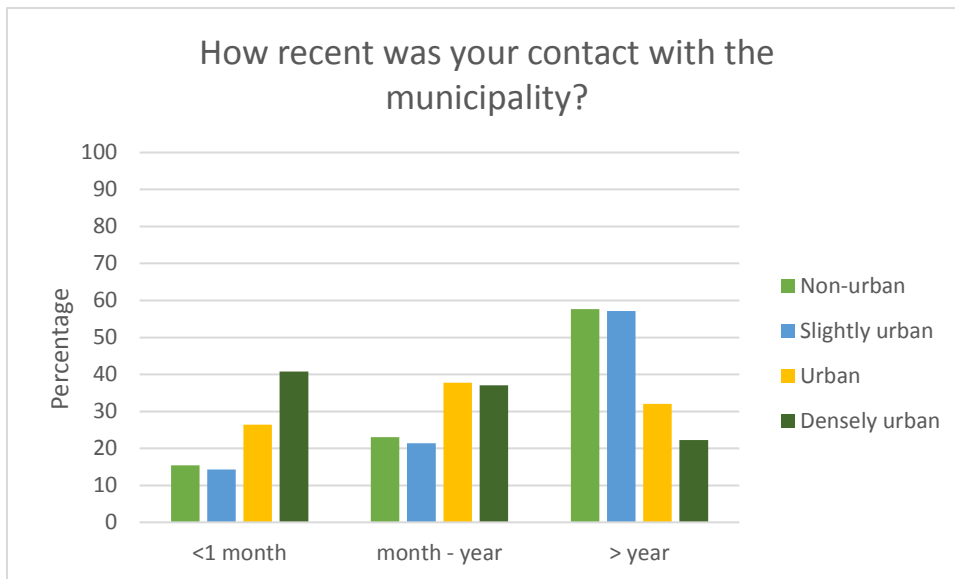


Figure 8: how recent was the contact between gardeners and the municipality?

The figure above shows that in non-urban and slightly urban areas most of the communication was more than a year ago. In the urban and densely urban areas, the answers are more spread, with most of the densely urban communication being less than a month ago.

Via which communication method did you have contact with the municipality?

An important part of communication is the method that is used for communication since every method has different characteristics and can fulfill different needs. The gardeners were asked what methods of communication were used when they communicated with the municipality. The figure below shows the different methods of communication used and their frequency of use.

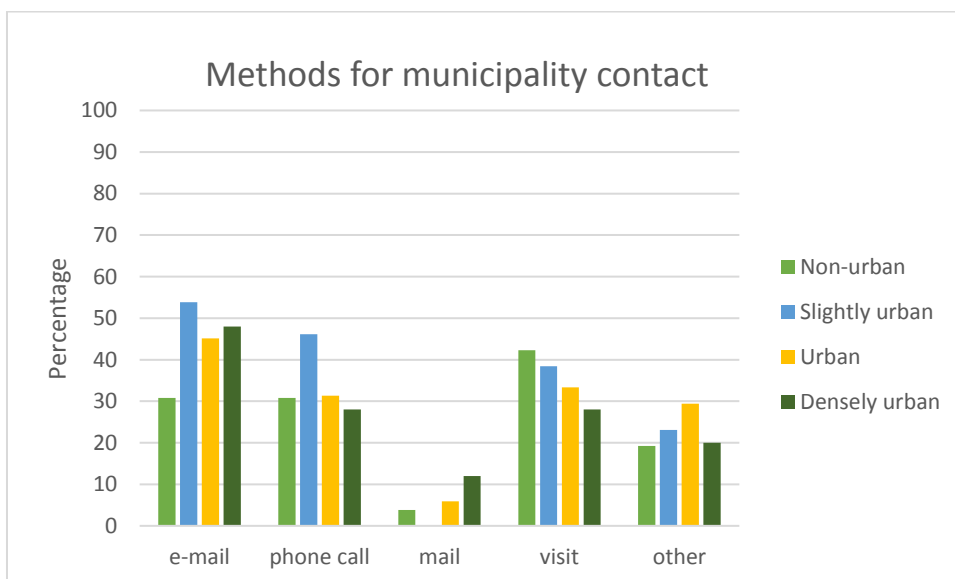


Figure 9: Methods of communication used in communication with the municipality

In the figure, it is very clear that mail is used the least frequent as a method of communication between municipalities and community gardeners. In non-urban areas the gardeners and municipality communicate most frequently when meeting face to face, for all other levels of urbanization e-mail is the most used method of communication, however in slightly urban areas phone calls are also used quite frequently for communication. Other methods of communication

mentioned by the gardeners were the municipality app, WhatsApp and meetings with the municipality. There was also a gardener mentioning working for the municipality and one mentioning only having had indirect communication via the board.

What topics were discussed during your contact with the municipality?

To understand the communication between the gardeners and the municipality it is needed to look at the topics that are discussed during this contact.

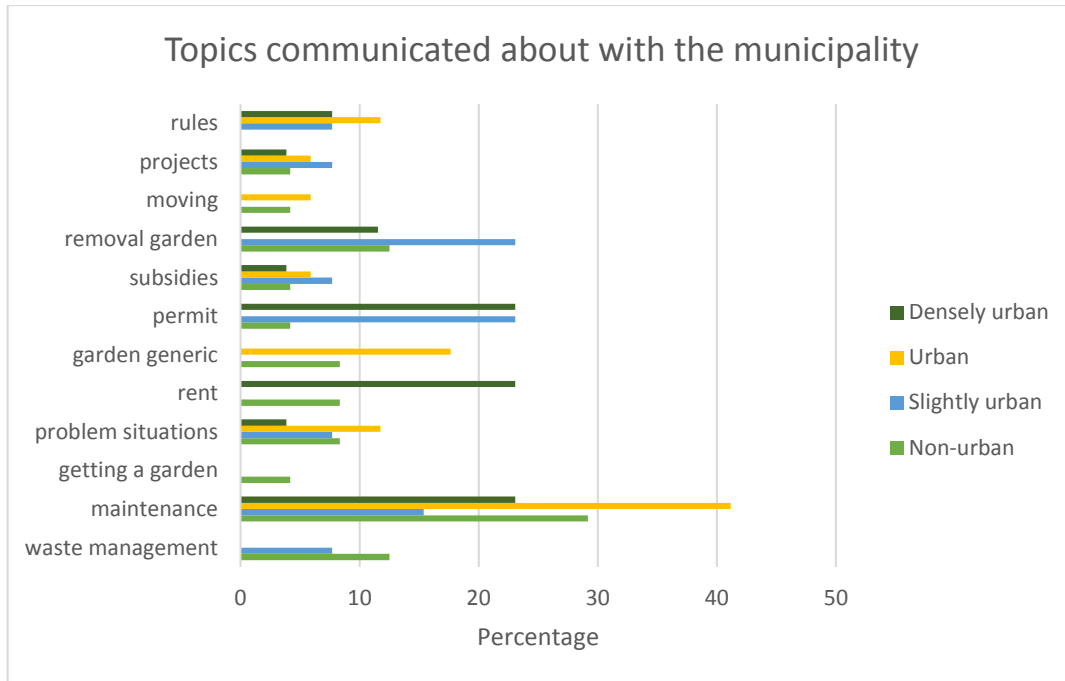


Figure 10: Topics discussed between the municipality and community gardeners

The topics discussed with the municipality were mostly focused on the organizational side of the garden, such as talking about rent and permits for buildings, or more with a negative tone, such as complaints about the maintenance and complaints about problem situations (such as vandalism and theft). Some of the topics mentioned were focused on gaining information, such as plans the municipality has concerning the existence of the garden and development of other projects on the garden grounds or explanations on policies and rules for the garden.

In the densely urban areas permits, rent, and maintenance are mostly discussed, in urban areas maintenance is the most frequently discussed with the municipality, for slightly urban both the removal of the garden and permits are discussed, and for non-urban areas maintenance is again the most discussed topic.

Can you grade your satisfaction with your contact with the municipality?

The gardeners were asked to grade their satisfaction with the contact with the municipality. This did only concern the contact they personally had with the municipality.

Table 14: gardeners' grades for their satisfaction concerning the contact with the municipality

Group	Grade
Non-urban	3.23
Slightly urban	2.85
Urban	3.08
Densely urban	3.08

The table shows that in non-urban areas the gardeners are more satisfied with the contact with the municipality. In slightly urban areas the gardeners are least satisfied. Most of the gardeners have a neutral attitude towards the contact with the municipality.

What would you like to change concerning your contact with the municipality?

Finally, we asked the gardeners what kind of changes they would want to see. This gives insight into the aspects of communication the gardeners are less satisfied with and they want to change. In non-urban areas the gardeners mentioned wanting to have a clear contact person, as one gardener mentions *"too many people [are] busy with the garden in the municipality"*. Several other gardeners mention wanting to have information quicker or be updated at all. This especially goes for the development plans the municipality has that might threaten the existence of the garden. One gardener also mentions that the municipality seems to put the garden in financial trouble to make sure they will be unable to exist. There are also some remarks on the way communication takes place. It is mentioned multiple times that the gardeners wish to have meetings with the municipality. Furthermore they wish for the municipality to increase contact, keep their promises, and have more in-depth conversations, while keeping them informal. One gardener also notes *"gardeners do not understand that they can change things by telling the board"*.

In the slightly urban areas, it is mentioned that the municipality is not aware of the state of the garden, so they should inform themselves more. Furthermore, it is mentioned that very few clergymen follow up on the promises they make towards the garden. Another gardener has several changes they would like to see: *"the ease of contact, how to get [the contact], where you need to be, [and] how to phrase the question to get to the right person"*.

In urban areas, there are several people that either mention having a contact person at the municipality, which works great, and several others that mention wanting to have such a person. There is also a gardener mentions having troubles with their contact person, the gardener says: *"Theoretically there's a contact person, but in reality you cannot get hold of this person."* Next to having issues with a contact person the gardeners mention having issues with starting communication with the municipality. One of the gardeners mentions that they tried contacting the municipality, but all of the clergymen seem to not have the authority to deal with the garden's problems and they never speak to someone who is able to help them. Another gardener adds to this sentiment by noting that it is very difficult to find the person you need for your inquiry. There are also several gardeners that have notes on the cooperation with the municipality. It is mentioned that promises are not kept, that everything is slow, there is no cooperative attitude, they are difficult to reach, and sometimes do not give an answer at all. A gardener also notes that the municipality should talk via the board, and not via every individual gardener. The gardeners also note issues with the attitude of the municipality. One of them mentions: *"[The] municipality is high and mighty and there's no contact possibilities for the gardeners."* Another gardener adds to this that they feel like they are 'being just a number' to the municipality, a different gardener mentions that if the

municipality should visit more they might take the garden more seriously.

There is one gardener that notes not being aware of the rules and municipalities for the garden, and two gardeners note that the communication is fine, but they do not get financial resources. There are also mentions of positive aspects of communication. It is mentioned that the municipality and the garden have a set amount of meetings every year, which they say creates understanding.

In densely urban areas, again, the gardeners wish for a contact person. They feel this will reduce the time it takes to communicate with the municipality. Not having this contact person makes that it is unclear to what department or clergymen the gardeners need to go, which makes the communication takes up a lot of time, stays very theoretical, and is not pleasing in general. It is also mentioned that the municipality promises fast response, but the responses are quite slow and the gardeners have to actively go after the responses themselves. In one of the cases this makes the gardener feel like the community garden is an afterthought for the municipality. Other gardeners mention not knowing what is done with their complaint and that they have been waiting for two years for a new contract. Next to this, a gardener notes: *"[There is] too much of a landlord-renter relationship, while the garden adds greenery to the area."*

Discussion

When looking at the methods of communication that are used and the changes the gardeners wish to see in the communication there are some similarities. The gardeners wish to have faster answers and quicker communication, which suits the use of e-mails and phone calls. Concerning the topics, it is interesting that all of the areas in different levels of urbanization communicate about the maintenance of the garden. This is interesting, since only the urban gardeners mentioned bad maintenance as the reason for their grade for the municipality before, while all of the groups mention it as a frequently discussed topic. Another interesting link between the reasons given for the municipality grades and the topics discussed with the municipality is that the municipality wants the ground for different projects. Before, when the gardeners gave their reasonings, this was mentioned by gardeners in densely urban, slightly urban, and non-urban areas, however, only the slightly urban gardeners discuss this topic frequently with their municipality.

Concerning the grades given for the municipality contact, it can be noted that they are somewhat similar to the grades given for satisfaction with the municipality overall. This means the gardeners still give neutral grades, even though they mention several changes they wish to see. It can be that the grade is more neutral since the gardeners feel that they have impact on the municipality by having direct communication with them, but they feel there is much that can be changed on the process.

The gardeners do mention several changes they would like to see in the communication process. Overall the gardeners want more clarity on who they should reach out to, or have a specific clergymen as their contact person. They also mention that the promises made by the municipality are often not kept, making them feel unimportant to the municipality. If promises are kept, the contact and executions are very slow. In urban areas the gardeners mention wanting finances for the garden, but not receiving them. This is understandable when looking at the literature. The idea behind the participation process was partially to create a better integrated process, but also to cover for budget cuts in the municipal process. (van der Stoep, 2014) If a municipality needs to make budget cuts, they cannot give as much financial support to the gardens. In all urbanization levels gardeners mention the attitude of the municipality towards the garden being dissatisfactory. Especially in the densely urban group the gardeners feel unappreciated, even though they add greenery in the built landscape.

Since generally all groups of gardeners note similar issues they are dissatisfied about in the communication process, it can be that their expectations of the municipality's way of communicating are different. The gardeners feel that responses should be given faster and promises should be kept, however they feel these expectations are not met, which makes them dissatisfied. (Domingo & Beunen, 2013) The municipality, on the other hand, can have different expectations. Since they are dealing with several projects that need communication, they might feel that their responses are quick already. Clear communication concerning the expectations of the communication process and the way the process is managed can help make both the gardeners and the municipality more satisfied concerning the process. (Zhu et al., 2019) Due to the scope of this research, it is unclear whether the municipality has the same expectations concerning the communication process as the gardeners have.

4.5 Concerning the future

Since the gardeners have experienced the community garden and the municipality, they will have expectations concerning these topics. In the following part, it will be discussed what the gardeners would like to change in the future, concerning their community garden and their municipality.

What would you like to change in the future concerning the garden?

The gardeners had the possibility to mention different changes they would like to see, these wishes have been categorized into different parts of the community garden and will be discussed.

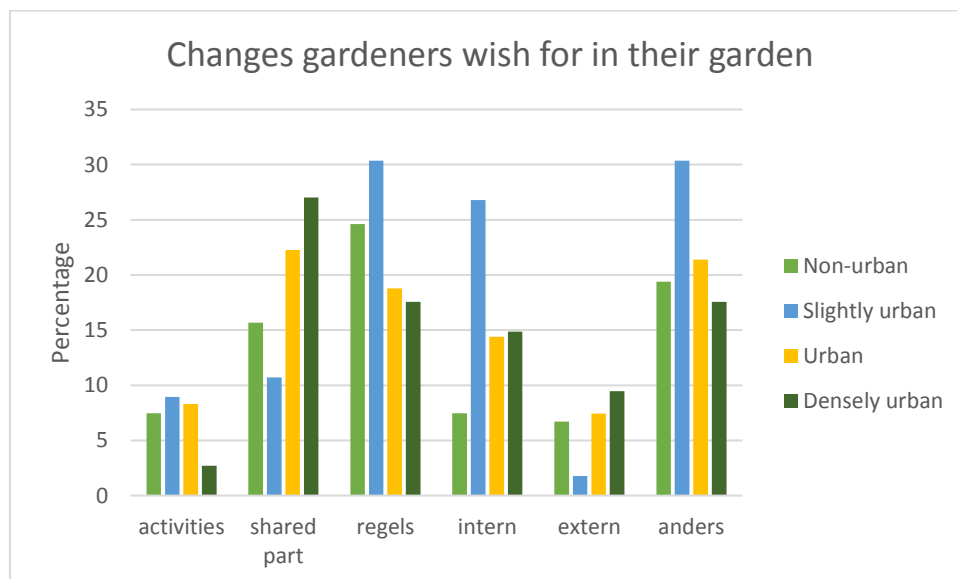


Figure 11: Changes gardeners wish for in their garden

In non-urban areas it can be seen that the gardeners wish to see are on different parts of the garden. Mostly they wish to see a change in the rules of the garden, in this part the focus is put on organic gardening and biodiversity. They also wish for more clarity on the rules in general. Concerning the internal part, the gardeners want to share experience more and have a member list the other gardeners can see, to know who the other gardeners are. In the category 'other' the gardeners wish to see fewer greenhouses and sheds and they want to have on-site water sources, electricity, gas, and an organic waste depot. A gardener also mentions wanting to put more time into youth activities.

In the slightly urban areas the focus of the gardeners is mostly on rules, internal affairs, and other aspects. Concerning the rules they wish for completely organic gardening and being more strict on the rules of the garden (especially on buildings). For the internal affairs they wish for the board to

have less favoritism and have a better relationship between gardeners and the board. There is also a gardener that wishes for more sharing of ideas. They do not elaborate on the other changes they want in the garden.

In the urban areas the gardeners want to see changes mostly in the shared part, rules, internal affairs, and 'other' parts. Concerning the shared part they want a better quality of the gardens, different sizes, and colors of buildings, an increase in soil quality, a toilet for the gardening complex, a solution for the water problems, financial resources to remove asbestos, and want to fine the renting gardener if a garden is badly managed. Also, they wish for better protection against thievery. Concerning the rules most gardeners wish for organic gardening and the prohibition of pesticides. For the internal affairs there are several things the gardeners wish for. Some of them want to be able to have yearly gardening-related activities on the grounds, another mentions adding a bee association. There are also mentions of education for new gardeners or gardeners interesting in alternative gardening, such as permaculture. There are several gardeners that want rejuvenation of the board, one of them mentioning: "[We need] a new chairman, the current one has been in this position for 35 years and keeps on participating for re-election. According to the rules that is possible." In the 'other' category the gardeners wish for modern facilities, meaning having water available in the gardens, electricity outputs, and a place to deposit plant-waste.

In the densely urban areas the gardeners mostly want changes on the shared part, the rules, 'other' parts, and somewhat on internal affairs. Concerning the shared part it is mentioned that the creeks should be cleared and the hedges should be better maintained, also a gardener wishes to prohibit addicts to work on the gardens since they create a nuisance. With the rules, the gardeners want organic gardening and the ability to stay the night in their garden. On the other hand a gardener mentions wanting "less of a campsite, more of a garden". Concerning internal affairs the gardeners wish for more volunteers and an expansion of products in the store. The changes the gardeners wish to see in the 'other' category are not specified.

What role do you think the municipality should have in the improvement of the garden?

Next, we asked the gardeners what they would like for the municipality in the future, especially focused on the role the municipality should take concerning the garden.

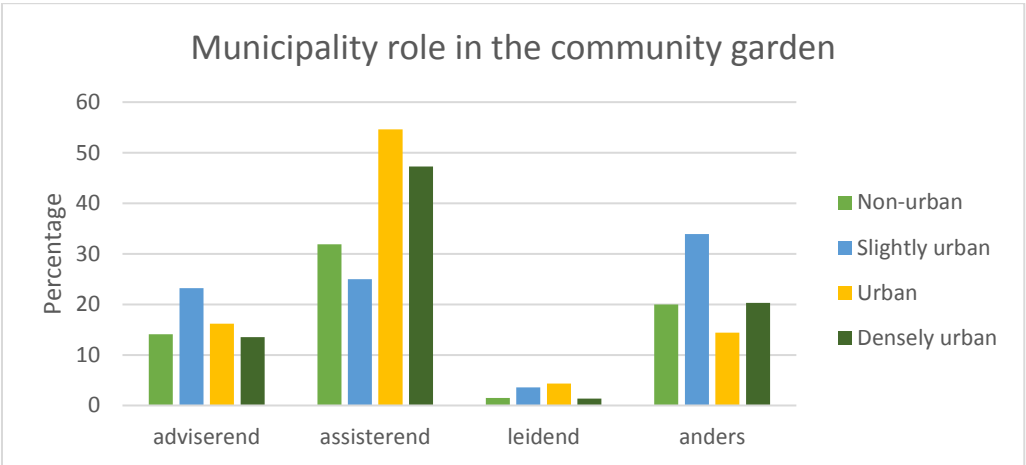


Figure 12: the future role for the municipality in the community garden according to gardeners

As can be seen in the figure above, generally the gardeners wish for the municipality to take on a role that leaves the autonomy to the gardeners. Mostly the gardeners want the municipality to have an assisting approach. The only exception are the slightly urban gardeners, who most frequently chose

the 'other' category.

The non-urban gardeners' explanations of the 'other' category mention a facilitating role or wish for the municipality to not have a role and only keep the grounds available for the garden. They also mention some specific changes they want the municipality to make, such as creating the ability for discussion and making waste bins free for the garden. In slightly urban areas, there are also mentions of facilitating roles and no roles. They also mention an enterprising role and wanting the municipality to lead in sustainability. In the urban area again the facilitating role is mentioned. The gardeners in these areas also mention more specific tasks, such as creating written evidence of promises, doing better maintenance, giving financial subsidies, and protecting the garden more. In the densely urban areas the gardeners mostly mention the municipality not having a role. One gardener mentions the facilitative role, a different gardener a stimulating role and another gardener mentions wanting more integration. Again, the gardeners mention several specific activities such as improving their administrative organization, have better budget for maintenance, and do nothing else than the legal responsibilities the municipality has.

Discussion

First the future changes for the garden will be discussed. In all cases, except for the slightly urban areas, the gardeners note an interest in sustainable gardening practices. These changes range from prohibiting pesticides to improving soil quality. In the non-urban areas there is also a wish for improving biodiversity. This might mean that overall the gardeners find organic and more sustainable forms of gardening interesting and suitable for community gardens. The non-urban gardeners focus on the surrounding environment as well with their wish for increasing biodiversity. Which is in line with the grades given before, where generally the gardeners feel their garden has a positive impact on the environment and biodiversity. It is interesting to note that these wishes of the gardeners are in line with the literature concerning community gardens' impact on the environment. (van Leeuwen et al., 2010) Community gardens can decrease human impact on the local environment and can create an increase in biodiversity when managed properly.

In all of the gardens the gardeners wish for an increase in social interaction and sharing ideas. Even though both the gardeners and literature (Lovell et al., 2014) note that the gardens are already places for socializing. However the form of this interaction is mentioned differently over the urbanization levels. The non-urban gardeners want to focus more on youth activity and creating bonds between gardeners. This last notion is also the case in the slightly urban areas, where they wish to achieve this by removing favoritism from the board. In the urban and densely urban areas the social interaction increase is wished for in the form of sharing ideas and knowledge about the garden. Which gives the impression that in the urban and densely urban areas the gardeners are mostly focused on the gardening activity, even in socialization.

When looking at the changes wished for in the densely urban areas there is a small conflict. Some of the gardeners mention they prefer to be able to spend their nights in the garden, this suits the notions the gardeners made about seeing their garden as a place of rest and relaxation. However, other gardeners mention they want the sheds for spending the night gone. They feel the community garden is turning into more of a campsite. This idea of spending the night on the community garden probably links to the use of the garden, since people in more urbanized areas use their garden as a green oasis in the urban environment and as a place of relaxation. (van Leeuwen et al., 2010) These conflicted opinions between the gardeners can stem from the diversity of use of community gardens and a difference in expectations in people with either opinion.

Finally, the gardeners seem to have a similar mindset concerning the role of the municipality in the garden. A large majority of the gardeners wish for the municipality to have a more assisting and facilitating role. This approach means more autonomy for the gardens and a more participatory

process for the municipality. This links in on the current trend in municipal management of using participation to prevent issues due to budget cuts and prevent dissatisfaction. (Buono et al., 2012) Even though the gardeners note that they wish for the municipality to take a more stand-off approach and have a more supporting role in the community garden, the gardeners overall noted having a negative feeling concerning the current amount of participation in their municipality. Due to this conflict in results I make the assumption that overall gardeners want more autonomy. Following the participatory approach of the municipality, the gardeners want to keep managing and organising the gardens themselves. However, if the municipality tackles a topic that concerns the garden, such as projects developing on their ground or maintenance issues, the gardeners wish to have input on these topics or at the least receive updates concerning the topic. This shows that even though the participatory approach is meant to prevent dissatisfaction, it is not a ready-made solution, but the process should be catered to the specific actors and the specific context. (Buono et al., 2012)

4.6 Regression

Finally, it was checked whether the grade concerning garden satisfaction and municipality satisfaction were influenced by internal motivations, instead of the concept itself. Two regressions were done to exclude the possibility of impact by personality. For these regressions a variable was found significant if $P < 0,05$.

The first regression looked at the interference of urbanization level, active role in a board or committee, education, age, and satisfaction with the municipality on the grade given for garden satisfaction. The outcomes of the regression are given in table 15.

Table 15: P-values of regression with garden satisfaction grade

Variable	Significance (P-value)
Urbanization level	0,289
Role in board or committee	0,058
Education	0,411
Age	0,302
Municipality satisfaction	0,000

The R Squared of the regression has a value of 0,050, meaning that 50% of the variance in scores can be predicted with the variables shown in the table. The table shows that of all the variables only municipality satisfaction has a significant role in determining the satisfaction of the garden. T

The second regression looked at the influence of urbanization level, active role in a board or committee, communication method used, age, and education on the grade for satisfaction concerning the municipality. The outcomes of this regression are shown in table 16.

Table 16: P-values of regression with municipality satisfaction grade

Variable	Significance (P-value)
Urbanization level	0,659
Role in board or committee	0,010
Communication method: e-mail	0,869
Communication method: phone	0,378
Communication method: mail	0,869
Communication method: visiting	0,222
Education	0,391
Age	0,453

The R Squared of the regression has a value of 0,027, meaning that 27% of the variance in scores can be predicted with the variables shown in the table. The table shows that there is one variable with a value below 0,05. This means that a gardener's role in the board or committee has an impact on the grade the gardener gives for municipality interaction.

Discussion

When looking at the relationship between municipality satisfaction and garden satisfaction, the assumption is that this influence is due to the municipality making part of the rules and policies concerning garden management and what kinds of adaptations (such as greenhouses, sheds, e.a.) are allowed on the garden. So, if the municipality has very strict rules this can have a negative impact on the enjoyment of the garden, whereas more flexible rules can have a positive impact since the gardeners feel more autonomy.

Concerning the influence of a gardener's active role in a board or committee on the grade for municipality satisfaction, it is assumed that the reason for this influence is that the board members are most frequently the gardeners discussing with the municipality and having firsthand experience with them. This means that these board members either can have the negative firsthand experience, or have positive experiences and seeing the municipal clergyman as a person in his own right.

5. Conclusion

To start the concluding chapter of this research we will begin on the central topic of the garden itself. Overall the gardeners at all different urbanization levels are satisfied with their gardens. They feel like the garden has a positive impact on their lives on exercise, nutrition, and social interaction. However the gardeners feel the impact of the garden on their financial state is not very beneficial. Even though the garden is noted to have a positive impact on social interaction, some gardeners do mention issues concerning exclusion by the forming of cliques between the gardeners. Concerning the garden's effect on its surroundings the gardeners feel that their garden has a positive impact on biodiversity, appreciation of the surroundings, social interaction and environment. Especially on the environmental aspect the garden is getting higher appreciation, specifically in the densely urban areas, which can be explained by the greenery gardens add to the urban landscape.

The gardeners are overall slightly positive about their municipality. In non-urban and slightly urban areas the gardeners appreciate the waste management, and in all urbanization levels, the gardeners mention good maintenance as a reason to be satisfied. This satisfaction with good maintenance is the least in urban areas, where the complaint of bad maintenance is mentioned more often. Furthermore in all urbanization levels, except for the urban level, the gardeners mention the municipality wanting the ground for other development projects as a reason to be less satisfied.

After this introductory part of the conclusion, the research questions will be answered. The main question of this research, *What are community gardeners' experiences with municipality communication?*, will be answered, but that cannot be done before making concluding remarks concerning the sub-questions.

What are the topics that community gardeners and the municipality communicate about?

Concerning the communication between the municipality and the community gardeners, it can be noted that it mostly takes place if the gardeners are in need of something. The gardeners initiate communication with the municipality when they have a request (for money or a permit, mostly), have issues concerning the municipality's approach (for example on development of the area) or when certain information is unclear (such as policies and rules). This is also reflected in the wishes the gardeners have for the municipality to have more of a supporting role towards the garden. Overall the topics the community gardeners and the municipality discuss do differ per urbanization level, except for one. In all of the urbanization levels the gardeners mention having communicated about the maintenance of the garden. In all areas except the urban areas, the gardeners also mention the removal of the garden. In these cases the municipality, or another party, wants to use the ground surrounding the garden or the ground of the garden is located on, for different development projects. In the case of densely urban areas the gardeners also discuss rent of the ground with the municipality, since they feel like it can be quite high.

In what way do community gardens and the municipality communicate and how is this communication valued?

In the communication between the community gardeners and the municipality, a variety of communication methods is used. The most common methods of communication are e-mails, phone calls, and visits. Physical mail is used the least frequent, most probably due to the slow response time. Visitation, either the gardeners visiting the municipality or the other way around, decrease in frequency the more urbanized an area is. This can be explained by having relatively fewer clergymen for a bigger group of people. The preference for e-mails and phone calls is also suitable for the gardeners wishes concerning the speed of the communication. Sending e-mails and having a phone

call are fast methods for communicating. This wish for a faster response is also seen in the mentions of using apps, like WhatsApp, and holding meetings.

To what extent does communication between community gardens and municipalities fulfill the expectations of the gardeners?

In general, the gardeners have a neutral attitude towards the communication with the municipality. Mostly the gardeners wish for a set clergymen that will be their contact person to prevent confusion and authority issues. Furthermore, the gardeners want a quicker response and clear communicated promises that will be kept on either side. In more urbanized areas the gardeners feel a lack of appreciation towards the garden, especially since the garden adds nature to the built environment.

Now we can answer the main research question of this research: *What are community gardeners' experiences with municipality communication and how is this communication valued?*

Overall the gardeners are not specifically satisfied or dissatisfied with the communication between them and the municipality. They do have positive feelings concerning the relationship between the garden and the municipality. Also, the gardeners do feel like they do not have as much input in the municipality as they wish to have, however they do not necessarily want to participate in the municipal process. They wish for the municipality to be assisting and facilitating, but the gardeners want to have more autonomy concerning the rules in the garden. The communication between the gardeners and the municipality mostly concerns requests, issues, or unclarity on the gardeners' part. The topics that are mostly discussed are the removal of the garden, the cost of the rent, and maintenance of the surrounding area (which is often the responsibility of the municipality). The communication mostly takes place via phone calls and online methods of communication (apps, chat services, and e-mail), most probably because these methods make a quick reply possible. The number of visits that make communication possible decrease per urbanization level, but gardeners in more urbanized areas do express their wish for more meetings and personal communication with the municipality. Overall the gardeners want the municipality to respond quicker, keep the promises made during communication, and have one specified contact person for more clarity in the communication process. Gardeners also note that if development plans are created concerning their gardens, they would like to know of these plans and be updated on them. Lastly, gardeners in the densely urban areas feel that their gardens are not taken seriously by the municipality, though they claim to add greenery to the concrete city landscape.

Recommendations for municipalities

The conclusion above mentions some appreciated changes in the role of the municipality and the communication process between the gardens and the municipality. Concerning the role the municipality plays, the gardeners wish for the municipality to take on a more supporting and assisting role. They wish to have more autonomy when managing their garden, but they do want to be able to rely on the municipality for question and information, especially concerning topics that impact their garden.

Preferably the communication goes via one clergyman at the municipality that has the right authorities and knowledge and keeps themselves updated on the happenings at the gardens. This clergyman should also keep their promise and treat the community garden as an opportunity for connection between people and the improvement of municipal greenery. In more urbanized areas the gardeners would appreciate having regular meetings to increase direct social contact with the municipality. These gardeners also feel less appreciated by the municipality. Frustration on this topic can be decreased by having regular contact and keeping the municipality updated on activities and

troubles of the garden.

Overall it would also seem beneficial to the municipality to communicate expectations with the gardeners. To make sure that both the gardeners and the municipality are aware of the expectations and wishes of the other party. Most of the changes wished for in both the role of the municipality and the communication process seem to stem from mismatched expectations on either side of the communication process.

6. Future research

Throughout this research questions and ideas arose concerning future research. This concerns both research opportunities outside the boundaries of this research, as well as research opportunities stemming from the results of this research.

Other methods of gardening

In the theoretical framework of this research, the concept of Community Supported Agriculture (CSA) is shortly mentioned. It is explained why the concept is left out of this research, however that does not mean CSA is not an interesting topic of research. Since CSA's have a different structure than community gardens, which is often more customer-based, I assume that the communication and the needs of a CSA project are different from those of a community garden. So far there is little information on the social networks surrounding CSA projects, especially concerning the municipality. It would be interesting to see future research concerning the municipal needs of CSA projects.

Community gardens

In the results chapter, it was noted that very few younger people participated in this survey, with almost no respondents under the age of 30. This is one of the notions that shows there is no standard "community gardener". It would be interesting to have an overview of what the mean community gardener is in which municipality in the Netherlands, or what kind of people participate in community gardens. For research like this, a suitable research question could be: *What are the characteristics of community gardeners throughout the Netherlands?* An overview like this would be of help at the start of this research and could be a foundation for future in-depth research.

Future research could also focus on sustainability. Nowadays sustainability is a big issue for a lot of people, and since gardeners mentioned in this survey that they wish for more sustainable or organic gardening, it would be interesting to research whether the people partaking in community gardens do so out of sustainable reasoning or not and whether this love for sustainability is higher with community gardeners than with the general Dutch population.

Interaction between community gardens and municipality

This research focuses on the communication between community gardens and municipality. Since communication and interaction are quite complex, this research is only scratching the surface. In this research a small overview was created in which gardeners had the ability to grade their municipality and the communication with it, as well as mention what changes the gardeners wanted to see in this communication. A topic for future research could be to look at the specific expectations community gardens have of the municipalities, for example on different topics such as finances, location, support, and policy-wise. Future research could also focus on only one of these topics, and then look at the process in place, creating a research question such as: *What does the process of communicating about (new) policies between municipalities and community gardeners look like?*

Another angle to look at future research would be to take a different perspective. In this research the focus lies on the community gardeners and what their expectations and opinions are. For future research it could also be a possibility to look at the municipal side of things, or even compare both. This would be interesting since in reality this communication process is not as one dimensional as is noted in this research. This kind of research can, for example, focus on the duality between municipalities wanting greenery (for citizens' happiness) and community gardeners mentioning the municipality wants to rid herself of these gardens.

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Appendix 1: Survey Questions

Introductie

- Bij welke tuin bent u aangesloten? (Kunt u hier zowel de naam als plaatsnaam geven)
- Om welke reden(en) heeft u zich bij deze tuin aangesloten? (U kunt hier meerdere antwoorden geven)
 - o Voor mijn eigen plezier
 - o Om meer te bewegen
 - o Om de oogst te gebruiken
 - o Om geld te besparen
 - o Om bezig te zijn
 - o Om contacten te leggen
 - o Om buiten te zijn
 - o Tuinieren
 - o Anders, namelijk...
 - o Weet ik niet / niet van toepassing
- Hoe lang bent u al bij deze tuin aangesloten?
 - o Kortere dan 1 jaar
 - o 1 tot 5 jaar
 - o 5 tot 10 jaar
 - o Langer dan 10 jaar
 - o Weet ik niet

Over de tuin

- Op welke manier wordt de tuin bewerkt?
 - o Gezamenlijk de gehele tuin
 - o Gedeeltelijk gezamenlijk
 - o Individuele percelen
 - o Anders, namelijk...
- Heeft de tuin positieve of Negatieve effecten op de volgende aspecten uit uw leven? (1 tot 5)
 - o Voeding
 - o Beweging
 - o Sociaal contact
 - o Financiën
- Wat voor een effecten, positief dan wel negatief, denkt u dat de tuin heeft op de omgeving? (1 tot 5)
 - o Milieu
 - o Biodiversiteit
 - o Sociaal Contact
 - o Waardering van de omgeving
- Kan u de sfeer in de tuin in 3 woorden omschrijven?
- Heeft u contact met andere tuinders uit de tuin?
 - o (Bijna) elke keer als ik op de tuin ben
 - o Ongeveer de helft van de keren dat ik op de tuin ben
 - o Af en toe als ik op de tuin ben
 - o Nee
 - o Anders, namelijk...
- Worden er gemeenschappelijke activiteiten georganiseerd in de tuin? Zo ja, wat?
 - o Nee
 - o Ja, namelijk...
 - o Ik weet het niet
- Kunt u aangeven hoe tevreden u bent over de tuin? (1 tot 5)

Over de gemeente

- Bent u bekend met de regels die er namens de gemeente gelden voor de tuin?
 - o Ja
 - o Gedeeltelijk
 - o Nee
 - o Ik weet het niet
- Kunt u aangeven hoe tevreden u bent met de gemeente in het algemeen? (1 tot 5)
- Kunt u met een cijfer aangeven hoe tevreden u bent over hoe de gemeente met de tuin omgaat? (1 tot 5)
- Kunt u een ervaring benoemen waarom u op deze wijze over de gemeente – tuin relatie denkt?
- Hoe tevreden bent u met de hoeveelheid inspraak die u heeft in uw gemeente? (1 tot 5)
- Heeft u al eens contact gehad met de gemeente betreffende de tuin?
 - o Ja (door naar de communicatie vragen)
 - o Nee (door naar het toekomst deel)
 - o Ik weet het niet (door naar het toekomst deel)

Communicatie met de gemeente

- Hoe lang geleden heeft u voor het laatst contact gehad met de gemeente betreffende de tuin?
 - o Minder dan 1 maand geleden
 - o Tussen 1 maand en 1 jaar geleden
 - o Meer dan 1 jaar geleden
 - o Ik weet het niet

toelichting De volgende vragen gaan over het meest recente contact dat u heeft gehad met de gemeente betreffende de tuin. **toelichting**

- Op welke manier heeft u contact gehad met de gemeente betreffende de tuin?
 - o Via e-mail
 - o Telefonisch
 - o Via post
 - o Met een afspraak / door langs te gaan
 - o Anders, namelijk...
 - o Ik weet het niet
- Wat was de aanleiding tot het contact met de gemeente over de tuin?
- Wat waren de onderwerpen / het onderwerp van het contact met de gemeente?
- Kan u met een cijfer aangeven hoe tevreden u bent met het contact met de gemeente? (1 tot 5)
- Wat zou u willen veranderen betreffend het contact met de gemeente? (U kunt hier meerdere antwoorden aangeven)
 - o De frequentie
 - o De contactwijze
 - o De duur van het contact
 - o Gemak van contact leggen
 - o De wachttijd tot het contact begint
 - o Anders, namelijk...
 - o Ik weet het niet

Over de toekomst

- Wat zou u in de toekomst aan willen passen aan de tuin? (U kunt hier meerdere antwoorden aangeven)
 - o Meer ruimte voor gemeenschappelijke activiteiten

- Onderhoud aan het gemeenschappelijke deel
- De regels binnen de tuin
- Communicatie tussen tuiniers
- Communicatie met externen
- Anders, namelijk...
- Ik weet het niet
- Wat voor een rol vind u dat de gemeente kan of zou moeten spelen in de verbetering van de tuin?
 - Adviserend
 - Assisterend / Helpend
 - Leidend
 - Anders, namelijk...
 - Ik weet het niet

Persoonlijk

toelichting Ter afsluiting van de enquête volgen er nog een aantal persoonlijke vragen.

toelichting

- Heeft u een bestuurlijke rol bij uw tuin (bijv. in het bestuur of in een commissie)?
 - Ja
 - Nee
 - Wil ik niet zeggen
- Wat is uw hoogst afgeronde opleiding?
 - Basisschool / Middelbare school
 - MBO
 - HBO / WO bachelor
 - WO master
 - Wil ik liever niet zeggen
- Wat is uw leeftijd?
 - Jonger dan 20
 - 20 – 29
 - 30 – 49
 - 50 – 59
 - 60 of ouder
 - Wil ik liever niet zeggen
- Wilt u verder nog iets kwijt of heeft u nog opmerkingen?

Einde

- Als u de resultaten van het onderzoek wilt ontvangen, laat dan alstublieft hier uw e-mailadres achter.