



# Green care in Health Care settings

*A case study of Sensa Zorg*

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Settings for Health Promotion (HSO-30806)

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## Preface

With this report we hope to provide a comprehensive overview of the current application of green care within Sensa Zorg and the possibilities for improvement. We think that green care holds promise for the future and we compliment Sensa Zorg for being a pioneer and an example in taking up the challenge to implement green care. We hope other organisations will follow them in the future.

We very much enjoyed the process of working towards a shared goal, together with the commissioners, Latifa and Oda, and the employees of Sensa Zorg. We would like to thank everyone for their enthusiasm and for taking the time to help us!

## Abstract

Green care is seen as an umbrella term for many different healthcare interventions in which elements of nature are used for various purposes, places and settings. It encompasses the promotion of health, wellbeing and welfare of clients. This study sought to unravel the current implementation of green care as well as the experienced constraints and opportunities within healthcare settings, specifically that of Sensa Zorg. This research made use of the Healthy Alliances Framework and took a multi-method approach, including semi-structured interviews, a literature study, a focus group, and a document-analysis. Constraints found, among others, were a lack of self-efficacy of employees and a lack of shared vision. Examples of opportunities that were found are to build upon existing capacities and create more visibility. Recommendations for Sensa Zorg are to come up with a shared vision, providing a tool or methodology, adapting the system, and to utilise existing opportunities.

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# 1. Introduction

## 1.1 Background

### 1.1.1 Nature and health

“We at Sensa Zorg believe that a natural green environment helps to support wellbeing and health” (Sensa Zorg, n.d.). Sensa Zorg is a Dutch healthcare organisation who is currently working on integrating green care in their everyday work processes. The relationship between nature and health is well established in the literature (Sempik et al., 2010). For example, a recent study shows that spending at least two hours per week in nature is associated with better health and well-being (White et al., 2019). According to Hartig et al. (2014), the positive effects of nature on health can be explained by four different pathways underlying its effect: air quality, physical activity, social cohesions, and stress reduction (Hartig et al., 2014). The first one means that trees and other vegetation affect the air quality, and through that influence health and well-being. Second, physical activity enhances mental and physical health, and the ability and willingness to be physically active is influenced by the outdoor environment and presence of natural elements. Third, social cohesion is positively associated with health, well-being and social relationships, and the few studies available suggest a positive relationship between natural environments and social cohesion (Hartig et al., 2014). Last, nature can decrease the risk of illnesses that involve chronic stress, help people to maintain their adaptive resources that are needed to deal with the demands of everyday life, and promote subjective well-being (Hartig et al., 2014).

### 1.1.2 Green care

Considering the health-promoting effect of nature, a relatively new field, green care, has emerged (Haubenhofner et al., 2010). Evidence of its effectiveness is increasing over the last fifteen years (Annerstedt & Währborg, 2011; Moriggi et al., 2020). Green care makes the connection between traditional healthcare sectors, such as mental healthcare, and other sectors beyond healthcare, like farming. Hereby, a link is made between care and outdoor elements or nature. Therefore, it is seen as an umbrella term for many different interventions in which different kinds of elements of nature are used for various purposes, places and settings (Haubenhofner et al., 2010). Well-known examples of green care are care farming,

ecotherapy, animal-based healthcare interventions, healing environments and gardens, and green exercises for various client and patients' groups and settings (Haubehofer et al., 2010; Rogersong et al., 2020). Thus, there is a link between healthcare and the natural environment. However, it is not a necessity for green care to happen outside, plants or animals can also be brought into houses or buildings for therapeutic or care purposes (Haubehofer et al., 2010).

During the first meeting with the commissioners of this case study, one of the commissioners, who is the coach that is helping Sensa Zorg to implement green care, said that green care can generally be divided into three different levels (Salomons, personal communication, March 19, 2021). This idea also relates to the framework of Haubehofer and colleagues (2010). The first level is that of experiencing the natural environment by looking at nature, for example by putting a window or the front door open during a therapy session. The second level relates to being active in nature by bringing the client out and taking a walk. The third level is based on interacting with natural elements and using nature as a means to achieve a certain therapeutic goal, for example by connecting feelings or experiences of the client to touching a tree.

However, not all commissioners had this same view on green care. During the same meeting it became clear that within Sensa Zorg, it is not yet clear what green care exactly entails and how it is currently embedded in the organisation. This shows that different perspectives exist on how green care should be defined. Since it is important to make green care fit to the setting of Sensa Zorg and not the other way around, a broad definition of green care has to be established for this case study. Following Sempik et al. (2010), we define green care as: The use of nature or contact with natural elements as an enhancing factor in regular care processes for the client and the everyday working processes of employees and the entire organisation.

### 1.1.3 Benefits of green care

In general, green care interventions are facilitating the health promotion process, which is in this study defined as: "the process of enabling individuals and communities to increase control over, and to improve their health" (Koelen & van den Ban, 2004). Green care is in line with recent developments in healthcare settings, such as the focus on positive health, which emphasizes the "ability to adapt and self-manage in the face of social, physical, and emotional challenges" (Huber et al., 2011). Therefore, green care is a holistic approach that aims to

maintain or promote a person's social, physical, mental, and educational well-being in their everyday living context (Haubehofer et al., 2010).

Green care has beneficial effects for both employees and clients, and likely also for the organisation. For clients, green care can result in faster recovery and fewer painkillers (Ulrich, 1984). Moreover, it can also lead to positive changes regarding a general health condition, self-confidence, the ability to cope with problems, taking responsibility as well as experiencing meaning and the improvement of physical health and social skills (Steigen et al., 2016). For employees, green care increases their productivity and acts as a buffer against burnout (Cordoza et al., 2018; Singh et al., 2010). Both client and employee benefits might contribute to the total organisational performance.

## 1.2 Problem statement

Although evidence supports the positive effects of green care interventions to a certain extent (Haubehofer et al., 2010; Steigen et al., 2016), little is known about how to best implement and integrate green care into healthcare settings (Cooley et al., 2020). Sensa Zorg is currently running a project aiming to develop a so-called tailored green care toolkit for healthcare settings, by researching their own green care practices. However, it is yet unclear what this toolkit should entail and how green care practices are currently embedded in the healthcare setting of Sensa Zorg. More research is needed to identify which specific elements of green care are effective in healthcare settings and how green care can be implemented in a sustainable way in regular work processes. By further developing this toolkit, implementation of green care practices can be improved and evaluation of its effectiveness and effective elements can be enhanced. Since green care has already shown – to a certain extent – its merits for the recovery process of multiple client groups, it is important to seriously consider green care as a useful and efficient complementary tool in healthcare settings (Annerstedt & Währborg, 2011). In turn, as described above, effective interventions with green care might speed up the healing process, which is not only relevant for the client itself, but also for society as it reduces healthcare related costs. Moreover, they are a possible resource for the employees and the organisation, which could also benefit the larger society. However, studies examining how green care can be implemented in healthcare settings reflect an under-

investigated research topic, since most studies only include pioneer practitioners and researchers who already have an affiliation with nature (Cooley et al., 2020).

Thus far, knowledge on what specific elements of green care are effective and ineffective in healthcare settings is still lacking (Artz & Davis, 2017; Rogerson et al., 2020). As healthcare settings are very complex, not all the general elements of green care might be effective in every specific situation. For example, going outside with a client might not be feasible, and thereby effective, for people who do not perceive green care as useful. Moreover, the implementation of green care is not only dependent on the willingness of the employee and the client to use it, but is dependent on the entire organisational system, and therefore also influenced by other factors related to the individual, interpersonal relationships, organisation and policy (Poland et al., 2009). Therefore, the aim of this research is to identify effective elements of green care in healthcare settings, investigate how green care is currently embedded into the healthcare setting of Sensa Zorg, and unravel the experienced constraints and opportunities for green care.

Thus, in this research the following research question will be answered: *How is green care currently embedded in healthcare setting Sensa Zorg, and what are experienced constraints and opportunities related to green care?*

### 1.3 Case background

In this research the focus is on the health setting Sensa Zorg. Sensa Zorg is a healthcare organisation with a wide range of client groups. The healthcare needs of people who come to Sensa Zorg range from ambulatory care support for adults, maternity care, youth mental health to specialist youth care in underprivileged neighbourhoods (Sensa Zorg, 2021). Ambulatory care is a broad term that encompasses a wide range of services related to healthcare. It refers to any medical service that does not require admission and is being provided in an outpatient setting (Heinrich, 2017).

Sensa Zorg is not just a regular healthcare organisation, but a culture- and nature-sensitive healthcare organisation. The 150 healthcare professionals, from 30 different cultures with 23 different languages makes it a culture-sensitive health care organisation (Sensa Zorg, 2021). Sensa Zorg is one of the few healthcare organisations in the Netherlands that applies green care in their work, which makes it nature-sensitive as well. The employees



are trained to apply green care into their everyday work processes. Often used types of green care are nature guidance and drawing a wish tree.

Many employees refer to nature guidance as walking coaching, with which they mean going for an outdoor walk with their client during a therapy session. However, for Sensa Zorg this is not the case, as it is not about coaching, but taking the therapy session outdoors. When the client is a child, nature guidance often implies playing outside (e.g., football). It relates to the second level of green care: being active in nature. The goal(s) of nature guidance can differ. Sometimes it can help the client to open up or talk about their problems. Other times it is about creating a positive association with nature, for example to reduce stress levels. The goal can also be to take clients into a different setting or learning new healthy habits to increase overall health. Furthermore, playing outside can show social skills and characteristics of young clients, and it can bring forward the problem to the caregiver without the client having to tell them.

Drawing a wish tree means that the client is asked to draw their own tree on paper without any further explanation. Afterwards, the caregiver will reflect with the client on the way the tree was drawn, as it tells something about the client and their way of thinking. Thus, this type of green care relates to the third level of green care: interacting with natural elements and using nature as a means to achieve a certain therapeutic goal.

Even though Sensa Zorg does apply green care, it is currently not a standard part of treatment, but more like an extra option for caregivers. Also, not all caregivers of Sensa Zorg apply green care. The caregivers that do, do not automatically apply green care with every client or during every therapy session. Moreover, when a caregiver does apply green care, there is no standard protocol or format on how green care should be applied. So, Sensa Zorg is currently applying green care, but not consistently.

In the future, Sensa Zorg would like to incorporate green care more in their treatment and make it a standardised process. They also want to be the first health care organisation in the Netherlands that applies green care consistently. This will make them an innovative organisation and an example for other healthcare settings. The director's dream perspective would be to move the office of Sensa Zorg to a tiny forest. The office will be a farm with different animals walking outside. Those can be used for cuddle- and horse therapy. Being in a forest will give the employees peace and the opportunity to walk directly in a real nature

setting with their clients, instead of walking in a neighbourhood. This shows that green care is not only important for clients, but also for the employees.

## 2. Theoretical framework

This study uses a settings approach. When taking a settings approach, the contexts within which people live, work, and play are addressed (Poland et al., 2009). In order to increase the likelihood of success, it is important to look at those factors and make them an object of inquiry and intervention. Besides, it is important to also look at the needs and capacities of people within the setting. Doing so offers opportunities to situate practice in its context (Poland et al., 2009). Sensa Zorg is a complex organisation, as there are multiple stakeholders involved within this health care setting. In the current study, the most important stakeholders are the director of Sensa Zorg, the implementation coach, the care consultant, the caregivers and the municipality. In order to take all different stakeholders into account and take up a settings approach, this research makes use of the Healthy Alliances (HALL) framework. With this framework the collaboration between different stakeholders becomes visible, which is useful in understanding why green care works or not.

### 2.1 The HALL framework

In order to understand how green care is embedded, as well as the experienced constraints/opportunities, a system of interdisciplinary innovation is needed. In such a system, interaction and communication has to take place between different actors originating from different sectors (Haubehofer et al., 2010). In other words, collaboration between different actors is needed. In the case of Sensa Zorg, the following actors can be thought of: clients, caregivers, municipalities, referrers etc. A framework that integrates the idea of collaboration as a prerequisite for success, is the HALL framework (Koelen et al., 2012). The key characteristics of alliances are considered working together (with combined strengths and talents) to achieve a shared goal. Considering Sensa Zorg this would mean integrating green care within the organisation. This entails applying green care organisation-wide, developing a toolkit, and being an example for other healthcare organisations on how green care can be applied to the specific organisational context, culture and working routines.

The central idea in this framework, presented in Figure 1, is that success of collaborations can be hindered or facilitated by institutional, interpersonal and organisational factors (Koelen et al., 2012).

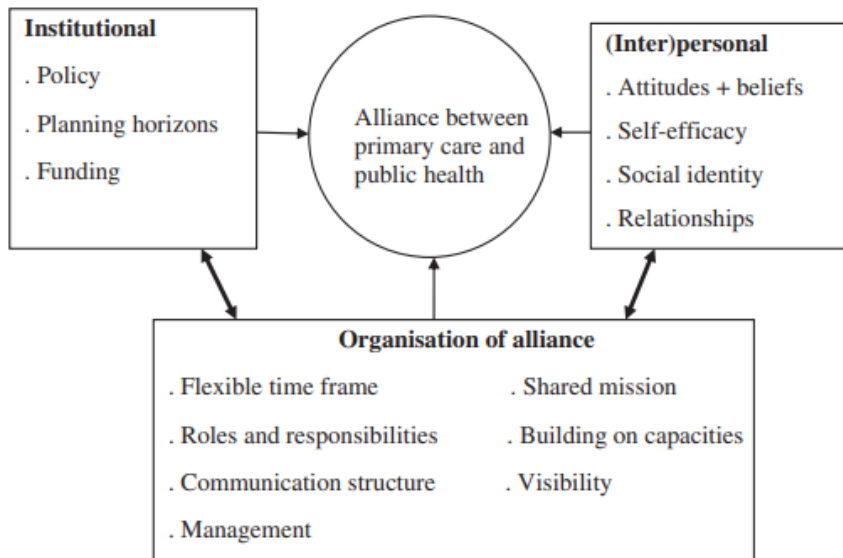


Figure 1. Overview of the HALL framework (Koelen et al., 2012).

The first level of factors in this framework is **institutional factors**. This cluster refers to circumstances or incentives that are embedded in the institutional and economic environment of organisations (Koelen et al., 2012). One of these institutional factors is *policy*. Health policies are not only shaped within the health sector (Koelen et al., 2012). For example, in the case of Sensa Zorg, municipalities play a role in the development of health-related policy. Thus, for the collaboration within Sensa Zorg, it is important to include policy coming from different sectors. Another factor is *planning horizons*. Care can be given on request, which normally shows results quite quickly. On the other hand, care related to public health is most of the time focused on prevention and is more proactive (Koelen et al., 2012). Often, the results of this form of care are not easily measured in a short time period. This could also be a problem within Sensa Zorg, as green care is considered part of the health setting. Therefore, it should not be an intervention by itself, but it should be integrated into the setting and into everyday work practices. Time is needed to reach this goal, so results cannot be measured quickly and easily in the short-term. The last institutional factor is *funding*. Funding is often spent on treatment of disease, instead of prevention of disease. If money is spent on prevention, the prevention programmes often focus on one single risk factor, whereas most diseases are caused by many more related risk factors (Koelen et al., 2012). Thus, prevention actually asks for complex interventions. However, often funding is not interesting as these complex interventions are both expensive and only show effects on the

long-term. Relating this to Sensa Zorg, the care consultant has to collaborate with the municipality in order to receive funding.

The second level of factors are **personal and interpersonal factors**. Everyone that is part of an alliance brings in their own personal background and opinion, which influences the collaboration (Koelen et al., 2012). One of the factors in this cluster is *attitudes and beliefs*. Not everyone sees every task as important or valuable. As a result, not every partner is willing to put in the same amount of effort. Therefore, it is important to find a common value or goal, to work towards together (Koelen et al., 2012). Relating this to Sensa Zorg, not all employees will have the same attitude towards green care. Therefore, the organisation should try to find something to work towards together. Also, *self-efficacy* relates to this cluster. Collaboration with other professionals from other sectors, such as municipalities, asks for competencies regarding teamwork. If they do not possess these competencies, this can make partners feel insecure about themselves and their role in the alliance (Koelen et al., 2012). It therefore is important that partners feel they are important for the alliance. Next, *personal attitudes* play a role in the success of an alliance. Only when partners trust each other, having fun in the alliance and accepting different visions, they can work together successively (Koelen et al., 2012). This for instance can be important in the relationship between healthcare professionals and clients when applying green care.

The last level of factors is related to **the organisation of alliances**. This cluster consists of factors that can help deal with the differences that are brought into alliances (Koelen et al., 2012). An alliance can only become successful when differences are handled. First, it is important to have a *flexible time frame*, as it takes time, trial, and error to come to a shared vision and the ability to build relationships (Koelen et al., 2012). So, the question is if there is enough time taken into account to implement green care. Another factor that flows from this, is the importance of a *shared mission*. All partners in the alliance will have different aims based on their own personal and institutional background. Therefore, a common goal within Sensa Zorg about green care is needed, so there is a common understanding of how to proceed within the implementation (Koelen et al., 2012). The next factor that is important, is *clear roles and responsibilities*. Relating this to green care within Sensa Zorg, this means that every stakeholder should know what their tasks are in implementing green care. Different backgrounds and expertise should be valued and linked to separate roles, as these roles together can make the collaboration successful (Koelen et al., 2012). Diversity of the partners

in the alliance gives the opportunity to *build on capacities*. In the case of Sensa Zorg there could be thought of the capacities of the employees within the organisation. Every employee should be able to use their own expertise related to the integration of green care. For example, the care consultant has a different task in the implementation process than a caregiver. Furthermore, organisational capacities that are already there should be used. For example, the natural environment the organisation is placed in. In addition, for the action that is taken by the alliance to be successful, the *communication structure* plays a role. It should be possible for partners to communicate both formal and informally about green care (Koelen et al., 2012). In this way, an open-minded sphere can be created which can help with the collaboration. Furthermore, *visibility* is a necessity. It is important that the collaboration that is needed for the implementation of green care is visible for outsiders (e.g., clients and funders), however, visibility also is needed within the alliance. This includes that every member of the alliance is participating in the implementation of green care and results and objectives are visible (Koelen et al., 2012). Lastly, the *management* of alliances are an important factor that influences success. A leader should take an empowering leadership style that stimulates participation (Koelen et al., 2012). For the implementation of green care this could mean that leaders motivate employees to apply green care and give opportunities to experience green care.

## 2.2 Research question

Connecting this framework to the implementation of green care in healthcare settings, it could be stated that the success of the implementation is related to these institutional, (inter)personal and organisational factors. Therefore, the HALL framework will be used as a guiding tool to structure the results of the present study. It shows interrelationships between different factors and stakeholders and reveals room for improvement in collaboration and the use of green care within Sensa Zorg. However, to make this possible, it is necessary to determine to what extent these factors are present in Sensa Zorg. This leads to the research question: *How is green care currently embedded in healthcare setting Sensa Zorg, and what are experienced constraints and opportunities related to green care?*

### 3. Research methods

To identify how green care is currently embedded in the everyday work processes of the health care setting of Sensa Zorg, and what the experienced constraints and opportunities related to green care are, a qualitative research methodology was used. To gain insider knowledge of the healthcare setting of Sensa Zorg, this study took an action-based research approach. Furthermore, it included actor’s involvement, helping them to improve their own practices, empowering them, and generating solutions to practical problems (Koshy et al., 2010; Meyer, 2020).

In order to create a better understanding of the use of green care in healthcare settings, and within Sensa Zorg specifically, this research has taken a multi-method approach, including a focus group, interviews, a literature study, and a document-analysis of project materials. The different methods are described in Table 1.

Data collection and data analysis has been an iterative process, wherein methods needed to be adapted to the findings as they presented itself. For the researchers, it has been a process of learning by doing that required flexibility and critical reflection. For example, the original plan was to use the same interview guide for every stakeholder, but during data analysis the interview guide for the director was adapted to be able to fill in the remaining gaps. Furthermore, bottom-up coding was changed to top-down coding.

**Table 1.**  
*Overview of data collection sources*

Methods	Number	Information on	Involved stakeholders
Literature study	4 articles	Effective elements	None
Focus group	1 group, consisting of 11 participants, with a duration of 2 hours	- Current situation - Opportunities and constraints	Commissioners, different employees of Sensa Zorg
Interviews	5 interviews, each with 1 participant, with a duration of 30-60 minutes	- Effective elements - Current situation - Opportunities and constraints	Commissioners, caregivers and director of Sensa Zorg
Document-analysis	3 project	- Opportunities and	Employees of Sensa

	documents, consisting of a questionnaire, and two summaries of previous focus-groups	constraints	Zorg
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### 3.1 Data collection and ethical considerations

#### 3.1.1 Data collection

The primary data collection method consisted of semi-structured interviews, while a focus group, literature study, and document-analysis acted as secondary data collection methods to supplement the primary findings.

First, semi-structured interviews with a range of open-ended questions have been conducted to gain more information directly from the stakeholders related to Sensa Zorg. The stakeholders that needed to be included as interviewees were selected based on the identification of the most important stakeholders and their availability, as mentioned in the case background. The interviewees have been selected through a purposive sampling method, which was preceded by network sampling of the participants. The commissioners of the case study have provided the contact details of the relevant actors and stakeholders necessary for the study. The participants consisted of two employees of Sensa Zorg, the director of Sensa Zorg, and the two commissioners: a Sensa Zorg consultant, and a Rewild Yourself consultant, which sums up to a total of five participants. Rewild Yourself is an organisation which specializes in coaching, implementing and measuring green care, including within Sensa Zorg, and they were considered crucial in identifying the barriers and opportunities of green care application in Sensa Zorg. Employees and Sensa Zorg consultants who apply green care were seen as important because they could give first-hand knowledge of green care engagement and application in the organisation. In addition, the director acts as the institutional head of the organisation and could provide useful insights on management and organisational levels. Each participant has been sent a form for informed consent via email and has been asked to read and sign it and send it back before the start of the interview. Based on the knowledge gathered during meetings with the commissioners and in the focus group, the interview questions have been established (see Appendix A). When deemed



necessary the questions have been changed to fit better to the stakeholder that was interviewed, which was applicable to the interviews with the commissioners and the director. Each interview has been recorded to make sure that no important data would be missed.

Subsequently, an online focus group involving the stakeholders such as commissioners, employees, and the director of Sensa Zorg has been attended by two participant observers. The aim was to gather information on the application of green care in the organisation and to provide a deeper insight into different views on the mission and vision of green care within Sensa Zorg. The focus group could not be recorded but the two participating observers both made notes.

Simultaneously, a document-analysis of data that was already gathered during previous stages of the overarching project, has been conducted to add additional knowledge. Documents included the results of a questionnaire of research phase one filled in by employees of Sensa Zorg, a report of a focus group with employees of Sensa Zorg about the green care toolkit, and a report of the same focus group as mentioned above but then written by another researcher.

Lastly, a literature study has been undertaken to investigate and identify the elements of green care that can be considered effective, and how these can be perceived as opportunities for implementation. Literature on green care and its application, mostly from Google Scholar and Pubmed, has been consulted for this purpose. Literature on green care application in health settings was found to be quite limited, however, the most related ones in a health care settings application were included for the literature study whilst the unrelated ones were excluded. In Table 2 an overview is provided of the included studies.

**Table 2.**  
*Used sources for literature study*

Author	Title	Keywords	Source
Cogstad et al., 2014	Narratives of Natural recovery: youth experience of social inclusion through green care.	“green care”, “nature”	Pubmed
Griffin et al., 2005	A Countryside for Health and Wellbeing; the Physical and Mental Health Benefits of Green Exercise.	“a countryside for health and wellbeing”	Haubenhofner et al., 2010

Salomon et al., 2010	Green Care as Psychosocial Intervention for Depressive Symptoms: What Might Be the Key Ingredients?	“green care”, “effective”	Pubmed
Van der Berg., 2016	Effectmeting wandel coaching	“walking”	Google scholar

### 3.1.2 Ethical considerations

Data for this study was collected by the researchers, in collaboration with the commissioners of Sensa Zorg. Procedures of data collection and analysis assured confidentiality by the safe storage of interview recordings and transcripts, and anonymising individual responses in such a way that one could not be recognized by their function. All participants of the interviews have been informed about their participation in this study and signed informed consent beforehand (see Appendix B). Ethical approval was not required as confidentiality was fully guaranteed and participation in the study was voluntary.

### 3.2 Data analysis

First, for the analysis of each interview, the notes that were taken by one of the researchers were, in consultation with the other researcher, processed into one summary. Subsequently, the summaries were deductively coded by the researcher that also held that specific interview, according to a top-down coding scheme that consisted of themes that were based on the interview questions (see appendix C), to make it possible to identify effective elements, current implementation and a first shift in opportunities and constraints. Something was marked a constraint if participants indicated that it was currently not present and therefore lacking, and thereby prevented or hindered them from using green care. For example, if a participant said to lack the knowledge to apply green care effectively, this was seen as a constraint. In contrast, opportunities were identified as factors that were mentioned as currently present and therefore stimulated the use of green care or as factors that were indicated as supporting if they would be implemented in the future. For example, if a participant indicated that the organisation had provided them with training to learn about green care, this was coded as an opportunity. Then, a second cycle of coding according to a different coding-scheme based on the concepts of the HALL framework (see appendix C), was performed to create a better understanding of the constraints and opportunities of using

green care within the complex healthcare system of Sensa Zorg. For example, “Another hindering factor she mentions, is the motivation of caregivers to deliver green care” has been coded as a constraining factor on the interpersonal level: attitudes and beliefs. To enhance credibility of all the findings, the applied codes were discussed between researchers and changed when deemed more appropriate.

Next, the literature study resulted in the identification of effective elements of green care application in health care settings. The effective elements were integrated with the opportunities found during the interviews, since the elements can be perceived as opportunities for the implementation of green care.

Next, the data of the focus group has been analysed through the means of triangulation of the summaries that were made by both researchers present. This resulted in one final, more objective, executive summary, which was subsequently deductively coded, according to the coding-scheme based on the HALL framework. Then, the same coding-scheme was again used for deductively coding the documents in the document-analysis. Finally, findings from the focus group and document-analysis were integrated with the findings from the interviews, especially focussing on complementary and contrasting findings, thereby creating a more complete picture. Findings were illustrated with translated quotes (see Appendix D).

Last, the collected data was also used to further elaborate on the case background, by getting more insight into the healthcare setting of Sensa Zorg and their current use of green care.

## 4. Results

From the interviews, focus group and document analysis, several overarching constraints and opportunities concerning the implementation of green care came forward. These constraints and opportunities are structured according to the HALL framework, as can be seen in Figure 2. The results will be discussed per level.

Institutional level	Organisational level	Interpersonal level
<p><b>Constraints</b></p> <ul style="list-style-type: none"> <li>▪ <b>Funding</b> <ul style="list-style-type: none"> <li>- Expensive</li> <li>- Perceived as luxury</li> </ul> </li> <li>▪ <b>Policy</b> <ul style="list-style-type: none"> <li>- Focus on practical problems</li> <li>- Green care not embedded in the organisation</li> <li>- Focus not on innovative methods</li> </ul> </li> <li>▪ <b>Living area of clients</b></li> <li>▪ <b>Collaboration with many stakeholders</b></li> <li>▪ <b>Media</b></li> </ul>	<p><b>Constraints</b></p> <ul style="list-style-type: none"> <li>▪ <b>Time</b> <ul style="list-style-type: none"> <li>- Limited time to go outside</li> <li>- Limited time to deal with problems</li> </ul> </li> <li>▪ <b>Communication</b> <ul style="list-style-type: none"> <li>- With clients</li> <li>- Reporting on green care not possible</li> </ul> </li> <li>▪ <b>Lack of shared mission</b> <ul style="list-style-type: none"> <li>- Matching process</li> <li>- External stakeholders</li> <li>- Caregivers</li> </ul> </li> <li>▪ <b>Not building on capacities</b></li> </ul>	<p><b>Constraints</b></p> <ul style="list-style-type: none"> <li>▪ <b>Culture</b></li> <li>▪ <b>Attitude &amp; beliefs</b> <ul style="list-style-type: none"> <li>- Caregiver not motivated</li> <li>- Client not motivated</li> </ul> </li> <li>▪ <b>Self-efficacy</b> <ul style="list-style-type: none"> <li>- No clear meaning / value green care</li> <li>- No clear role outdoors</li> <li>- Lack of skills/ knowledge/ tools</li> </ul> </li> <li>▪ <b>Trust</b></li> <li>▪ <b>Bad weather</b></li> <li>▪ <b>Stress / other things to do</b></li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ <b>Policy</b> <ul style="list-style-type: none"> <li>- Integrate green care in preparation treatment (mapping out green areas)</li> <li>- Expectation management from the start</li> </ul> </li> <li>▪ <b>Planning horizons</b></li> <li>▪ <b>Increased value of green care</b> <ul style="list-style-type: none"> <li>- COVID-19</li> <li>- Governmental</li> </ul> </li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ <b>Different definition</b></li> <li>▪ <b>Visibility</b> <ul style="list-style-type: none"> <li>- Digitalisation</li> <li>- Effectiveness</li> <li>- Reporting</li> </ul> </li> <li>▪ <b>Management</b> <ul style="list-style-type: none"> <li>- Supportive managers</li> <li>- Matching system</li> </ul> </li> <li>▪ <b>Organisational culture</b></li> </ul>	<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>▪ <b>Attitudes &amp; beliefs</b> <ul style="list-style-type: none"> <li>- Caregiver positive towards green care</li> <li>- Belief of caregiver in effectiveness green care</li> </ul> </li> <li>- Caregiver motivates client actively</li> <li>- Care fits the client</li> <li>- Experiential learning</li> <li>▪ <b>Self-efficacy</b></li> <li>▪ <b>Trust</b></li> <li>▪ <b>Benefits client</b> <ul style="list-style-type: none"> <li>- Stress relieving</li> <li>- Change of setting</li> </ul> </li> <li>▪ <b>Benefits employee</b> <ul style="list-style-type: none"> <li>- Stress relieving</li> <li>- Physical activity</li> </ul> </li> </ul>

Figure 2. Overview constraints and opportunities structured according to the HALL framework

## 4.1 Constraints and opportunities on the institutional level

### *Constraints*

Within this study several constraints on the institutional level were found. **Policy** within Sensa Zorg seems to be a constraint, as the focus of policy regarding caregiver's tasks is mainly on practical matters such as paperwork. One interviewee stated: *"I do not practice green care with adults very often, as I have to focus on their practical matters first."* A participant in the focus group also described this problem: *"For this [practical matters] we sometimes need to be inside, for example when we use a laptop."* As a result, there is less time to go outside and practice green care. This shows that green care is still not fully embedded in the organisation; it is not integrated in policy about the caregiver's tasks. Related to this problem is the **living area of clients**. Not every client lives in an environment where nature is easily accessible, let alone if there is limited time. This challenges the ability of the caregivers to apply green care. Lastly, **lack of funding** is considered a constraint. As concrete results of green care are not visible yet, the municipality is not willing to invest in it. Oftentimes innovative methods are not invested in, which hinders its implementation. Furthermore, green care is often perceived as a luxury treatment, as something that is an addition to normal services. According to an interviewee, negative ideas about green care are enhanced by **the media**. The interviewee stated: *"Within healthcare, every change in policy that is made is reported about in the media. This is also the case with green care; for example, animal treatment is written about negatively."* As a result of the negative ways in which green care is framed, it is less attractive for funders to invest in this type of care.

Lastly, the **collaboration with stakeholders** is perceived as a constraint. Before green care can be implemented, the management has to make sure every stakeholder is on board. For example, team leaders, the HR manager and mediators should be convinced that green care should be invested in. This collaboration takes time and does not guarantee a successful outcome, as not all stakeholders are positive towards the implementation of green care. Results from the document analysis of the focus group show that the municipality and health insurance companies who are also necessary stakeholders view green care as an extra cost item and also cannot invest in it efficiently because of lack of effective implementation of green care which yields little evidence for research purposes. Also, the care purchasers have little knowledge of green care and it has to be explained repeatedly for them.

### *Opportunities*

Even though policy, as it is now within Sensa Zorg, is considered a constraint by many of the interviewees, some see **changing policy** as an opportunity for green care. When green care is integrated in the policy from the start, employees would be incentivised to apply it. This opportunity was also found in the document analysis. Accordingly, expectation management about green care should be part of the policy as well. This helps employees to think about their expectations of green care from the start and helps defining goals related to the implementation of green care. For example, one interviewee said: *“I believe that every caregiver should figure out what are options for green care within the living area of the client, before they start with the treatment. This could be done by making it an obligatory part of the preparation process of the treatment. It could also be made a part of the digital system”*. This example shows that policy is seen as an opportunity to solve multiple of the before mentioned constraints.

Furthermore, green care is seen as an opportunity related to **planning horizons**. It can be used when a treatment process is stuck, by giving the client an opportunity to open up more easily. Green care then is seen as an opportunity to speed up the treatment process, which in the end reduces treatment duration. According to one interviewee, as a result, Sensa Zorg will perform better and will be able to cure more clients.

Lastly, the **(added) value of green care** is increasingly seen by external stakeholders. For instance, the government and other healthcare institutions now are more aware of the added value of green care. As one of the interviewees said: *“A few years ago, the government did not see any use in green care. They thought it was too spiritual, that it did not have an effect. Now they are changing that view, they see that being outdoors in nature is valuable.”* Furthermore, as was mentioned by several interviewees, COVID-19 boosted the interest in green care even more. Green care (that is mainly practiced outside) enabled Sensa Zorg to continue with providing face to face care, whereas other care institutions were lacking this opportunity.

External stakeholders appreciating green care can be considered an opportunity, as this makes external parties more interested in funding green care initiatives.

The document-analysis added to this that a strong collaboration between stakeholders, amongst others, healthcare referrers, caregivers, the municipality, health insurers and clients is needed from the start, because this would make it possible to make the

specific value of green care visible. Furthermore, health care referrers should be made aware of the possibility of green care provision, which would make it more self-evident that clients are taken out outside.

## 4.2 Constraints and opportunities on the organisational level

### *Constraints*

During the interviews with the stakeholders, several factors related to the organisational level were mentioned. Firstly, **time** was considered a constraint. Some interviewees mentioned they feel they do not get enough time with their client. Moreover, sometimes problems with green care occur. Clients are not always willing to go outside, the client lives far away, or the weather is bad. If the caregivers would have had more time with the clients, they might be able to deal with these problems and eventually go outside.

Another constraint is **lack of communication**. Employees feel like they are not always able to communicate goals of green care clearly to their clients. Communication about green within the organisation is hard as well, as there is not a possibility to report about green care within the system yet.

Furthermore, interviewees feel like the organisation is not building on capacities that are already there. Capacities of employees are not used fully, for example one interviewee said: *“I am familiar with walking coaching and enthusiastic about green care, however I would like to have some more tools to implement green care practices even further. I want to know what I can do besides asking questions.”* Furthermore, some employees feel like the natural environment that is already there, is not used. One interviewee mentioned: *“Instead of creating new natural environments, we could utilize existing opportunities way more. For example, we could go to a petting zoo, or to a park nearby.”*

Lastly, an often-mentioned constraint is the **lack of a shared mission and vision** within Sensa Zorg concerning green care. It is a constraint experienced in all stakeholders that are interviewed. An overview is missing of what green care is and who is practicing it already. As a result, the matching process is difficult, as in this process a caregiver can be matched to a client who needs green care. Moreover, without a shared vision it is hard to unanimously communicate about green care with external stakeholders. For caregivers it brings problems with their practical implementation of green care; they cannot perform green care if they are

not aware of what it entails. Within the document analysis and focus group this problem also came forward, as some of the employees felt like the definition that is now formed within Sensa Zorg, is not clear and mainly focused on walking coaching. Although it was also said that walking coaching in itself is not the right term, and that nature guidance fits better with the abilities of the caregivers. Therefore, another, broader definition might be better as this would relate to more types of green care. In this way the type of green care could be matched with competencies of the caregivers.

### *Opportunities*

The interviewees also proposed some opportunities for the implementation of green care. The main opportunity interviewees mentioned concerned the **visibility** of green care and its results. From the document analysis it became clear that visibility of the organisation should be further enhanced. An opportunity that is described within both the focus group and interviews, is digitising green care. It should become part of their existing digital system. According to the document analysis, this makes it possible to keep track of green care. For example, the usage of green care can be linked to the treatment process. In this way there can be reported about the usage of green care, and eventually, the effects of green care could be measured within this system. It was also mentioned in the document analysis that the ability to scientifically measure the beneficial effects of green care in Sensa Zorg will be effective in making relevant stakeholders invest into it.

Within the document analysis and focus group **a different definition** of green care was considered an opportunity. Some employees felt like the definition that is now formed within Sensa Zorg, is not clear and mainly focused on walking coaching. Even the definition of walking coaching itself is not the right term and that walking guidance better fits with the abilities of the caregivers, according to several interviewees. Therefore, another, broader definition might be better as this would relate to more types of green care. In this way the type of green care could be matched with competencies of the caregivers.

Another opportunity for the implementation is the **management** within Sensa Zorg. Within Sensa Zorg, care is distributed by means of a matching system. Clients and caregivers are matched based on the needs of the client. This is a great opportunity to implement green care more often, as caregivers that use green care can be linked to clients who need green care. In addition, the organisation consists of motivated and inspired managers that are eager



to implement green care. In one of the interviews the following was stated: *“Implementing green care was a leap in the dark for the organisation. Still the management decided to just do it and hired an implementation coach.”* This combination of the matching system and motivated managers, contributes to the implementation of green care. Document analysis results also show that implementing green care from the start of the client’s treatment is also more effective in getting the client used to the treatment.

Even broader, it was mentioned that the **organisational culture** itself includes green care: *“We have implemented green care within Sensa Zorg. We placed plants in the office and made a moss wall. Furthermore, there are relaxing spaces for employees. I believe that it is important that all the employees are exposed to green care within Sensa Zorg and experience the benefits of it themselves.”* This was also emphasized in the focus group. In here it became clear that the organisation cares for their employees and wants to give them the opportunity to experience green care and relaxation. This is seen as an opportunity, as it introduces employees to green care and its benefits. These benefits have been found in the literature as well, as viewing nature from an open window and incorporating indoor nature already is an effective element of green care (Griffin et al., 2005). Results from the focus group also show that currently, Sensa Zorg has a famous indoor tree called “Wout”.

### 4.3 Constraints and opportunities on the (inter)personal level

#### *Constraints*

On the (inter)personal level, **culture** can be seen as a constraint. People with a different cultural background can look at green care differently. Document analysis results also showed that cultural reasons can hinder a client from being seen outdoors with a caregiver of the opposite sex. Besides, the **attitude** of both caregivers as the client plays an important role. When a caregiver is not motivated to use green care, he/she will also not do it. Same case for the client, when a client is not motivated it will be much harder for the caregiver to get the client along. Certain client groups were seen as more motivated than others. This lack of motivation and resistance against green care also came clearly forward in the document-analysis.

Other constraints were seen on the factor **self-efficacy**. A lack of a clear meaning or value of green care was seen as a constraint for the use of green care. For caregivers it is more

difficult to define their role as a caregiver in an outside environment. They lack skills, knowledge and tools in order to provide green care in the best possible way. From the document-analysis it became clear that tools are needed that help to concretely apply green care, help to motivate clients and help to get the conversation started with young people. More education or training is therefore necessary. Also, more specific intervention methods or guides with exercises for green care can be considered.

**Trust** was seen as another important aspect in the provision of green care. Caregivers consider the outside environment as less secure than an inside environment. One interviewee described it as: *“In the security of a home it is easier to have confidential conversations.”* The lack of secure feeling can keep caregivers from having personal conversations with a client.

Finally, the weather and the need to arrange many practical matters play a role in the use of green care. **Bad weather** prevents caregivers from going outside with the client and the combination of having to take care of many practical matters and going outside gives caregiver **stress**, causing them to drop green care. *“If we have to arrange so many (practical) things, I don't want to go outside at all. If we do go outside to play football, we won't make it.”*

### *Opportunities*

While a lack of motivation can be seen as a constraint, having a positive **attitude** towards green care and being motivated to use it can be seen as an opportunity. Both will increase the willingness of the caregiver to do so. However, it is also important that green care fits the client's needs. Active motivation of the client can help in this. Motivating a client will go easier when the caregiver **beliefs** in the effectiveness of green care. The intrinsic motivation of the caregiver can be enhanced through experiential learning. An interviewee said about experiential learning: *“The most powerful method in my view, because only by experiencing something yourself, you can offer it to other people.”* The document-analysis also showed that expectation management from the start is crucial to make sure that the client knows what to expect of green care.

Feeling capable in using green care can also be seen as an opportunity for using green care. **Trust** is also an important opportunity. Literature mentions a “trusted caregiver” as an effective element of green care. A trusted caregiver helps in stimulating **self-efficacy** of clients and creating an “atmosphere of kindness and recognition for the clients” (Cogstad et al.,

2014). When outside, clients feel more at ease, which helps them in opening up more. This can also make the caregiver feel more capable. The study of Van der Berg (2020) provided findings that walking in nature affords clients less psychological stress and yields more concentration and focus. Although the interviews showed that the outside environment was less secure, this was evident from the document analysis. It became clear that outside provides a safe place. Walking together creates a dynamic that provides more in-depth conversations.

Being outdoors and using green care led to **opportunities for both the client as the caregiver**. For both clients and caregivers being outdoors has a stress relieving effect. It also makes them more physically active, which has a positive effect on their overall health. In the article of Salmon et al. (2018), exposure to sunlight and utilising natural scenes were identified as effective elements of green care which helps in improving the physiological and health benefits of the client. Besides, being in a different environment can help them in opening up and it helps them feel more empowered.

The document analysis, next to the interviews, also showed opportunities in the provision of additional education and training, and specific intervention methods for green care to employees.

## 5. Discussion

### 5.1 Reflection of the study findings

The aim of this research was to identify effective elements of green care, investigate how green care is currently embedded into the healthcare setting of Sensa Zorg, and unravel the experienced constraints and opportunities for green care. From the results, it can be concluded that within Sensa Zorg there are now two main types of green care implemented, nature guidance and the wish tree. However, there is a lack of a clear understanding about what green care really entails. Caregivers see the effect of the use of green care, but do not feel they are capable of really implementing it, as they lack tools. The multi-methods approach gave a good overview about the constraints and opportunities for green care. The most important constraints are dealing with practical issues and with that a lack of time. Besides, a lack of funding, communication and a shared mission/vision concerning green care are seen as constraints. Furthermore, applying green care is made more difficult due to the different cultures, bad weather and the attitude of caregivers or clients towards green care. An important opportunity for green care is making it more visible, for example by implementing it in policies. In addition, the COVID-19 pandemic has contributed to the visibility of green care. Both can lead to more funding opportunities. Strong collaboration between stakeholders is therefore important. Other factors that are seen as opportunities for green care, are a positive attitude and motivation of both the caregiver and client. Clients can also open up more easily when they are in a different environment.

### 5.2 Scientific implications

In the article of Cooley et al. (2020), which is a review of outdoor talking therapy, several issues and solutions were described that can be linked to the constraints and opportunities found in this study. One of the potential issues out of the practitioner's perspective was that they needed to be aware of practicalities, including the weather and difficulties in access to natural spaces. Furthermore, lack of confidentiality that could be provided in the outdoor environment was also seen as a problem. Both of these align with the findings of this study. However, Cooley et al. (2020), also indicated changes in relational boundaries, difficulties in predicting the psychological condition of the client and the impact of the environment on this,

and feelings of disempowerment and insecurity as difficulties. To complement, this study has found additional constraints, namely that employees lack the self-efficacy to implement green care and that for both clients and employee's shortage of motivation, especially intrinsic, can hinder the use of green care. Aligned to these findings, a review by Masterston et al. (2020) indicated that the beliefs of the clients and a lack of motivation could act as barriers, and additionally, previous negative or positive experiences with therapy and healthcare providers could be of influence as well. Another similarity to studies of Cooley et al. (2020) and Masterston et al. (2020), was a lack in methodology, guidelines and funding. However, lack of guidance and support within the organisation, including likeminded supervisors and specialist training, was also mentioned by Cooley et al. (2020), but this was not seen in this study, wherein enthusiasm of the management/team and the training provided was found as a strength and opportunity. Solutions that were provided in the article by Cooley et al. (2020), were that some of the issues can be solved by enhancing predictability of outdoor therapy by including pre-planned time frames, using agenda's, combining indoor and outdoor therapy, and using outdoor spaces that are private. A study by Steigen et al. (2016), showed some opportunities for the client that were not specifically mentioned in this study, namely green care resulting in experiences of mastery and coping, social gains, and structure and meaningfulness. This research has brought additional knowledge of opportunities by showing that a shared mission and vision within the organisation, and a clear view on what green care actually defines, is very important to stimulate its implementation.

## 5.3 Limitations, strengths and recommendations for future research

### 5.3.1 Limitations

This study has some limitations related to its design and execution. A first limitation is that the number of participants that were included in the interviews was relatively small, five in total, and the participants per stakeholder group were even lower with most stakeholders being represented by only one participant. Furthermore, not all important stakeholder groups were involved, since the clients, general practitioners and municipality were not interviewed, nor were they part of the focus group. Moreover, the participants of the interviews were selected, based on the current application of green care in their care processes, or because they were already involved with the implementation. It would have been interesting to also

include participants who do not apply it yet or who are not in favour of green care, to cover a larger diversity of ideas and perhaps also show the other side of the story.

A second limitation is that the coding scheme could have been specified even more beforehand, to leave less room for individual interpretation of the researcher, for example by making a list with definitions of each code. Furthermore, since the interviews were not strictly transcribed and summaries were made, the used quotes were not always perfect representations of what was exactly said.

Last, due to government regulations, the interviews were held online instead of on location. This has led to some technical difficulties, including access problems and weak internet connections, which together with the different atmosphere that the online environment brings, could possibly have had a negative influence on the content of the interviews. However, it was also an opportunity since it allowed for flexibility in the schedules of both interviewees and researchers, making it more likely that everyone could attend.

### 5.3.2 Strengths

Despite the above-mentioned limitations, this research also has its strengths. A strength of this study is the multi-method approach that was used and the triangulation of data sources, methods, and analysis by researchers, which created a more complete picture of the situation. By integration of these different methods, a report has been delivered that is based on the identification of working elements of green care and gained knowledge on the practice of utilising green care according to the view of different stakeholders involved with Sensa Zorg.

Moreover, since Sensa Zorg is a culture-sensitive healthcare organisation and this research included participants with a diverse cultural background. This is valuable because this contributes to a multicultural perspective, making it more transferable to and relevant for Sensa Zorg and other healthcare settings.

As the results show, the implementation of green care within Sensa Zorg is a complex process that includes many stakeholders. Linking this to a setting approach, this means it is important to map out the different stakes of and relations between stakeholders, and how they influence each other (Poland et al., 2009). Furthermore, insight about perspectives on green care from all these stakeholders are necessary to make the collaboration on implementing green care successful (Koelen et al., 2012). Therefore, the use of the HALL

framework adds a new perspective to the current knowledge base of green care, since it focuses on the elements that explain success of green care in healthcare settings and looks further than just the separate factors, thereby taking into account how the constraints and opportunities are located within different levels inside and outside of the organisation. Furthermore, this study is innovative because it is based on the healthy settings approach and thereby has attributed to context-specific knowledge of Sensa Zorg.

Last, since this is part of a larger research project that has been initiated by Sensa Zorg and it has taken an action-based approach that included perspectives of multiple stakeholder groups, it provides new insights that are relevant for and actionable in practice, including but not limited to Sensa Zorg.

### 5.3.3 Recommendations for future research

Future research should focus on investigating the experienced barriers and constraints of the key stakeholder groups that were missed in this study, including clients, the municipality, healthcare insurers and referrers, to even further enhance the current knowledge of green care implementation in healthcare settings. Furthermore, future studies should take place on a larger scale, thereby making it possible to base conclusions on a larger sample that includes different healthcare organisations and different participant's backgrounds, which would also allow for sub-group comparisons. Finally, there is a need for more research into the effect and process evaluation of green care in healthcare settings, since this could make it visible how green care and its implementation actually work or do not work for different involved stakeholders.

## 6. Conclusion

The current study has been able to co-create with stakeholders of green care in Sensa Zorg and gain meaningful insights into how green care interventions are currently being implemented. Furthermore, it identified experienced constraints and (future) opportunities, by using the HALL framework as a theoretical lens. Important constraints found in this study included practical barriers, a lack of self-efficacy or motivation of employees and/or clients, limited funding, and a lack of training and methodology. These are closely related to the opportunities that were discovered, namely making green care more visible within and outside of the organisation, having a positive attitude of employees and clients, and creating a strong collaboration between stakeholders involved in green care. Finally, the research brought up the need for a unified consensus on the definition, vision and application of green care within Sensa Zorg.



## 7. Recommendations for Sensa Zorg

Based on our results, we propose the following recommendations to Sensa Zorg for an effective application of green care.

First, it became clear that a shared vision about green care is missing, which affects all stakeholders. Without a clear definition, it is challenging to implement green care. This constraint became clear in the work processes of the caregivers. Due to a lack of clear operationalisation of what green care entails, it is challenging to successfully carry out green care in practice and convey this message to clients and other external stakeholders. This shared mission could therefore also help in making green care more visible.

Second, a tool or methodology is necessary to enhance self-efficacy of caregivers in the implementation of green care. By developing a standard methodological framework of green care that includes specific exercises and practical steps to follow, employees would get more clarity about the roles to assume as caregivers while outdoors and indoors. Next to providing employees with tools, this framework could also help in making the application of green care more evidence based.

Third, the utilisation of existing opportunities and adoption of more types of green care is recommended, such as going to the zoo or nearby park, as this was voiced by stakeholders as a wish.

Last, it would also be worthwhile to work on the matching system and adapt it to match clients with employees, taking into account the green care needs of the client and the green care abilities of the employee. Furthermore, by making green care part of the system, both visibility of green care and its effectiveness might be enhanced.

Altogether, these recommendations might increase the use of green care in Sensa Zorg and therefore ultimately lead to improved health status of both clients and employees.

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# Appendix A - Interview guide

**Interviewer:**

**Notulist:**

**Geïnterviewde:**

**Introductie:**

- Begroeting
- Korte introductie van onderzoeksteam en onderzoek
- Informed consent bespreken
- Korte introductie van geïnterviewde (naam, functie en wie u vooral begeleid)

**Vragen:**

- Past u groene zorg op dit moment toe? Bij ja, hoe precies/wat voor vorm van groene zorg?
- Wat beschouwt u als groene zorg? Wat zijn verschillende vormen die u kunt bedenken?
- Heeft u een voorkeur van het toepassen van groen als passief element (het ervaren van natuur) of als actief element (interactie met de natuur) binnen de zorg?
- Wat denkt u dat groene zorg betekent voor de organisatie Sensa Zorg? Komt dit overeen met uw persoonlijke visie of is deze anders?
- Wat beschouwt u als waardevolle elementen van groene zorg voor u als medewerker? Wat is de toegevoegde waarde?
- Wat beschouwt u als waardevolle elementen van groene zorg voor uw cliënt? Wat is de toegevoegde waarde?
- Welke elementen van groene zorg zijn volgens u effectief en welke niet?
- Wat stimuleert u om groene zorg toe te passen? En waarom?
  - Welke factoren binnen de organisatie?
  - Welke factoren gerelateerd aan de client en zijn/haar omgeving/cultuur?
  - Welke factoren gerelateerd aan uzelf?

- Wat verhindert u om groene zorg toe te passen? En waarom?
  - o Welke factoren binnen de organisatie?
  - o Welke factoren gerelateerd aan de client en zijn/haar omgeving/cultuur?
  - o Welke factoren gerelateerd aan uzelf?
  
- (Zijn er bepaalde vormen van groene zorg die u zou willen toepassen maar waar u op dit moment niet toe in staat bent? Bij ja, wat zijn deze dan?)
  
- (Zijn er dingen gerelateerd aan groene zorg binnen Sensa Zorg die u graag anders zou willen zien?)

Dit waren al onze vragen, is er nog iets wat u graag kwijt wil of zou willen vragen?

Bedankt voor uw tijd en dat wij dit interview met u mochten doen.

Als u nog vragen te binnen schieten na afloop van het interview of u nog aanvullende informatie wil delen, dan kunt u ons altijd bereiken via email.

# Appendix B - Informed consent

## Toestemmingsformulier onderzoek groene zorg

Beste deelnemer,

U bent uitgenodigd om deel te nemen aan een onderzoek van studenten aan de Universiteit van Wageningen naar de toepassing van groene zorg binnen zorgorganisaties. Het doel van dit onderzoek is om meer inzicht te verkrijgen in groene zorg binnen Sensa Zorg. De focus ligt voornamelijk op het onderzoeken van stimulerende en belemmerende factoren die een rol spelen bij het toepassen van groene zorg. Door middel van interviews met verschillende betrokkenen rondom groene zorg in de organisatie, zal er een antwoord gegeven worden op de volgende onderzoeksvraag; *“Hoe is groene zorg momenteel ingebed in de zorgomgeving van Sensa Zorg, en wat zijn de ervaren belemmeringen en kansen met betrekking tot groene zorg?”*

U neemt deel aan een interview waarin u vragen gesteld zullen worden over hoe u groene zorg toepast en welke stimulerende en belemmerende factoren u hierin ervaart.

Vanwege de vertrouwelijkheid van dit onderzoek, willen wij u vragen om onderstaande verklaring door te lezen en te ondertekenen. Bij ondertekening gaat u akkoord met deelname aan het onderzoek en onderstaande voorwaarden.

Ik verklaar hierbij dat:

- Ik, ....., vrijwillig akkoord ga met deelname aan dit onderzoek.
- Ik begrijp dat, zelfs als ik ermee instem deel te nemen, ik me op elk moment terug kan trekken of mag weigeren een vraag te beantwoorden.
- Het doel van het onderzoek schriftelijk aan mij is uitgelegd en ik de mogelijkheid heb gehad om vragen te stellen over het onderzoek.
- Ik ermee akkoord ga dat dit interview wordt opgenomen en dat de opname zal worden gebruikt voor rapportage doeleinden.
- Ik begrijp dat alle informatie die ik verstrek voor dit onderzoek vertrouwelijk behandeld zal worden.
- Ik begrijp dat de informatie uit dit interview anoniem verwerkt zal worden. Dit houdt in dat mijn naam niet genoemd zal worden en eventuele details die mijn identiteit weergeven worden verhuld.
- Ik begrijp dat ondertekende toestemmingsformulieren, de originele audio-opnames en de transcripties van de interviews niet langer worden bewaard dan nodig is voor de doeleinden van dit specifieke project.
- Ik begrijp dat ik recht heb op toegang tot de informatie die ik heb verstrekt op elk moment zolang deze is opgeslagen.

- Ik begrijp dat ik vrij ben om contact op te nemen met een van de mensen die bij het onderzoek betrokken zijn voor verdere informatie en/of vragen.

Ik heb dit formulier gelezen en begrepen. Al mijn vragen zijn naar mijn tevredenheid beantwoord en ik ben vrijwillig akkoord met deelname aan dit onderzoek.

.....  
*Handtekening deelnemer*

.....  
*datum*

.....  
*Handtekening onderzoeker*

.....  
*datum*

Voor verdere informatie of vragen kunt u contact opnemen met:

Jasmijn de Gijt

[jasmijn.degijt@wur.nl](mailto:jasmijn.degijt@wur.nl)

Supervisor Wageningen University & Research:

Roald Pijpker



## Appendix C - Coding scheme

First round of coding: We use top-down coding

1. Current application green care within SZ: Types of green care they apply right now (groen)
2. Their definition of green care: What is green care? (Oranje)
3. Passive green care (lichtgroen 2)
4. Active green care (donkergroen 1)
5. Effective elements (geel)
6. Added value of green care client (rood)
7. Added value of green care employee (lichtrood 2)
8. Stimulating factor (magenta)
9. Hindering factor (cyaan)
10. Improvement/change they want to see in Sensa Zorg (donkergrijs 2)

### Codes related to RQ

Subquestion 1: *What can be considered effective elements of green care, according to literature?*

- No coding needed

Subquestion 2: *How is green care currently being implemented into the everyday work processes of the Sensa Zorg team in Amsterdam-Amstelland?*

- Current application green care within SZ
- Passive green care
- Active green care

Subquestion 3: *What are perceptions of green care, according to different stakeholders?*

- Their definition of green care
- Effective elements
- Added value of green care client
- Added value of green care employee
- Improvement/change they want to see in Sensa Zorg

Subquestion 4: *What are institutional barriers/ opportunities of using green care in healthcare settings, according to the different stakeholders?*

- Stimulating factors
- Hindering factors

Subquestion 5: *What are (inter)personal barriers/ opportunities of using green care in healthcare settings?*

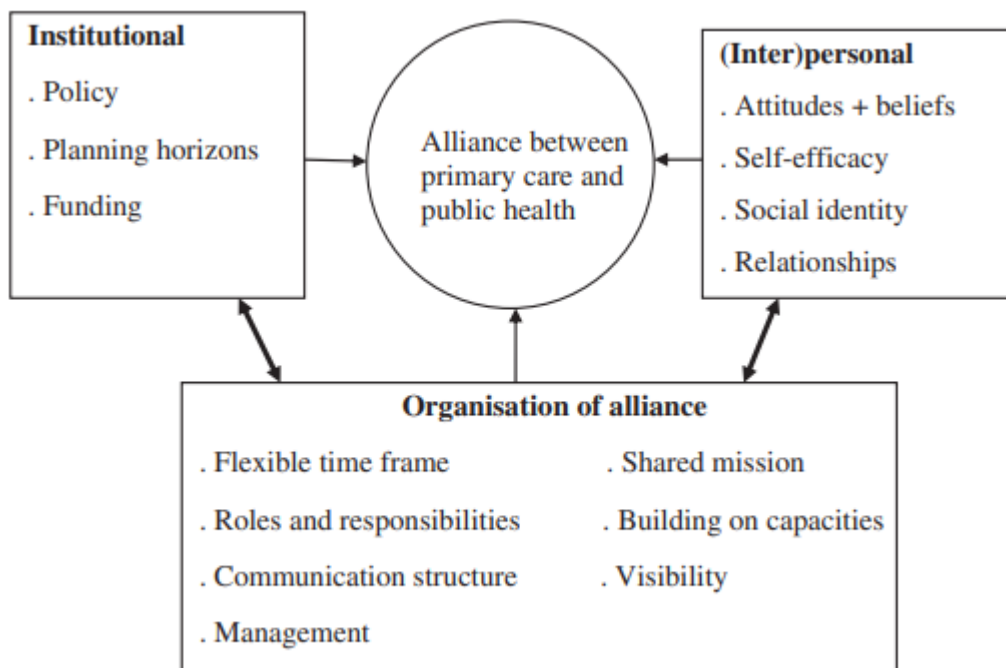
- Stimulating factors
- Hindering factor

Subquestion 6: *What are organisational barriers/ opportunities of using green care in healthcare settings?*

- Stimulating factors
- Hindering factors

Second round of coding: Top down codes HALL framework:

We only apply the top-down codes (see below) to the codes “stimulating factors” and “hindering factors” to further structure them into institutional, (inter)personal, and organisational.



The codes with “other”, refer to a code that does not fit to a specific subcategory but is a hindering/stimulating factor on this level.

**Codes → we will code this by putting a comment in the word document**

Subquestion 3: *What are institutional barriers/ opportunities of green care in healthcare settings, according to the different stakeholders?*

- Hindering factor on the institutional level\_Policy
- Hindering factor on the institutional level\_Planninghorizons

- Hindering factor on the institutional level\_Funding
- Hindering factor on the institutional level\_Other

Subquestion 5: *What are organisational barriers/ opportunities of green care in healthcare settings?*

- Hindering factor on the organisational level\_Flexibletimeframe
- Hindering factor on the organisational level\_Rolesandresponsibilities
- Hindering factor on the organisational level\_Communicationstructure
- Hindering factor on the organisational level\_Management
- Hindering factor on the organisational level\_Sharedmission
- Hindering factor on the organisational level\_Building on capacities
- Hindering factor on the organisational level\_Visibility
- Hindering factor on the organisational level\_Other

Subquestion 4: *What are (inter)personal barriers/ opportunities of green care in healthcare settings?*

- Hindering factor on the (inter)personal level\_Attitudes+beliefs
- Hindering factor on the (inter)personal level\_Self-efficacy
- Hindering factor on the (inter)personal level\_Socialidentity
- Hindering factor on the (inter)personal level\_Relationships
- Hindering factor on the (inter)personal level\_Other

Subquestion 3: *What are institutional barriers/ opportunities of green care in healthcare settings, according to the different stakeholders?*

- Stimulating factor on the institutional level\_Policy
- Stimulating factor on the institutional level\_Planninghorizons
- Stimulating factor on the institutional level\_Funding
- Stimulating factor on the institutional level\_Other

Subquestion 5: *What are organisational barriers/ opportunities of green care in healthcare settings?*

- Stimulating factor on the organisational level\_Flexibletimeframe
- Stimulating factor on the organisational level\_Rolesandresponsibilities

- Stimulating factor on the organisational level\_Communicationstructure
- Stimulating factor on the organisational level\_Management
- Stimulating factor on the organisational level\_Sharedmission
- Stimulating factor on the organisational level\_Building on capacities
- Stimulating factor on the organisational level\_Visibility
- Stimulating factor on the organisational level\_Other

Subquestion 4: *What are interpersonal barriers/ opportunities of green care in healthcare settings?*

- Stimulating factor on the (inter)personal level\_Attitudes+beliefs
- Stimulating factor on the (inter)personal level\_Self-efficacy
- Stimulating factor on the (inter)personal level\_Socialidentity
- Stimulating factor on the (inter)personal level\_Relationships
- Stimulating factor on the (inter)personal level\_Other

## Appendix D - Translations quotes

“I do not practice green care with adults very often, as I have to focus on their practical matters first.”

- Ik pas groene zorg niet vaak bij volwassenen toe, omdat er dan vaak praktische zaken zijn waar eerst op gefocust moet worden.

“The practical matters sometimes consist of paperwork and we have to use a laptop.”

- Soms ben je bijvoorbeeld met papieren bezig, en heb je een laptop nodig.

“Within healthcare, every change in policy that is made is reported about in the media. This is also the case with green care; for example animal treatment is written about negatively.”

- Zorg is een andere wereld qua beleid. Daarom moet je voorzichtig zijn met de stappen die je neemt, de media pakt namelijk iedere stap die je zet (negatief) op. Bijvoorbeeld paardentherapie, wordt overgebracht op een negatieve manier.

“I believe that every caregiver should figure out what are options for green care within the living area of the client, before they start with the treatment. This could be done by making it an obligatory part of the preparation process of the treatment. It could also be made a part of the digital system”.

- Waar woont iemand, daar moeten medewerkers zich in verdiepen. Er zijn altijd mogelijkheden in de omgeving. Ik denk niet dat iedereen in een centrum woont, er is vast wel iets. Ik dat je daarop moet inspelen. Dit zou dus bij de voorbereiding al moeten gebeuren en het zou bijvoorbeeld ook al in het systeem kunnen staan.

“I am familiar with walking coaching and enthusiastic about green care, however I would like to have some more tools to implement green care practices even further. I want to know what I can do besides asking questions.”

- Ik vind groene zorg belangrijk in de begeleiding, om dit te doen wanneer het kan. Ik doe zelf veel wandel coaching. Ik kom soms zelf in de knoop, ik heb meer handvatten nodig bij het wandelen. Tijdens het buiten zijn weet ik niet goed wat ik moet doen, naast vragen stellen. Naast wandelen en spelen weet ik niet hoe ik groene zorg verder nog kan gebruiken.

“Instead of creating new natural environments, we could utilize existing opportunities way more. For example we could go to a petting zoo, or to a park nearby.”

- In plaats van zelf een boerderij maken of een bos, zouden we eigenlijk meer gebruik moeten maken van wat er al is. Bijvoorbeeld kunnen we naar de kinderboerderij of een park.

*“We have implemented green care within Sensa Zorg. We placed plants in the office and made a moss wall. Furthermore there are relaxing spaces for employees. I believe that it is important that all the employees are exposed to green care within Sensa Zorg and experience the benefits of it themselves.”*

- Groene zorg is ook voor de medewerkers zelf. We hebben groene zorg bijvoorbeeld ook op het kantoor geïmplementeerd; we hebben planten, de moswanden. Het is belangrijk dat ook onze medewerkers rust ervaren, de voordelen van groene zorgen. Dit zorgt er ook voor dat medewerkers mee gaan in groene zorg.

“In the security of a home it is easier to have confidential conversations”.

- In de geborgenheid van een huis kun je makkelijker vertrouwelijke gesprekken voeren.

“If we have to arrange so many (practical) things, I don't want to go outside at all. If we do go outside to play football, we won't make it”.

- We moeten zoveel dingen regelen, dan wil ik helemaal niet naar buiten, als we dan buiten gaan voetballen reddend we het niet.