Public Urban Green Spaces in the Dutch Municipal *Omgevingsvisie*:

Developing a Decision-Making Support Model for Envisioning Greenness

by Jay Erdkamp

Public Urban Green Spaces in the Dutch Municipal *Omgevingsvisie*:
Developing a Decision-Making Support Model for Envisioning Greenness

Master's Thesis Spatial Planning, Specialisation Planning, Land and Real Estate Development
Nijmegen School of Management
Radboud University
August 2020

by Jay Erdkamp

Student Number: s4468368
Supervisor: P. J. Beckers
Second Reviewer: D. A. A. Samsura

Word Count: 34921

We need wonder and awe in our lives, and nature has the potential to amaze us, stimulate us, and propel us forward to want to learn more about our world. The qualities of wonder and fascination, the ability to nurture deep personal connection and involvement, visceral engagement in something larger than and outside ourselves, offer the potential for meaning in life few other things can provide. (...) We need the design and planning goals of cities to include wonder and awe and fascination and an appreciation for the wildness that every city harbors.

> – T. Beatley, *Biophilic Cities: Integrating Nature into Urban Design and Planning*, pp. 14-15.

Nature – even in our modern urban society – remains an indispensable, irreplaceable basis for human fulfillment.

> – S. R. Kellert, *Building for Life: Designing and Understanding the Human-Nature Connection*, p. 3.

What is the value of preserving and strengthening the sense of awe and wonder, the recognition of something beyond the boundaries of human experience? Is the exploration of the natural world just a pleasant way to pass the golden hours (...) or is there something deeper? I am sure there is something deeper. (...) Those who dwell (...) among the beauties and mysteries of the earth are never alone or weary of life. (...) There is something infinitely healing in the repeated refrains of nature.

> – R. Carson, *The Sense of Wonder*, p. 100.

Human beings need contact with nature and the natural environment. They need it to be healthy, happy, and productive and to lead meaningful lives. Nature is not optional, but an absolutely essential quality of modern urban life. Conserving and restoring the considerable nature that already exists in cities and finding or creating new ways to grow and insert new forms of nature are paramount challenges of the twenty-first century.

> – T. Beatley, *Handbook of Biophilic City Planning & Design*, p. 3.

Preface

Human beings in contemporary society are confronted with multiple crises. Climate change caused by anthropogenic emissions is, for instance, likely to cause a higher incidence of extreme weather events. Climate change adaptation and mitigation are necessary to reduce and manage impacts and risks related to climate change (IPCC, 2014). Although humanity has already achieved great things, such as a sharp, worldwide increases in the level of human development in the last couple of decades (Human Development Report Office, 2019), such achievements might only be sustained if we change our relation to the natural environment. If this relationship doesn't change, the consequences might be disastrous. Some renowned climate scientists wrote, for instance, the following in a 2018 article with the title *Trajectories of the Earth System in the Anthropocene* about the severity of the consequences of anthropogenic climate change:

> The Earth System may be approaching a planetary threshold that could lock in a continuing rapid pathway toward much hotter conditions—Hothouse Earth. This pathway would be propelled by strong, intrinsic, biogeophysical feedbacks difficult to influence by human actions, a pathway that could not be reversed, steered, or substantially slowed. (…) The impacts of a Hothouse Earth pathway on human societies would likely be massive, sometimes abrupt, and undoubtedly disruptive (Steffen et al., 2018, p. 8252).

As is this weren't enough, we are faced with a biodiversity crisis of unprecedented size (Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services, 2019) and the disastrous effects of physical inactivity on human health (see e.g. Lee et al., 2012; Hambrecht & Gielen, 2005), which is, among other things, translated into the millions of deaths due diseases linked to this physical inactivity (Lee et al., 2012). As a (future) spatial planner, I see it as a responsibility of spatial planners to make a contribution to solving these issues, as small as it might be. When it comes to fighting climate change specifically, I'm not necessarily positive about the achievements lowering greenhouse gas emissions. This is especially because, despite all the efforts made so far, CO_2 levels in the atmosphere are still on the rise (NASA, 2020) and global carbon emissions are still increasing (Planbureau voor de Leefomgeving [PBL], 2020). I am, however, optimistic about the capacity of individual spatial planners to make their own (small) contributions to better this world and keep it liveable, not only for humans, but also for other species. It is by writing about the integration of the theme public urban green spaces that I found a possibility to bring this into practice already a little bit – although my expectations of actually bettering this world by writing a thesis are modest at most.

Although I have been aware of what I perceive to be a task of spatial planners from the moment I learned about spatial planning during the bachelor GPM, this awareness has had a boost ever since I started working on this thesis. The belief that planners, including me, have an important job to do has been a great motivator for me during the research process. Where this belief comes from is hard to pin down, but it might have something to do with my conviction that human beings should cooperate with Mother Earth – and not act against it. Such an attitude might also be a very logical one for us humans, because, as Stephen Kellert,

professor of social ecology at the Yale School of Forestry & Environmental Studies and advocate of the biophilia theory (see e.g. Kellert & Wilson, 1993), argues:

> The reliance on nature reflects our biological origins as a species. We evolved in a natural world, not an artificial or human-created one. For more than ninety-nine percent of our history, our fitness and survival depended on adaptively responding to the ongoing demands of the natural environment (Kellert, 2012, p. X).

To conclude, I would like to thank Pascal Beckers, my supervisor, for his help while preparing and conducting my research. His critical stance towards my ideas, combined with giving me the impression that he had a real intention to help me forward and wanting the best for me, has been of great value. My thanks also go to the interviewees that were willing to make time for me and to partake in an interview. Moreover, I want to thank all the people that supported me throughout my study career and that kept believing in me, even though it took me a couple of years more to arrive at the point where I'm now, namely in the final phase of my master spatial planning. All of you not only helped me with coming so far, but you also directly and/or indirectly stimulated me to dedicate my future career as a spatial planner to a large degree, what the famous astronomer Carl Sagan calls so beautifully, "*preserve and cherish the pale blue dot, the only home we've ever known*" (Sagan, 1994, p. 6), at least to that degree that I'm capable of doing.

I also wish all readers a pleasant and inspirational reading experience.

– Jay Erdkamp
Nijmegen, August 2020

Summary

The *Omgevingswet* will, according to current expectations, be introduced on the January 1, 2022 (Ollongren, 2020). Large parts of current Dutch environmental law will be integrated into a new legal system that comes with the introduction of this act (see Van den Broek, 2012; Kamerstukken II, 2013/14). In the *Omgevingswet*, two societal objectives have been formulated. The first societal objective that the act aims to reach is "*to achieve and maintain a safe and healthy physical environment and good environmental quality*" (Ministry of Infrastructure and the Environment, 2017a, p. 2). Its second societal objective is "*to effectively manage, use and develop the physical environment in order to perform societal needs*" (Ministry of Infrastructure and the Environment, 2017a, p. 3). These objectives should be reached by means of using the six different main instruments of the *Omgevingswet* (Kramer, 2019). One of these instruments is the so-called *omgevingsvisie* (environmental strategy; Kamerstukken II, 2013/14). An *omgevingsvisie* is an integral long-term vision on the necessary and desirable developments of the physical living environment, a province, or for the Netherlands as a whole (Oldenziel & De Vos, 2018a).

In the context of the *omgevingsvisie*, the word integral relates to the fact that an *omgevingsvisie* should be comprising all elements of the living environment that fall within the scope of section 1.2 Ow (Oldenziel & De Vos, 2018a; art. 3.2, paragraph c Ow). This means that it should also contain a vision on public urban green spaces. The fact that the *omgevingsvisie* is such a new instrument, combined with the fact that such a vision document should contain integral policy, might leave municipalities wondering how they may integrate elements of public urban green space into the structure of an *omgevingsvisie*. A review of existing literature on the *omgevingsvisie* as an instrument, public urban greening and strategic vision-making does not provide straightforward (possible) directions that can help municipalities to answer this question, which means that (possible) directions for municipalities can only be newly constructed.

The external research aim of this study was to develop a develop a decision-making support model that can be utilised by urban municipalities as a supporting tool in deciding about how to integrate elements of public urban greening into the structure of their *omgevingsvisie*. This aim should be reached by means of reaching two internal research aims. The first internal research aim was to explore the ways in which the theme public urban greening may be integrated into the municipal omgevingsvisie, on the basis of policy document analysis (see §1.2). Internal research aim number two was formulated as "*developing an understanding of which considerations, more specifically those concerning values linked to urban greening and strategic spatial planning and envisioning, may be taken into account when making the decisions in question, on the basis of literature research and semi-structured interviews*" (§1.2). A central idea behind this model was, that is was not meant to be prescriptive but prescriptive. It should serve as a tool that helps municipalities to inform decisions on how to integrate public urban greening into the structure of an *omgevingsvisie*. For this reason, it has also been called a decision-making *support* model (see §1.2).

In order to be able to conduct research, the external and internal research aims have been translated into three main research questions, namely the following:

1. How can the theme public urban greening be integrated into the structure a municipal *omgevingsvisie*?
2. Which considerations may be of importance for urban municipalities to take into account when making decisions about how to integrate elements of urban greening into the structure of their *omgevingsvisies*?
3. How can an overview of alternative ways of integrating public urban greening into the structure of an *omgevingsvisie*, as meant in main question (1), and the considerations, as meant in main question (2), be translated into a decision-making support model that can be used by municipalities for making decisions on the integration of public urban greening into the structure of their *omgevingsvisies*? (§1.3).

Possible ways of integrating public urban greening have been explored by means of conducting policy document analysis. Municipal *omgevingsvisies* of six different urban municipalities have been analysed following a three-step process. The first step was to use in vivo coding to highlight where in these vision documents public urban greening was integrated. A second step was to create categories of integration with regards to ways of integration per individual *omgevingsvisie*. In a third step, categories of integration for all six visions have been integrated into one single overview of categories (see §3.5). This has resulted in a list of sixteen categories of possible places of integration. For each category, possible means of integration have been formulated (e.g. in the form of plain text and/or maps; see Chapter VI). The second internal research aim was mainly met by means of conducting literature research. Results of qualitative interviewing have also been used, although literature research was predominant. With regards to conducting research on the considerations related to public urban green space, it was mostly meta-analyses and large literature reviews that have been consulted first. Individual studies have largely been used to illustrate the findings of these studies of studies.

In order to be able to come up with a decision-making support model, a way had to be found to translate the findings into a specific structure. To make this possible, main research question (3) has also been formulated. The basis for such a model was found within the rational planning paradigm, although not all logics behind rational planning models have been (fully) adopted (see Chapter VII & §8.2). On the basis of the results of this research, a decision-making support model containing seven steps and several sub-steps has been created. It also contains several feedbacks. The model aims to encourage municipalities to subsequently reflect on certain issues, such as main challenges and problems faced by a municipality, the preferred general nature of an *omgevingsvisie* (e.g. defining what strategy means to a municipality), the values of public urban green space, and concrete alternative ways for integrating the theme public urban green space into the *omgevingsvisie*, so that they can inform their decisions with regards to this issue – but it does not prescribe what they ought to do (see §8.2). Some recommendations about how municipalities might use this model are provided in §9.2.

Table of Contents

I. Introduction

This first chapter provides an introduction to the research that was conducted in the light of this master thesis. Firstly, §1.1 gives an overall overview of the research context within which this research was placed. It introduces current – that is to say: current at the time of writing – developments in the field of spatial planning and the law system that forms the basis for Dutch (municipal) spatial planning, including the introduction of the *omgevingsvisie* as an instrument. Thereafter, the research aim will be introduced in §1.2. This research aim is, in fact, expressing the embeddedness of this research in the total research context, while at the same time delimiting the scope of this research so that is wouldn't address every aspect of the research context but only a specified part (as meant by Verschuren & Doorewaard, 2015). The research aim is presented in the form of one external aim that was supposed to be reached by meeting up with two internal aims. This will be followed by the introduction of the main research questions and sub-questions in §1.3, showing which information is considered to be useful for meeting up with the research aim. Finally, the scientific relevance and societal relevance are described in §1.4 and §1.5, respectively.

1.1 Research Context

The *Omgevingswet*[1] was, according to relatively recent expectations, supposed to be put into effect on 1 January 2021 (Van Veldhoven, 2019). With an eye to events concerning the coronavirus crisis and the additional challenges this crisis posed – or, at the time of writing: poses – to administrative bodies, but also because of the lack of sufficient necessary progress for the successful implementation of the *Omgevingswet* in some non-coronavirus-related respects, the (meanwhile) former Minister for the Environment and Housing, Stientje van Veldhoven, communicated to the speaker of the *Tweede Kamer der Staten-Generaal*[2] that the implementation would be postponed to a date unknown at that time. This was in April 2020 (Van Veldhoven, 2020). In May 2020, the Minister of the Interior and Kingdom Relations informed the speaker of the *Tweede Kamer* that the government's intention is now to implement the *Omgevingswet* on 1 January 2022 (Ollongren, 2020).

The act itself will consist of 349 law articles, and it will be accompanied by four *AMvBs*[3] and one *ministeriële regeling*[4] (Ministry of the Interior and Kingdom Relations, 2019). These will be replacing 26 acts, with about 4700 articles in total (Ministry of Infrastructure and the Environment, 2014), parts of a couple of additional acts (Kamerstukken II, 2013/14), 60 *AMvBs* (Kamerstukken I, 2018/19) and 75 *ministeriële regelingen* (Ministry of the Interior and Kingdom Relations, 2019). With the introduction of this new system of environmental law, the lawmaker will introduce two societal objectives[5] (art. 1.3 Ow[6]) and four

---

[1] Environment and Planning Act (Ministry of Infrastructure and the Environment, 2017a).
[2] House of Representatives (Tweede Kamer der Staten-Generaal, n.d.).
[3] *Algemene Maatregel van Bestuur*: a Dutch governmental decree in which an elaboration of is provided on rules of law (Eerste Kamer der Staten-Generaal, n.d.).
[4] Ministerial order.
[5] In Dutch: *maatschappelijke doeleinden* (see art. 1.3 Ow).
[6] Abbreviation for *Omgevingswet* as used in a Dutch legal context (Oldenziel & De Vos, 2018a).

improvement goals[7] (Kamerstukken II, 2013/14). The societal objectives are formulated as follows:

> With a view to ensuring sustainable development, the habitability of the country and the protection and improvement of the living environment, this Act aims to achieve the following interrelated objectives:
> a. to achieve and maintain a safe and healthy physical environment and good environmental quality, and
> b. to effectively manage, use and develop the physical environment in order to perform societal needs (Ministry of Infrastructure and the Environment, 2017a, pp. 2-3; see art. 1.3 Ow)[8].

What becomes clear when looking at these societal objectives is that they are externally oriented, which is to say that they directly concern the physical living environment. The four improvement goals are, however, improvement goals for the revision of the system of environmental law (Oldenziel & De Vos, 2018a; Kamerstukken II, 2013/14), which makes them more internally oriented, and they ultimately serve the realisation of the two societal objectives (Kamerstukken II, 2013/14). The societal objectives are anchored in the *Omgevingswet* (art. 1.3 Ow) and present, therefore, a legally-binding framework within which administrative bodies should manoeuvre. Both the societal objectives and the improvement goals should be realised by means of utilising six different core instruments (Kramer, 2019), one of which is the so-called *omgevingsvisie* (Kamerstukken II, 2013/14). In an unpublished essay, the *omgevingsvisie* was defined earlier as follows by Erdkamp (2020):

> [the *omgevingsvisie* is] an integral long-term vision on the necessary and desirable developments of the physical living environment in a municipality, or a province, or for the whole of the Netherlands (Oldenziel & De Vos, 2018a, p. 8), that is drawn up to decide how the tasks of an administrative authority are being filled in, and to formulate further ambitions for the physical living environment. As such, it is a form of strategic planning (Kamerstukken II, 2013/14, p. 22; p. 117) (p. 4).

The word integral relates, in this context, to the fact that an *omgevingsvisie* should be comprising all elements of the living environment that fall within the scope of section 1.2 Ow (Oldenziel & De Vos, 2018a; art. 3.2, paragraph c Ow). This includes elements like nature, landscapes and soils (art. 1.2, paragraph 2 Ow). Without the inclusion of a vision on urban green spaces (UGS), the *omgevingsvisie* is not fully integral, because UGS are likely to fall within the range of the definition of landscapes (see Annex art. 1.1 Ow, in Ow). The Dutch legislator also explicitly states that parks are, for instance, considered to be part of the living environment (Kamerstukken II, 2013/14), and that most planted trees and plants that are connected to the ground fall under the header of nature (as meant in art. 1.2 Ow; Kamerstukken II, 2013/14). This gives a further indication that the inclusion of UGS in an *omgevingsvisie* is a necessity indeed when it comes to making this vision really integral.

---

[7] In Dutch: *verbeterdoelen* (see Kamerstukken II, 2013/14)
[8] The English version of these societal objectives, as displayed in this quote, appeared in an unofficial translation of the *Omgevingswet* (see Ministry of Infrastructure and the Environment, 2017a). Therefore, it is important to also consult the official (Dutch) version of the act.

The novelty of the *omgevingsvisie* as an instrument, together with the integral nature of this vision, might leave municipalities asking themselves the question how to integrate public urban greening into the structure of their *omgevingsvisies*. A review of existing literature on the *omgevingsvisie* as an instrument, public urban greening and strategic vision-making does not provide straightforward (possible) directions that can help municipalities to answer this question, which means that (possible) directions for municipalities can only be newly constructed.

1.2   Research Aim

For the research that was conducted, the research context and research problem statement, as described in the previous paragraph, were translated into the following research aim:

Developing a decision-making support model that can be utilised by urban municipalities as a supporting tool in deciding about how to integrate elements of public urban greening into the structure of their *omgevingsvisie*

by

exploring the ways in which the theme public urban greening may be integrated into the municipal *omgevingsvisie*, on the basis of policy document analysis.

and by

developing an understanding of which considerations, more specifically those concerning values linked to urban greening and strategic spatial planning and envisioning, may be taken into account when making the decisions in question, on the basis of literature research and semi-structured interviews.

There are four important remarks to be made concerning the research aim. Firstly, the research aim formulated above is largely in accordance with Verschuren and Doorewaard's (2015, p. 40) formula for formulating an information-rich research aim. Verschuren and Doorewaard (2015) propose the formula "the aim of this research is … (a) … by …(b)…", whereby (a) represents the external aim and (b) the internal aim. In this thesis, however, an extra "and by" was added, representing the presence a second internal aim, because the internal aim of the research carried out was twofold. There were two separate though interrelated knowledge problems that asked for an answer in order to meet up with the external aim, which means to come up with the decision-making support model.

Secondly, the research that has been conducted was largely explorative in nature. For the first internal research aim goes that is explicitly contains the word exploring. According to Van Thiel (2014), a researcher may conduct exploratory research when "*little or no knowledge* [about a subject] *is available*" (p. 15). The novelty of the *omgevingsvisie* as an instrument, combined with the lack of literature on the integration of the theme public urban greening (see also §1.4), were reasons for why exploration has been considered most appropriate regarding this first internal aim. The second internal aim is an exploratory-descriptive one. It is descriptive due to the before conducting this research already existing body of literature on

both (considerations related to) public urban greening and (considerations related to) strategic spatial planning and envisioning. At the same time, it is also an exploratory internal aim in the sense that no direct link between those considerations and the *omgevingsvisie* has been made in academic literature before the time of handing out this research. This provided the possibility to transfer that which was extracted from existing literature to a new context, namely that of the *omgevingsvisie*. As can also be read in the second internal aim, the considerations taken into account for the decision-making support model are specifically those that concern the values linked to UGS (e.g. Baycan-Levent. Vreeker, & Nijkamp, 2009) and those concerning strategic spatial planning and envisioning (e.g. Albrechts, 2004).

Thirdly, the research aim makes clear that the type of research that has been carried out was theory-oriented research - and not practice-oriented research. More specifically, it took the form of theory-developing research (see Verschuren & Doorewaard, 2015). Although the results might be of help for solving an action problem, which is a field of tension between an actual and a desirable condition or development (Verschuren, 2017), the intention was first and foremost to develop an at the start of this research trajectory non-existing, theoretical model in the form of a decision-making support model. This model doesn't describe how specific municipalities *should* include the issue of public urban greening in their *omgevingsvisie* but how they *may* include it. It is, in other words, not meant to serve as a prescriptive model, although it may be used as such. The research was also not addressing the demand of one or a couple of specific municipalities.

Fourthly, it might be necessary to further clarify what is meant by the term decision-making support model. To do so, the term decision-making needs to be clarified. Koontz and Weihrich (2007) state the following about decision-making:

> Decision-making is defined as the selection of a course of action from amongst alternatives; it is at the core of planning. A plan cannot be said to exist unless a decision - a commitment of resources, direction, or reputation - has been made (p. 121).

Panpatte and Takale (2019) use a quite comparable definition, stating that "*decision-making involves the selection of a course* [of] *action from among two or more possible alternatives in order to arrive at a solution for a given problem*" (p. 73). It is "*the process of making choices by identifying* [the problem on which to make] *a decision, gathering information, and assessing alternative resolutions*" (Panpatte and Takale, 2019, p. 73), whereby a problem represents "*a difference between the current situation and the desired situation*" (Panpatte and Takale, 2019, p. 76). A choice can be seen as "*an act or the possibility of choosing*" (Cambridge Dictionary, n.d.-a). Watts (1998), on his turn, vividly illustrates what he understands as choosing:

> [Choosing] is the act of hesitation that comes before making a decision. It is a mental wobbling, much like when some people take up a pen to write but don't just start writing; they jiggle the pen around indecisively for a while and then start. When a person comes into a room and hesitates and wonders who to talk to, in that moment he [or she] is choosing (p. 82).

All in all, taking into account what has been said in the former part, decision-making is the act of making choices between alternatives. Choosing, in its turn, relates to both the eventual decision being made and the thinking process about which alternative(s) to go for. Therefore, decision-making is about selecting one or more alternatives but also about the assessment of alternatives preceding the actual selection. The central idea behind the decision-making support model in this research has been to mainly address that part of the decision-making process which precedes the actual selection. It concerns alternatives to choose between when it comes to the integration of public urban greening into the structure of an *omgevingsvisie* as well as the considerations that may be taken into account in opting for one of more specific alternative ways of integration. Considerations should, in this context, be understood as issues of relevance that may be taken into account by municipalities in order to build a line of reasoning that lays at the basis of their eventual decisions that will be made about the contents of an *omgevingsvisie*. Those considerations serve, in other words, to inform their decisions, and they are meant to serve as a catalyst for a reflexive attitude towards the questions how to integrate public urban greening into the structure of an *omgevingsvisie* for what reasons

In a conceptual, schematic form, Figure 1 displays a first, initial line of thought on decision-making, more specifically concerning the inclusion of public urban greening in the *omgevingsvisie*. In this initial model, the possible elements of public urban greening represent both (a.) possible specific contents of an *omgevingsvisie* regarding the topic public urban greening and (b.) the ways of integrating these specific contents into the structure of an *omgevingsvisie*. The meaning of the term elements is, in other words, twofold. In this research, however, the focus hasn't been on giving an overview of which specific contents municipalities may include. Instead, the focus has been on the possible ways to integrate the issue of public urban greening, so on possible ways to integrate specific contents. Considerations, in turn, represent issues and questions that may be taken into account in the thinking process that precedes a decision on which elements to include in what way in the *omgevingsvisie*. It is assumed that the assessment of elements on the basis of considerations underlies an actual choice for those very elements, which, in its turn, will be translated into an *omgevingsvisie*. The conceptual framework in §2.6 builds on this initial model.
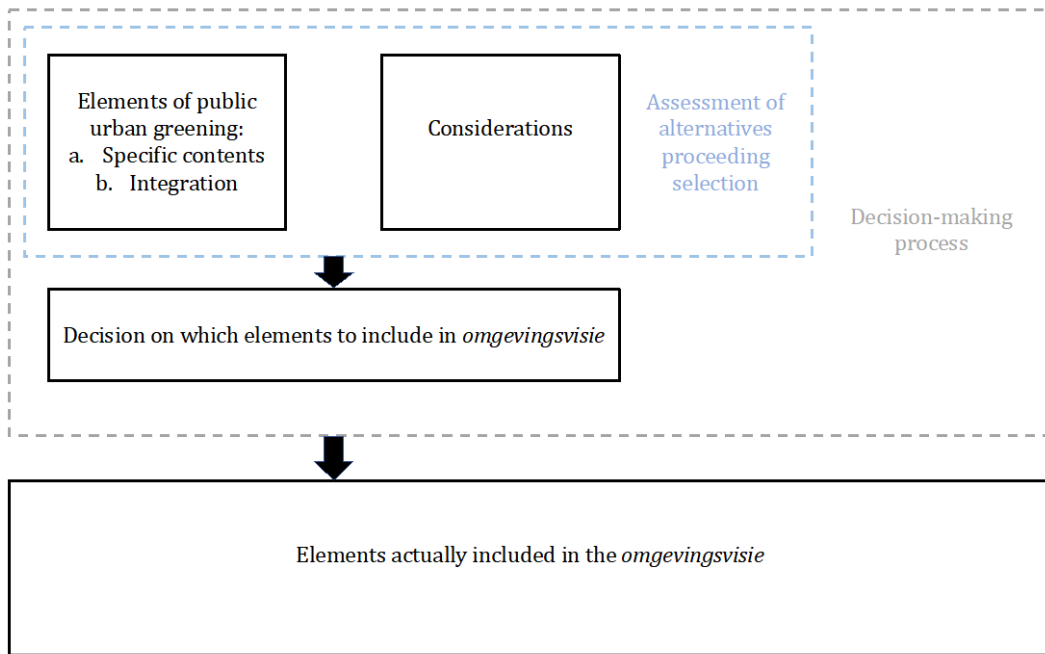
Figure 1: Schematic representation that formed the conceptual basis for the decision-making support model that was created in this research. The decision-making process is displayed as consisting of an assessment of alternatives, after which follows a decision on which elements to include, whereafter the outcomes of the decision-making process will be translated into the actual omgevingsvisie. Author's work, 2020.

Concerning the concrete form of the decision-making support model, the aim was to present a model in the form of a step-by-step plan that can be used by municipalities – or by others interested in how elements of public urban greening can be included in the structure of *omgevingsvisies* of (Dutch) urban municipalities. In figure 2, the first ideas for how such a model was possibly going to look like are presented. This model is an initial one that had been made before conducting the empirical part of this research. It is important to keep in mind that figure 2, for now, only presents an undetailed version of the model, showing a possible structure for the final model. This initial idea for a structure of the eventual model was, however, never considered as fixed; in case a different structure would appear to be more suitable, the eventual model would have been divergent from this initial one – which also appeared to be the case (cf. Chapter VIII).
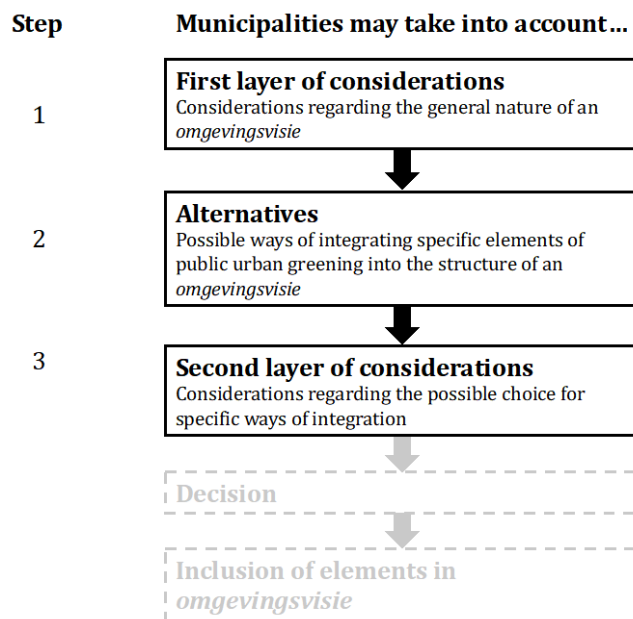
Figure 2: Initial form of the decision-making support model in this research. The model consists of three steps, together making up the assessment of alternatives (see Figure 1). The eventual decision to be made and the actual inclusion of elements in the omgevingsvisie are displayed in grey in order to bring about that these aspects of the model weren't the point of attention in this research. Author's work, 2020.

The first step of the initial model holds that a municipality has the possibility to reflect on what kind of *omgevingsvisie* it desires, relating to, for instance, the level of detail included in the *omgevingsvisie* (see Kamerstukken II, 2013/14). This is called: the first layer of considerations. The second step concerns a municipality taking notice of the alternative ways to integrate public urban greening into the structure of their *omgevingsvisie*. Lastly, the third step holds that municipalities take into account the in this step of the model presented considerations when assessing the alternative ways of integration, making up the second layer of considerations. Together, these three steps form the assessment of alternatives preceding their selection (see Figure 1).

The assumptions underlying this first model and its steps were partly derived from the so-called ABCD Model, as applied by The Natural Step practitioners (The Natural Step Canada, n.d.-a), and the related principle of backcasting (The Natural Step Canada, n.d.-b). This means that when the ABCD Model is applied to the process of vision-making, one should first envision what the (nature of the) vision should become like, after which backcasting should be applied to decide on which concrete elements should be included in which manner in a vision in order to 'arrive' at the envisaged (nature of the) vision (see The Natural Step Canada, n.d.-a; n.d.-b).

Next to this, the (normative) idea that it may be helpful for municipalities to first come up with ideas about the preferred general nature of their *omgevingsvisisie* is also partly derived from the rational-comprehensive theory of decision-making (see Anderson, 2014). It is a theory of decision-making that emphasises "*the procedure and intellectual activities involved in making a decision*" (Anderson, 2014, p. 135) that "*specifies the procedures involved in making well-considered rational decisions that maximize the attainment of goals, whether personal or organizational*" (Anderson, 2014, p. 135). Using a policy-making approach based on rational-comprehensive theory involves that goals, values, and objectives are known

before making choices for concrete alternatives to meet up with them (Anderson, 2014). This, however, doesn't mean to say that the decision-making support model that has been developing during this research is completely in line with rational-comprehensive theory.

1.3   Research Questions

To meet up with the research aim, it was translated into the following research questions:

1. How can the theme public urban greening be integrated into the structure a municipal *omgevingsvisie*?
<u>1a.</u> What does the term public urban greening hold?
<u>1b.</u> What is an *omgevingsvisie*?
<u>1c</u>. To what extent does the nature of the municipal *omgevingsvisie* as an instrument allow elements of public urban greening to be included in this vision?
<u>1d.</u> Which ways of integrating elements of public urban greening into the structure of an omgevingsvisie can be recognised in already existing omgevingsvisies of urban municipalities in the Netherlands?
<u>1e.</u> In which categories can the possible ways of integrating public urban greening, as meant in main question (1), be grouped?

2. Which considerations may be of importance for urban municipalities to take into account when making decisions about how to integrate elements of urban greening into the structure of their *omgevingsvisies*?
<u>2a.</u> Which considerations that can be derived from academic literature on public urban greening are relevant for municipalities to take into account when deciding about the integration of public urban greening into the structure of an *omgevingsvisie*?
<u>2b.</u> Which considerations that can be derived from academic literature on strategic spatial planning and envisioning are relevant for municipalities to take into account when deciding about the integration of public urban greening into the structure of an *omgevingsvisie*?

3. How can an overview of alternative ways of integrating public urban greening into the structure of an *omgevingsvisie*, as meant in main question (1), and the considerations, as meant in main question (2), be translated into a decision-making support model that can be used by municipalities for making decisions on the integration of public urban greening into the structure of their *omgevingsvisies*?
<u>3a.</u> Which (elements of) already existing decision-making (support) models are relevant for creating the decision-making support model that can be utilised by urban municipalities as a supporting tool in deciding about how to integrate elements of public urban greening into the structure of their *omgevingsvisie*?
<u>3b.</u> How can (elements of) already existing decision-making (support) models which are relevant for creating the decision-making support model, as meant in sub-question (3a), be used to produce a decision-making support model that can be utilised by urban municipalities as a supporting tool in deciding about how to integrate elements of public urban greening into the structure of their *omgevingsvisie*?

The first main question gives an answer to the question which information was considered useful for reaching the first internal goal, while the second main question provided the

information that was seen as useful for fulfilling the second internal goal. Lastly, answering the third main question provided the information necessary to translate the answers to main questions (1) and (2) into a decision-making support model, as meant in the external aim. The third main question was, in other words, a prerequisite for meeting up with the external aim.

The sub-questions, in turn, gave direction (as meant by Verschuren & Doorewaard, 2015) in where to look for which information. Verschuren and Doorewaard (2015) argue that the sub-questions should cover the main questions under which they fall, no more, no less. The extent to which they did so was, in case of this research, dependent on the external and internal research aims formulated. This, for instance, means that the sub-questions under main question (1) were covering the full main question, but only when taking into account what is stated in the first internal research aim, holding that insights into the possible ways of integrating public urban greening were to be derived from academic literature, vision documents, and on the basis of semi-structured interviews – so already leaving out other sources that could also serve as sources to extract possible elements from. A comparable argumentation is applicable for main question (2), but now for deriving considerations. This is justified by the fact the main questions ultimately serve to reach the research aim (Verschuren & Doorewaard, 2015).

1.4   Scientific Relevance

The lawmaker acknowledges that although the scope of the (municipal) *omgevingsvisie* is large, that doesn't mean to say that municipalities are obliged to provide a detailed description of every single aspect of their visions. Municipalities are free to set priorities and to accentuate certain aspects. Clear is, however, that a municipal *omgevingsvisie* should contain a vision on green elements within the municipality's territory. The vision should describe general outlines of the proposed development, use, management and the preservation of the municipal territory and of its policy for all the aspects of the living environment, the latter of which is described in section 1.2 Ow (Kamerstukken II, 2013/14).

Although there is a large body of literature on urban greening available (e.g. Roy, Byrne, & Pickering, 2012; Baycan-Levent et al., 2009), a link with the *omgevingsvisie* has not been made before this study was handed out. What an *omgevingsvisie* should exactly contain is so unclear, that Backes (2017) calls the 'prescription' of its contents, to be found in art. 3.2 Ow, contentless and colourless, after which he argues that this is mitigated to some degree by what is prescribed in art. 1.3 Ow. The latter article contains the already mentioned societal objectives (art. 1.3 Ow). All in all, this means that a scientific contribution on the inclusion of (public) urban greening within the municipal *omgevingsvisie*, more specifically on the decision about how to integrate elements of public urban greening into the structure of an *omgevingsvisie*, had in it the potential to fill (part of) an existing scientific lacuna.

As stated in the research aim, the external aim of this research was to come up with a decision-making support model. This model may not only be helpful for municipalities, as will be argued is §1.5, but it might also help researchers in their possible future research on topics related to the *omgevingsvisie* or to other instruments within the *Omgevingswet* (see Kamerstukken II, 2013/14 for these instruments), perhaps especially when this research

concerns the issue of public urban greening. Due to the complete lack of research on the topic in question here, the scientific contribution of this research has been fully unique and new. The same goes for the model that was designed in this research; such a model was never presented before. The model provides researchers with a basis to reflect on: a basis on which they may elaborate, a basis that can be used to contrast against when developing and presenting their own models, and/or by 'just' using it as a source of inspiration, for instance in the process of defining their research topics. Producing a model had, compared to merely describing the research findings in plain text, the advantage that researchers may now be better and more quickly able to get an overview of the research findings of this study.

Important to note is, nonetheless, that some humbleness is appropriate. Assuming that academic researchers will be referring to this research in their own works is probably unrealistic, given that it is a master thesis. Usefulness can, however, also be expressed in more indirect ways, which means not by directly referring to this research but by taking it into account without explicitly mentioning it in a publication.

1.5   Societal Relevance

The *omgevingsvisie* an instrument that is free of format. According to the lawmaker, this vision is necessary in order to decide how the tasks of an administrative authority, in this case that of the municipality, should be filled in and to formulate further ambitions for the physical living environment. Tasks of these administrative authorities are not prescribed in detail in the *Omgevingswet*. The lawmaker argues that an *omgevingsvisie* contains, in essence, strategic spatial policy. On a strategical level, connections in the physical living environment are being made, and one overarching and direction-providing long-term vision is being written down. This should lead to a sustainable development of this living environment. (Kamerstukken II, 2013/14).

The *omgevingsvisie* as an instrument is placed at the beginning of the so-called policy cycle. This policy cycle provides an overview of which instruments administrative bodies (need to) have at their disposal. It is a thinking model for situations in which those bodies have to deal with a spatial problem. The principal idea behind placement of the instruments of the *Omgevingswet*, such as the *omgevingsvisie*, within this cycle is to bring about that these different instruments are not independent of one another. Legally speaking, the instruments are not coupled – although there is one exception to this, not being relevant for this study. It is, however, a sign of good governance if they are synchronised (Kamerstukken II, 2013/14).

An *omgevingsvisie* is only legally binding to the specific administrative body that produced the vision in question (Oldenziel & De Vos, 2018a). This is due to the principle of the separation of policy and normative standards[9]. Although the contents *omgevingsvisie* have no legal consequences[10], because they compose 'just' a policy document, (Kamerstukken II, 2013/14), it is of vital importance that these contents are thoroughly thought through, because the *omgevingsvisie* does, as a matter of fact, have a steering function. This steering function follows from the fact that municipalities are supposed to live up with their own

---

[9] In Dutch: *scheiding van beleid en normstelling* (see Kamerstukken II, 2013/14).
[10] In Dutch: *rechtsgevolgen* (see Kamerstukken II, 2013/14).

policies. When municipalities want to deviate from the contents of the *omgevingsvisie*, for instance in composing an *omgevingsplan*, they should motivate this decision, according to the *Vereniging Nederlandse Gemeenten* (VNG, 2016).

The choice for how to include elements of public urban greening in an *omgevingsvisie* has, as became clear in the previous part, possible consequences for the later stages in the policy cycle, including for what will actually be implemented (see Kamerstukken II, 2013/14). A decision-making support model on this – producing one was the external aim of the research to be conducted – has the potential to serve as a means for municipalities to come to better-informed decisions about how to include green elements for what reasons. The model should make it harder to overlook ways of integration, and it should stimulate a process of true reasoning before final decisions concerning the contents of the vision are being made. This may be beneficial for municipalities, because it lowers the chances in intra-municipal inconsistencies in policy and legal documents, since it may provide them with the means of creating a stronger motivational foundation for decisions behind the eventual contents of the vision, and because it may give some guidance in decision-making processes – although it should be stated again here that is doesn't prescribe what should happen in which way. The choice for producing a model instead of just plain text was, in this respect, a conscious one: it appears plausible that ways of integration and considerations are harder to overlook when presented in a structured model compared to when presented in plain text. Society as a whole might also benefit from a (possibly) higher level of consistency and better-informed policy.

II.   Theoretical and Conceptual Framework

This second chapter provides a theoretical and conceptual framework – or maybe: totality of frameworks. In doing so, it fulfils multiple functions, among which at least the following: it elaborates on the meaning of certain terms used in this research, it contains (parts of) answers to several research sub-questions, it guided the implementation of research methods during the research process, and it contextualises the research conducted within the totality of Dutch environmental law and recent developments within this field of law, within the broader body of literature on (P)UGS, and within the body of literature on strategic spatial planning and envisioning. The concept of planning culture will be introduced to contextualise this totality even more. In the last two paragraphs of this chapter, a theoretical model (§2.5) and a conceptual framework (§2.6) will be presented, with the former summarising the larger research context in a schematic format and the latter giving guidance while conducting this research. The main aim of this chapter is to create a deep understanding of this *omgevingsvisie* as an instrument by showing its non-separateness from and connection to more general discussions and ideas within the field(s) of spatial planning and environmental law.

2.1   Current and Upcoming System of Environmental Law

This paragraph provides a brief introduction to the current Dutch system of environmental law and to the future system of environmental law under and around the upcoming *Omgevingswet*. Not everything in this paragraph might be new to those familiar with the Dutch planning system and its legal basis. The fact that this thesis is written in the English language – meaning it will also be accessible to read for English-speaking, non-Dutch speaking people who may not have any or only little knowledge about Dutch environmental law –, combined with the fact that this knowledge might also not be self-evident for spatial planners educated in the Netherlands[11], has led to the conclusion that first introducing Dutch environmental law in the following paragraph would be the wiser choice.

Equally or even more important might be that §2.1.2 provides insights into the spirit of the law of the new system under the *Omgevingswet*. In this paragraph, it will be argued that developing an understanding of this spirit of the law is of vital importance to be able to work with the *Omgevingswet* and its instruments. The fact that the lawmaker apparently found it necessary to write a 629-page explanatory memorandum accompanying the *Omgevingswet* explaining its intentions behind this act (see Kamerstukken II, 2013/14) is just one indication that working with environmental law is precision work.

2.1.1   Current System of Environmental Law

In this study, the term environmental law is seen as the equivalent for the Dutch *omgevingsrecht*[12] (as used by e.g. Koeman, 2010), which means that it is more than that

---

[11] This can, for instance, be observed when seeing that courses in which environmental law is the main object of study are not obligatory in several master programmes in spatial planning offered by Dutch universities (e.g. Radboud Universiteit, n.d; Universiteit van Amsterdam, n.d).
[12] Van den Broek (2012) also opts for environmental law as a translation for *omgevingsrecht*.

which is usually called *milieurecht*[13] (see Koeman, 2010). Current Dutch environmental law, of which a definition can be found in §2.1.1, is a form of what in Dutch is called *bijzonder bestuursrecht*[14], which can be seen as a particular field of law within the larger field of administrative law (Hardy & Wenders, 2019). In the Dutch legal system, administrative law is the area of law for, of and against governmental authorities (Schlössels & Zijlstra, 2017; Hardy & Wenders, 2019).

Environmental law, as a part of administrative law, is known to be made up out of different constituents which are ordered in a hierarchical way (Michiels, 2016). More specifically, it is a system of "*delegated rulemaking power*" (Barkhuysen, Ouden, & Schuurmans, 2012, p. 2) or, to use a different wording, a system of "*stratified regulation*" (Seerden & Heldeweg, 1996, p. 272). These terms represent the English translations for what in Dutch is called *gelede normstelling* (Barkhuysen et al., 2016; Seerden & Heldeweg, 1996). This means that different parts of administrative law are produced on different administrative levels, and that creating a conflict between the parts lower on the hierarchical ladder and those parts higher up in this hierarchy is not allowed[15] (Michiels, 2016). For Dutch administrative law as it is now, the following hierarchy is relevant (Figure 3):

Legislative Hierarchy of Dutch Constitutional and Administrative Law (*Gelede Normstelling*)

- Direct binding provisions of treaties and international bodies (*verdragen/secundair verdragsrecht*)

- Constitution (*Grondwet*)

- Statutes (*Wetten in formele zin*)

- Crown decrees (e.g. *AMvBs*)

- General ministerial decisions (*ministeriële regelingen*)

- Provincial general regulation (*provinciale verordeningen*)

- General regulations by municipalities and water boards (*gemeentelijke en waterschapsverordeningen*)

- Policy (*beleidsregels*)

- Permits (*voorschriften/verplichtingen verbonden aan een beschikking*)

Figure 3: The legislative hierarchy of Dutch constitutional and administrative law. Direct binding provisions of treaties and international bodies are ranked on the top position in the hierarchy, while permits are placed at the lowest end. Adapted from: Seerden & Heldeweg, 1996, p. 271; Michiels, 2016, p. 17.

The present-day system of environmental law that will eventually be replaced by a new law system under the *Omgevingswet* consists of about 4700 articles, distributed over 26 different acts (Ministry of Infrastructure and the Environment, 2014), (parts of) a number of additional acts (Kamerstukken II, 2013/14), 60 *AMvBs* (Kamerstukken I, 2018/19) and an

---

[13] Which can, confusingly enough, also be translated as environmental law (see Van Dale, 2015).
[14] The best English translation for the Dutch word *bijzonder* would, in this case, be the words particular (see Van Dale, 2015; Hardy & Wenders, 2019) or specific (see Seerden & Stroink, 2002).
[15] There are, in fact, two forms of *gelede normstelling*: vertical and horizontal (Michiels, 2016). The hierarchal legislative structure as presented in figure 3 represents the vertical variant (see Michiels, 2016; Hardy & Wenders, 2019).

additional 75 *ministeriële regelingen* (Ministry of the Interior and Kingdom Relations, 2019). Examples of acts which are part of the current environmental law system are the *Wet algemene bepalingen omgevingsrecht*[16] (*Wabo*) and the *Wet ruimtelijke ordening*[17] (*Wro*) (Kamerstukken II, 2013/14). An overview of the totality of acts within the current environmental law system that will be integrated in the *Omgevingswet* can be found in Annex I.

Then it comes to the formulation of municipal spatial policy under the current environmental law system, there the lawmaker recognises that the bodies in a position to make decisions on initiatives are not reviewing those initiatives in a coherent way, and that they are not coming up with integral policy (Kamerstukken II, 2013/14). With respect to this latter point about integral policy, it can be said that municipalities have a variety of different spatial policy documents (VNG & Kwaliteitsinstituut Nederlandse Gemeenten [KING], 2017), and a number of municipalities provide an overview of those documents, among which are the municipalities of Nijmegen (Wing, 2019, p. 4) and Veenendaal (Gemeente Veenendaal, 2017, pp. 18-20). For the lawmaker, this complexity was one of the two reasons for the introduction of the *Omgevingswet* (Kamerstukken II, 2013/14). In the next sub-paragraph, the introduction of a new system of environmental law under the header of this *Omgevingswet* will be discussed.

2.1.2   The (Upcoming) *Omgevingswet*, Its Instruments, and the *Omgevingsvisie*

With the planned introduction of the *Omgevingswet* comes a significant reduction in the number of law articles, acts, *AMvBs* and *ministeriële regelingen* (see Rijksoverheid, n.d.). The act itself will consist of 349 law articles, and it will be accompanied by four *AMvBs*[18] and one *ministeriële regeling*[19] (Ministry of the Interior and Kingdom Relations, 2019, p. 14). These will be replacing 26 acts, with about 4700 articles in total (Ministry of Infrastructure and the Environment, 2014), parts of a couple of additional acts (Kamerstukken II, 2013/14), 60 *AMvBs* (Kamerstukken I, 2018/19) and 75 *ministeriële regelingen* (Ministry of the Interior and Kingdom Relations, 2019).

Strictly speaking, the lawmaker sometimes describes this process as replacement (e.g. Kamerstukken II, 2013/14, p. 8), while, in other instances, this same process is labelled as integration (e.g. Kamerstukken II, 2013/14, p. 26). These described upcoming changes in the field of environmental law are, in many instances, 'simply' labelled as introduction of the *Omgevingswet* (e.g. Rijksoverheid, n.d.; Van den Broek, 2020). In fact, it isn't the introduction of a single act but the introduction of a whole new system of environmental law. Consequently, this involves a change in more than 'just' one layer of the administrative hierarchy of Dutch environmental law (see Figure 3; Seerden & Heldeweg, 1996; Michiels, 2016). A summarising overview in numbers of the transition described can be found in the figure below (Figure 4).

---

[16] Environmental Law (General Provisions) Act (Ministry of Infrastructure and the Environment, 2017b).

[17] Spatial Planning Act (Ministry of Infrastructure and the Environment, 2017b).

[18] *Algemene Maatregel van Bestuur*: a Dutch governmental decree in which an elaboration of is provided on rules of law (Eerste Kamer der Staten-Generaal, n.d.).

[19] Ministerial order.

From	To
26 acts	1 act
with about 4700 law articles	with 349 law articles
60 *Algemene Maatregelen van Bestuur* (*AMvBs*)	4 *Algemene Maatregelen van Bestuur* (*AMvBs*)
75 *ministeriële regelingen*	1 *ministeriële regeling*

Figure 4: Reduction of the number of acts, AMvBs and ministerële regelingen in the field of environmental law, achieved by the introduction of the new environmental law system under the (upcoming) Omgevingswet. Adapted from: Rijksoverheid, n.d.; Ministry of Infrastructure and the Environment, 2014.

The (translated) official motto of the *Omgevingswet* is "*scope for development, safeguarding quality*" (Ministry of Infrastructure and the Environment, 2017b, p. 5). According to the lawmaker, this means that the *Omgevingswet* simultaneously contributes to a strengthening of the economy and to the quality of the physical living environment in the Netherlands. This motto is a direct translation of the aforementioned societal objectives of the new system of environmental law (see §1.1). Because these objectives are so important – the lawmaker literally states that the whole point of the *Omgevingswet* is to aim to reach the societal objectives as formulated in the act (see art. 1.3 Ow) –, they are, again, as follows:

> a. to achieve and maintain a safe and healthy physical environment and good environmental quality, and
> b. to effectively manage, use and develop the physical environment in order to perform societal needs (Ministry of Infrastructure and the Environment, 2017a, pp. 2-3; see art. 1.3 Ow).

A paradigm shift that should come with the introduction of the *Omgevingswet* (see Kamerstukken II, 2013/14) is reflected in the improvement goals and societal objectives. This can be observed when reading the societal objectives, since both objectives may, in fact, be seen as one objective: in principle, both should be achieved (see art. 1.3 Ow). The lawmaker speaks of a change towards a situation in which developments receive priority, whereby a healthy and safe physical living environment of good environmental quality are at the heart of this. One of the things to be reached with the introduction of the *Omgevingswet* is that civilians, businesses and governmental bodies get more of an eye for the coherence of the relevant parts and aspects of the physical living environment and therein involved stakes (Kamerstukken II, 2013/14).

According to Van den Broek (2020), the *Omgevingswet* is an act of instruments. He states that it is primarily focused on (the development of policy for) area-specific management and development of the physical living environment, and that to make this possible – meaning: to give this focus shape in practice –, the act introduces instruments which are at the disposal of administrative bodies on a municipal, provincial and national level. There are three types of instruments contained within the *Omgevingswet*, namely core instruments, supporting instruments, and instruments for land policy (Kamerstukken II, 2013/14; Van den Broek, 2020). Meijer, Oldenziel and De Vos (2016) argue that the core instruments are the backbone of the act. In total, there are six different core instruments (Kamerstukken II, 2013/14), an overview of which can be found in the table below (Figure 5).

Policy development	Promulgation of policy	General rules	Permission
Omgevingsvisie (Environmental strategy)	*Decentrale regelgeving: beoordelingsregel voor vergunningaan-vraag* (Assessment rule for a permit application)	*Decentrale regelgeving: omgevings-plan* (Physical environment plan)	*Omgevingsvergunning* (Environmental permit)
Programma (Programme)		*Decentrale regelgeving: algemene regels in de waterschaps-verordening* (General rules contained in the water board regulation)	*Projectbesluit* (Project decision)
		Decentrale regels: algemene regels in de omgevingsverorde-ning (General rules contained in provincial environmental regulation)	
		Algemene rijksregels (General government regulations)	

Figure 5: Typification of the six core instruments of the Omgevingswet. As shown in this figure, there are multiple types of decentrale regels (decentral regulations). The lawmaker, however, considers them to be all sub-types of the core instrument decentral regulations (Kamerstukken II, 2013/14). Adapted from: Kamerstukken II, 2013/14, p. 8; Ministry of Infrastructure and the Environment, 2017b, p. 4.

In the table above (Figure 5), the *omgevingsvisie* is typified as a core instrument for policy development. The totality of core instruments, including the *omgevingsvisie*, will be introduced in order to make possible the realisation of the societal objectives and improvement goals (Kramer, 2019). All core instruments are placed within a so-called policy cycle (Kamerstukken II, 2013/14, pp. 21-24), which is showed in figure 6. This cycle has already been introduced in relation to the societal relevance of this research (see §1.5), where it has been described as a thinking model that can be used by administrative bodies for dealing with spatial issues that are perceived by them as problematic. The cycle gives an overview of which instruments these bodies (need to) have at their disposal to deal with these issues (Kamerstukken II, 2013/14; see §1.5), and it is an expression of the paradigm shift that has already been discussed in this paragraph (Kamerstukken II, 2013/14).
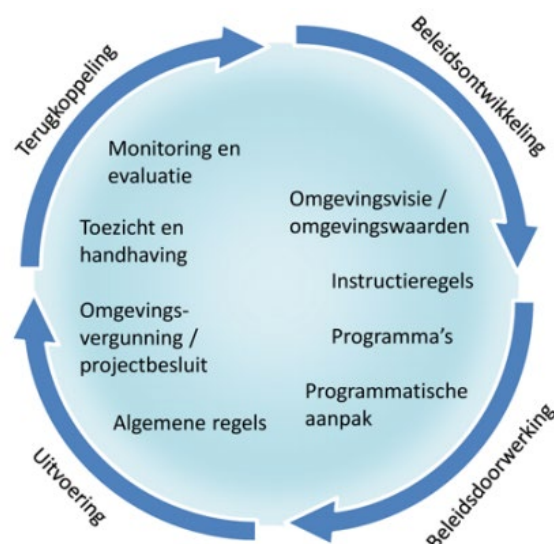
Figure 6: Original, non-translated version of the policy cycle of the Omgevingswet. In total, there are four different phases, designated with the arrows around the circle. The words Dutch beleidsontwikkeling, beleidsdoorwerking, uitvoering, and terugkoppeling refer to the English policy development, policy promulgation, implementation, and feedback respectively. Reprinted from: Kamerstukken II, 2013/14, p. 22.

When it comes to defining the *omgevingsvisie* as an instrument, the lawmaker speaks of "*an integrated strategy consisting of primary long-term strategic policy choices in relation to the living environment*" (Ministry of Infrastructure and the Environment, 2017b, p. 29). It will have the form of "*a political and administrative document that provides a comprehensive definition of the policy governing the physical environment*" (Ministry of Infrastructure and the Environment, 2017b, p. 29), whereby comprehensive means "*that the strategy relates to all areas of the physical environment and corresponds in that regard to the scope of the legislative bill*" (Ministry of Infrastructure and the Environment, 2017b, p. 29) as displayed in section 1.2 of the *Omgevingswet* (Kamerstukken II, 2013/14). It is, furthermore, remarked that "*this forms a coherent strategic vision and is not merely an enumeration of policy strategies from different areas*" (Ministry of Infrastructure and the Environment, 2017b, p. 4). Van den Broek (2019b) adds to this that the vision is concerned with the necessary and desirable developments of the physical living environment of the administrative area of the administrative body that produced an *omgevingsvisie*, and that it is focused on the physical living environment in its totality, so that it will be approached in a comprehensive way in the complex dynamics of modern society.

According to Van der Schoot and Spel (2020), a municipal *omgevingsvisie* is an obligatory political, administrative, and strategic document for the full municipal territory of a municipality. Van der Schoot, Van Leijen, Gabry, Prins, and Brugman (2017) state that the fact that the vision is an integral document means that it is more than the sum of the current municipal documents it will replace, among which the current *structuurvisie* (see also Kamerstukken II, 2013/14). It is a (vision) document in which all relevant stakes are taken into account, and in which these stakes are weighed against each other. Furthermore, it is a politico-social document, because it is enacted by the elected municipal council (Van der Schoot et al., 2017). Important to know is that an *omgevingsvisie* is also free of form, meaning there are no specific requirements when it comes to its contents and form (Kamerstukken II, 2013/14) – except from general requirements about what it should contain (see art. 3.2 Ow).

That which has been explained about the *omgevingsvisie* so far can, to some degree, also be observed when reading artt. 3.1 and 3.2 Ow, law articles about the obligation for certain administrative bodies to determine an *omgevingsvisie* and about the contents of such a vision respectively. They, in a translation into English, are as follows:

> **Article 3.1 (determining an environmental strategy)**
> 1. The municipal council shall determine a municipal environmental strategy.
> 2. The Provincial Council shall determine a provincial environmental strategy.
> 3. Our Minister shall determine a national environmental strategy in agreement with Our Ministers whom it concerns.
>
> **Article 3.2 (content of an environmental strategy)**
> An environmental strategy contains the following, partly for the purpose of performing duties and exercising the powers as referred to in Article 2.1, paragraph one:
> a. a description of the main features of the quality of the physical living environment,
> b. the broad outlines of the proposed development, the use, management, protection and preservation of the territory, [*sic*]
> c. the principal aspects of the entire policy[20] to be pursued in relation to the physical environment (Ministry of Infrastructure and the Environment, 2017a, p. 17).

All in all, taking everything that has been said in this thesis about the *omgevingsvisie* as an instrument into account, the following definition, as formulated earlier in an (unpublished) essay by Erdkamp (2020), has been used during the research:

> **[the *omgevingsvisie* is] an integral long-term vision on the necessary and desirable developments of the physical living environment in a municipality, or a province, or for the whole of the Netherlands (Oldenziel & De Vos, 2018a, p. 8), that is drawn up to decide how the tasks of an administrative authority are being filled in, and to formulate further ambitions for the physical living environment. As such, it is a form of strategic planning (Kamerstukken II, 2013/14, p. 22; p. 117) (p. 4).**

One way in which this is expressed in the fact that it should be an integral vision (art. 3.2, paragraph c Ow, in combination with art. 1.3 & 2.1 Ow) that replaces multiple existing policy documents (Kamerstukken II, 2013/14). With the introduction of the *Omgevingswet*, the 'balancing act' that currently has to take place in the field environmental law because of the coexistence of more or less opposite, competing goals of *ruimtelijk bestuursrecht* on the one hand and *milieurecht* on the other (as meant by Koeman, 2010; Boeve et al., 2016; see §2.1.1) might turn into a 'balancing act' between complementing goals (as laid down in art. 1.3 Ow) – although only time will tell how much of this comes true, as the *omgevingsvisie* is such a novel instrument.

2.2   Public Urban Greening

---

[20] In the official Dutch law text, the word integral is used explicitly (see art. 3.2, paragraph c Ow).

Because the *Omgevingswet* is about the physical living environment and activities that (may) have consequences for the physical living environment (art. 1.2, paragraph 1 Ow), which means it deals with spatial issues, the term public was related to the term space in this study. The both of them together make the term public space. Burgers (2000) discusses the complexity of the task of defining the urban. He states that "*the very concept of public space is hard to define. Obviously numerous social science concepts are fuzzy, but this is even more so for public space than for most other theoretical notions. In this sense there is a parallel with the concept of the city, which is similarly characterized by indeterminacy*" (Burgers, 2000, pp. 145-146). According to Van Melik (2008), "*the crux of the matter* [of defining public space] *is to formulate a definition which is not too exclusive but at the same time describes the characteristics of public space as specifically as possible*" (p. 17).

Staeheli and Mitchell (see 2007), for instance, found sixteen different, non-mutually exclusive definitions of public space that are used in academic literature. Van Melik (2008) recognises two types of approaches of defining public space, namely a physical and a procedural one. The physical approach is used "*to denote a particular physical place in the city*" (Van Melik, 2008, p. 16), while "*a procedural definition of public space is grounded in the function of hosting common action that is coordinated through speech and persuasion*" (Van Melik, 2008, p. 16). When merging the two, the social meeting function of public space can be highlighted. Closely linked to this is the question of accessibility (Van Melik, 2008).

Van Melik (2008) remarks that only a very small number of definitions include a ownership as a distinguishing actor for space to be public, which suggests that "*the authors either assume that public space is publicly owned by the local government or consider ownership – be it public or private – irrelevant to a definition of public space*" (Van Melik, 2008, p. 17). Within this context, Needham (2007) states that while public space is for the public, it isn't necessarily of the public. Dessouroux (see 2003), for instance, seems to share this view, as he includes the axis of ownership in his three-axes model that can be used for defining specific public spaces on the basis of these axes, making clear a place doesn't have to be scoring the maximum score on this axis to call it public. His model is displayed in the figure Figure 7 (cf. model Figure 1 in Németh & Schmidt, 2011, p. 10):
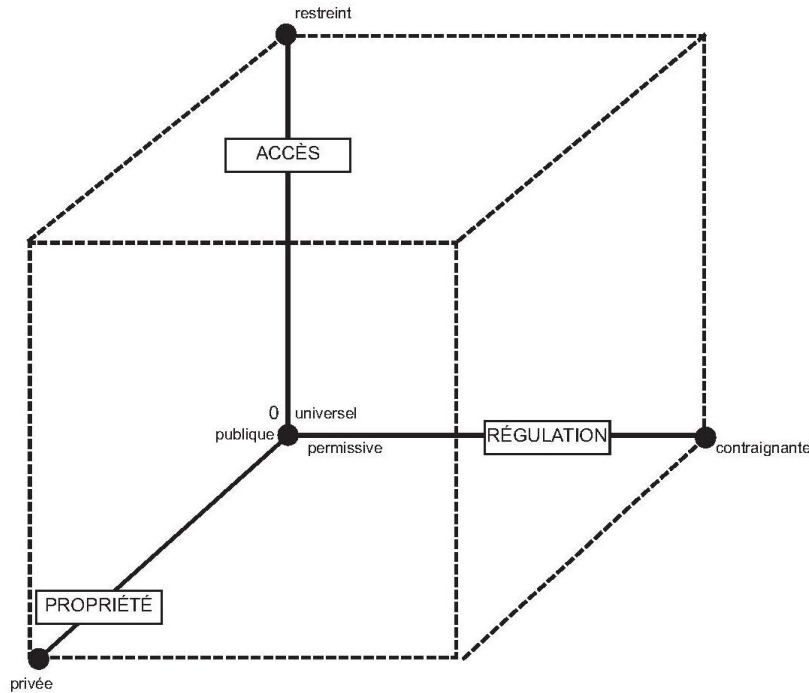
Figure 7: Dessouroux's (2003, p. 7) three-axes model, represented in the form of a cube. The three axes represent three parameters on the basis of which public spaces can be defined, namely ownership (propriété; Cambridge Dictionary, n.d.-b), regulation (régulation; Cambridge Dictionary, n.d-c) and access (accès; Cambridge Dictionary, n.d-d). On the lower left backside of the cube, the ideal type of a public space is displayed with the number 0. This ideal type (Gedankenbild[21]) represents a space that is simultaneously fully owned, maintained, and managed by a public administrative body, accessible for everybody, and free of any kind of constrained use (Dessouroux, 2003, pp. 6-7). In reality, the ideal type of a public space doesn't exist (see e.g. Dessouroux, 2003; Atkinson, 2003, p. 1830). Reprinted from: Dessouroux, 2003, p. 7.

The existence of "*privately owned but publicly accessible spaces*" (Van Melik, 2008, p. 17) was recognised in this research, which is, among other things, of importance because people may experience and use privately owned space in a comparable or equal way as publicly owned space (see Staeheli & Mitchell, 2006; Meyer, Hoekstra, & De Josselin de Jong, 2006). Although public spaces may be located indoors as well as outdoors (e.g. Cybriwsky, 1999; Yücesoy, 2006), indoor spaces were excluded in the definition of public spaces in this research. Another caveat that was made is that public space was seen as physical space that is meant to be used by the public, thus excluding spaces which are not physical and not accessible to the public (as meant by Dessouroux, 2003). Moreover, public spaces were seen as places "*outside the boundaries of individual or small group control, providing spaces that mediate between, and give access to, private spaces, as well as performing a multiplicity of functional and symbolic roles in the life of an urban society*" (Madanipour, 2012, p. 449).

Every place that "*belongs to, or is controlled by, an individual, for that individual's exclusive use, keeping the public out*" (Madanipour, 2003, p. 35) was, in other words, not seen as part of the public space. The definition of public space as used in this thesis has, however, been less narrow than the one used by Madanipour (cf. 2003; 2012), in which he integrated a phrase stating that space can only be public "*if it is controlled by the public authorities*" (Madanipour, 2003, pp. 98-99). This definition has been seen as an ideal-type definition (see Dessouroux,

---

[21] The concept of the ideal type, and the term *Gedankenbild(er)*, are coined by Max Weber (Nadin & Stead, 2013; see Weber, 1949).

2003; Atkinson, 2003) that is too exclusive (as meant by Van Melik, 2008), and, moreover, possibly representing an oversimplification of reality, as "*public spaces are owned and managed through multiple complex arrangements, and always have been, and many are neither clearly public or private as regards who owns and manages them*" (Carmona, 2019, p. 51).

In the definition that has been used in this research, the publicness of a particular place is seen on a spectrum that runs from more public to more private (see Németh & Schmidt, 2011). Spaces which are, without doubt, not meant to be used by the public (as meant by Dessouroux, 2003) and places that are monofunctional (as meant by Madanipour, 2012) are considered to be non-public. For defining a specific place's publicness, spectra like Dessouroux's (2003) or Németh & Schmidt (2011) might be used. This leads, in conclusion, to the fact that the definition of public urban green spaces (PUGS) as provided later on in this paragraph is not free of fuzziness – because a fuzziness-free definition would be too exclusive in nature (as meant by Van Melik, 2008), and it would show a lack of appreciation for the fact that "*the dichotomy of public and private space is not as black-and-white as one might assume*" (Van Melik, 2008, p. 20).

There is one term left that needs to be explained in the paragraph: greening. In this context, greening refers to UGS, a term that has (also) been defined in various ways in the relevant body of academic literature. Swanwick, Dunnett, and Woolley (2003) define urban green space as follows:

> [urban green space is] *land that consists predominantly of unsealed, permeable, 'soft' surfaces such as soil, grass, shrubs and trees. Urban green space is therefore an umbrella term for all areas of land covered by this definition of green space, whether or not they are publicly accessible or publicly managed* (pp. 97-98).

According to Swanwick et al. (2003), green spaces form one of two components out of which the external environment of cities exists. The other component of the external environment is grey space, which is "*land that consists predominantly of sealed, impermeable, 'hard' surfaces such as concrete, paving or tarmac*" (Swanwick et al., 2003, p. 98). The complete urban environment, in its turn, are made up of buildings and the external environment between those buildings (Swanwick et al., 2003). On first sight, when looking solely at the definitions of green and grey space provided so far, it might seem as if Swanwick et al. (2003) are of the opinion that the two are opposites of one another. This is, however, not what they might want to bring about, as will be made clear in the following part.

Grey spaces can, in the eyes of Swanwick et al. (2003) either be functional spaces, meaning it is created to serve a specific purpose, or civic spaces, which means that they are "*publicly accessible areas designed primarily for public enjoyment, including town squares, plazas, pedestrianized streets and esplanades*" (Swanwick et al., 2003, p. 98). Green spaces, on the other hand, are, according to Swanwick et al. (2003, pp. 97-100), categorizable into four different main types: amenity green space, functional green space, semi-natural habitats, and linear green space. There first three of these main types of green space are also divided into sub-types. An overview of the main types of green spaces, including an overview of their sub-types can be found in figure 8. Green space and civic (grey) space can together form so-called

open space, which is seen as a mixture between the two, but where the open spaces mainly consist of hard surfaces (Swanwick et al., 2003, pp. 97-98).

MAIN TYPES OF GREENSPACE			
ALL URBAN GREEN SPACE	Amenity Green Space	Recreation Green Space	Parks and gardens
			Informal recreation areas
			Outdoor sports areas
			Play areas
		Incidental Green Space	Housing green space
			Other incidental Space
		Private Green Space	Domestic gardens
	Functional Green Space	Productive Green Space	Remnant farmland
			City farms
			Allotments
		Burial Grounds	Cemeteries
			Churchyards
		Institutional Grounds	School grounds (including school farms and growing areas)
			Other institutional grounds
	Semi-natural habitats	Wetland	Open/running water
			Marsh, fen
		Woodland	Deciduous woodland
			Coniferous woodland
			Mixed woodland
		Other Habitats	Moor/heath
			Grassland
			Disturbed ground
		Linear Green Space	River and canal banks
			Transport corridors (road, rail, cycleways and walking routes)
			Other linear features (e.g. cliffs)

Figure 8: A typology of UGS. The typology includes the main types of UGS but, if applicable, also their sub-types. Reprinted from: Swanwick et al., 2003, p. 99.

The fact that Swanwick et al. (2003) mention a type of space that is a mixture of grey and green space might be perceived as an indication of the fact that they don't have the intention to see them as each other's opposites. That they aren't opposites, may also become clear when observing that green and grey space are very much dependent on each other, and by the fact that, in many cases, they are both located in the same geographical area.

There are also some very short but telling definitions of urban green space available. Young (2010), for instance, states that municipal green spaces are "*publicly managed natural resource assets in a city or town*" (p. 315). For extracting a definition of urban greening from this, one might leave out the phrases "*publicly managed*" and "*town*" (Young, 2010, p. 315), which leads to the following definition of urban green space: "[UGS are] *natural resource assets in a city*" (Young, 2010, p. 315). Another short definition is provided by Girling and Kellett (2005): "*Urban green spaces include everything in cities that has vegetation*" (p. 57).

One concept that is directly related to UGS is that of biophilic cities. This term first appeared in Beatley (2011), and it refers to "*cities that provide close and daily contact with nature, nearby nature, but also seek to foster an awareness of and caring for this nature*" (Beatley & Newman, 2013, p. 3328)[22]. Beatley (2011) concludes, on the basis of this concept, that the presence of nature in human beings' lives is essential – and not optional. Beatley and Newman (2013) state that "*cities and urban environments contain a variety of* [these according to Beatley (2011) necessary] *ecological and green assets*" (p. 3329). These assets - or: elements - have been integrated into a framework with the title "*Biophilic Urban Design elements across Scales*" (Beatley, 2011, p. 84), a framework that has been based on Girling and Kellett's (2005, p. 58; see Beatley & Newman, 2013, p. 3330) on "*open spaces across scales*" (Girling & Kellett, 2005, p. 58). A visual representation of this is provided by Hidalgo (2014, p. 540; see Figure 9).

---

[22] The concept of biophilic cities is based upon the concept of biophilia, that has been introduced Erich Fromm (1964; 1973), and later, is was used by Wilson (1979, in Wilson, 2006) to refer to "*the innately emotional affiliation of human beings to other living organisms*" (Wilson, 1993, p. 31; see also Wilson, 1984).

Figure 9: Biophilic urban design elements across spatial scales. Reprinted from: Hidalgo, 2014, p. 540; adaptation of original in Beatley, 2011, p. 84*.*

Making a differentiation between different scales for biophilic urban design elements (see Figure 9) shows that the type and extent of natural features will be different for different spatial scales to which attention is payed (Beatley, 2011). This differentiation – or: a different though comparable one that uses spatial scale to in its differentiation between the various green elements of cities – may be seen a seen as necessary at least for two reasons. The first reason is a more or less normative one, namely a conviction that "*biophilic urbanism can and must happen at different scales*" (Beatley & Newman, 2013, p. 3329). A second reason is provided by Snep and Opdam (2010). They themselves differentiate between urban ecosystems on two different levels of spatial scale. Firstly, there are those on the site level (Snep & Opdam, 2010), relating to "*a patch of a particular ecosystem type, interacting with its urban context*" (Snep & Opdam, 2010, p. 261). Secondly, there are those on the urban landscape scale, which means distinguishing "*a pattern of ecosystem sites, which may interact and thereby build an ecosystem network embedded in the urban matrix*" (Snep & Opdam, 2010, p. 261). Such a green network is also labelled by various authors as green infrastructure (e.g. Kambites & Owen, 2006; Voskamp & Van de Ven, 2015).

Important to take into account is also the concept of Small Public Urban Green Spaces (SPUGS). They can take various forms, like hedges, trees present in small numbers and small parks. Peschardt, Schipperijn and Stigsdotter (2012) point at the importance of these SPUGS by stating the following:

> Because of densification tendencies in cities in Western countries, large green areas are a limited resource and many people live in city areas where the distance to larger green areas reduces the possibility for frequent use. Small Public Urban Green Spaces (SPUGS)in dense city areas might contribute to satisfy the need for everyday experiences of outdoor areas (p. 235).

Taking these SPUGS into account is critically important, because one might have the tendency to think big. Central Park in New York City is an extreme example of big thinking, as it was originally already intended as becoming a large, great park (Rosenzweig & Blackmar, 1992). Peschardt et al. (2012), however, articulate the importance of thinking small - while at the same time not opposing thinking big. Taking into account the idea of SPUGS may help in preventing one from putting an overemphasis on large urban greening areas. As such, it fits perfectly within Beatley's (2011) framework of "*Biophilic Urban Design elements across Scales*" (p. 84), since this framework also includes smaller green elements, like sidewalk gardens and street trees (see Beatley, 2011, p. 84).

All in all, taking into account everything that has been said in this paragraph, public urban greening as a term was, in this research, understood to mean the following:

Public urban greening is a synonym for PUGS. PUGS are physical, outdoor spaces which are meant to be used by the public – thus excluding spaces which are non-physical, indoors, and non-accessible to the public. These spaces are either publicly or privately owned. In case they are privately owned, they must generally be perceived and used by the public as if they were publicly owned. PUGS perform a large variety of functional and symbolic roles in the life of (the people who are) urban society. They can be found on different spatial scales, and they are or contain natural, vegetative assets of a city.

2.3 Strategic Spatial planning and Envisioning

An *omgevingsvisie* is supposed to be strategic and integral in nature (Kamerstukken II, 2013/14; see §2.1.2). Gaining an understanding of what makes a vision a strategic one is, therefore, vital for producing the decision-making support model to be developed (see §1.2). This will be accomplished by exploring the concept of strategic spatial planning.

Several definitions of strategic spatial planning exist. Healey (1997), for instance, describes strategic spatial planning as "*a social process through which a range of people in diverse institutional relations and positions come together to design plan-making processes and develop contents and strategies for the management of spatial change*" (p. 5). Albrechts (2004), on his turn, writes the following about it: "*Strategic spatial planning is a public-sector-led (…) socio-spatial* [*sic*] *(…) process through which a vision, actions, and means for implementation are produced that shape and frame what a place is and may become*" (p. 747).

The phrase "*what a place is and may become*" (Albrechts, 2004, p. 747) can be recognised in the text of article 3.2 Ow. This article describes what the contents of an *omgevingsvisie* should be (see art 3.2 Ow). It holds, among other things, that an *omgevingsvisie* must contain both "*a description of the main features of the quality of the physical living environment*" (Ministry of Infrastructure and the Environment, 2017a, p. 17) and "*the broad outlines of the proposed development, the use, management, protection and preservation of the territory*" (Ministry of Infrastructure and the Environment, 2017a, p. 17).

Although Mäntysalo, Kangasoja and Kanninen (2015) conclude that "*what is needed is strategic wisdom in planning practices, including the making of statutory plans, not strategic plans per se*" (p. 179), the *Omgevingswet* still obliges municipalities (and authorities on a provincial and national level) to come up with an *omgevingsvisie* (art. 3.2 Ow). According to the lawmaker, this (for municipalities, provinces, and the national government obligatory) *omgevingsvisie* is a strategic instrument. When it comes to types of policies, it distinguishes between strategic policy and implementation-oriented policy. The lawmaker argues that such a distinction is contributing to the creation of more coherent spatial policy, and that it contributes to the by the lawmaker intended policy dynamics. The strategic spatial policy of an *omgevingsvisie* is supposed to be consistent long-term oriented policy (Kamerstukken II, 2013/14). As such, it should provide a coherent policy basis for the utilisation of the other instruments of the *Omgevingswet*. These other instruments serve the pursuit of reaching the policy goals as laid down in the *omgevingsvisie*. The implementation of policies should, however, be approached in a flexible manner, but simultaneously in such a way that it doesn't undermine the long-term strategic goals of the *omgevingsvisie*. According to the lawmaker, the *omgevingsvisie* should offer continuity and certainty, while implementation-oriented policy should offer flexibility (Kamerstukken II, 2013/14).

2.4   Planning Cultures

Spatial planning can be understood as a cultural construct (Booth, 2011). This view moves away from "*the notion that spatial policy-making and spatial planning are essentially neutral, technical activities*" (Booth, 2011, p. 14). The view of spatial planning as a cultural construct is contained the term planning culture (see Booth, 2011). According to Reimer (2016), "*der Kulturbegriff dient hier als Hilfsmittel, um die lokalen Besonderheiten planerischer Praxis zum Ausdruck zu bringen*" (p. 22)[23]. On the basis of his review of literature on the concept of planning culture, Taylor (2013) concludes that there are divergent interpretations and explanations of this concept. He argues that these interpretations can be categorised on the basis of using two different dimensions. Firstly, there is the dimension of dependence. Planning culture can either be seen as an independent or as a dependent variable. Secondly, it is possible to differentiate between planning culture as organizational culture and planning culture as or planning culture as societal culture. The former relates to a set of norms and values intrinsic to the system and practice of spatial planning (Taylor, 2013), while the latter holds that planning culture is seen "*as determined by, or as a subset of, the broader political or societal culture*" (Taylor, 2013, p. 688).

---

[23] German; in English: the concept of culture serves as a tool to express – or: address – the local particularities of spatial planning (Author's translation, 2020).

One of the existing conceptualisations that Taylor (2013) discusses on the basis of the two dimensions mentioned is that of the culturised planning model, which was introduced by Knieling and Othengrafen (2009). He argues that the culturised planning model brings with it a conception of planning culture as an independent variable that has societal culture as its analytical focus (Taylor, 2013). This specific conceptualisation holds that planning culture is seen as a subculture of a broader societal culture, "*because the actors involved in planning processes are conditioned by the system of planning they act in*" (Knieling & Othengrafen, 2015, p. 2135). In (an unpublished text by) Erdkamp (2019a), the following has already been stated before about the culturised planning model:

> In their [Knieling and Othengrafen's (2009; 2015) & Othengafen's (2010)] conceptualization, planning culture is seen as a subculture of a broader societal culture (...) The culturised planning model consists of three analytical levels, namely (1) planning artefacts (manifest), (2) planning environment (manifest or non-manifest), and (3) societal environment (non-manifest) (Knieling & Othengrafen, 2015, pp. 2137-2138) (...) In the culturised planning model, there is (...) an interaction between the three analytical levels. Visible planning artefacts come into being because of decisions made by actors within the planning environment, who all have their own values, which are in turn influenced by values from within the broader societal environment (Othengrafen, 2014, in Li et al., 2019, pp. 3-4). It may also be the other way around, which means that changes on the level of planning artefacts influence values held by planners, which in turn influences broader societal norms (Li et al., 2019, p. 4) (p. 3).

In the culturised planning model, the three analytical levels are each constituted by dimensions (Othengrafen, 2012, in Knieling & Othengrafen, 2015). These dimensions are displayed in Figure 10. The model is based on Schein's (2004, pp. 25-36) framework on levels of organisational culture. The culturised planning model makes it possible for the observer to differentiate between manifest and non-manifest levels of culture, but also to between conscious and unconscious routines (Knieling & Othengrafen, 2015; Schein, 2004). As already made clear in the quote above, it is important to understand that the analytical levels of a planning culture are interrelated, meaning they influence each other, so that changes in one level lead to changes in the other analytical levels (see Othengrafen, 2014, in Li et al., 2019; Li et al., 2019; Knieling & Othengrafen, 2015).

Analytical level	Description	Manifestation	Dimensions
1. Planning artefacts	*"Perceivable territorial structures as well as visible policy solutions proposed by planners and policy-makers, including urban and regional plans and concepts, written justifications of plan proposals, strategies or projects"* (Reimer & Othengrafen, 2013, in Knieling & Othengrafen, 2015, p. 2137).	Manifest	- Distinctive visible urban structures - General characteristics of planning systems - Features of planning products
2. Planning environment	*"Shared assumptions; values and cognitive frames that are taken for granted by members of the planning profession"* (Othengrafen, 2010, p. 93).	Manifest and non-manifest	- Spatial planning's core mission - Policy frames and policy-making - General understanding of planning
3. Societal environment	*"Underlying and unconscious; taken-for-granted beliefs; perceptions; thoughts and feelings which are affecting planning"* (Othengrafen, 2010, p. 93).	Non-manifest	- Orientation towards time - Qualities of nature - Properties of the state - General characteristics of society

Figure 10: The analytical levels of planning cultures and their dimensions. Adapted from: Othengrafen, 2012, pp. 187-196, in Knieling & Othengrafen, 2015, pp. 2137-2138; Knieling & Othengrafen, 2015, pp. 2137-2138; Othengrafen, 2010, p. 93.

The culturised planning model is relevant in at least the following ways: firstly, it provides a means of describing the nature of the *omgevingsvisie*, namely as a planning artefact that needs to be produced by (members of) the planning environment, and that needs to be produced because of the existence of another planning artefact: the *Omgevingswet*. Here, (one of the) interactions between the analytical levels of a planning culture become apparent. Secondly, and very much related to the first point, it makes clear that the manifest elements of a planning culture, of which the *omgevingsvisie* is an example, are essentially connected to non-manifest elements of a planning culture. This makes it possible to introduce possible considerations regarding the integration of public urban greening into the structure of the *omgevingsvisie* into their wider context of a planning culture, since these considerations, as being considered within the planning environment, may eventually 'land' in an *omgevingsvisie*, meaning they become carved into stone in a planning artefact – at least for as long the *omgevingsvisie* in question continues to exist. The considerations might be non-manifest. A reflection on considerations may make them partly manifest within the planning environment and, eventually, possibly in a planning artefact. Following the logic of interaction between the analytical levels, these written-down considerations that are part of an *omgevingsvisie* may then also influence the planning environment and its workings.

Originally, these considerations originate from the societal environment, the background for the planning environment (see Knieling & Othengrafen, 2015).

2.5   Theoretical Model

On the basis of the theory and the related frameworks presented in the previous part of this chapter (§2.1-§2.4), theoretical model has been assembled. This theoretical model can be found in Figure 11. The purpose of this model is to provide an overview of the larger (planning-cultural) context within which decision are to be made about the contents of an *omgevingsvisie* – and, therefore, about the integration of public urban greening into the structure of an *omgevingsvisie*. An explanation on this model will be provided after the presentation of the model itself.
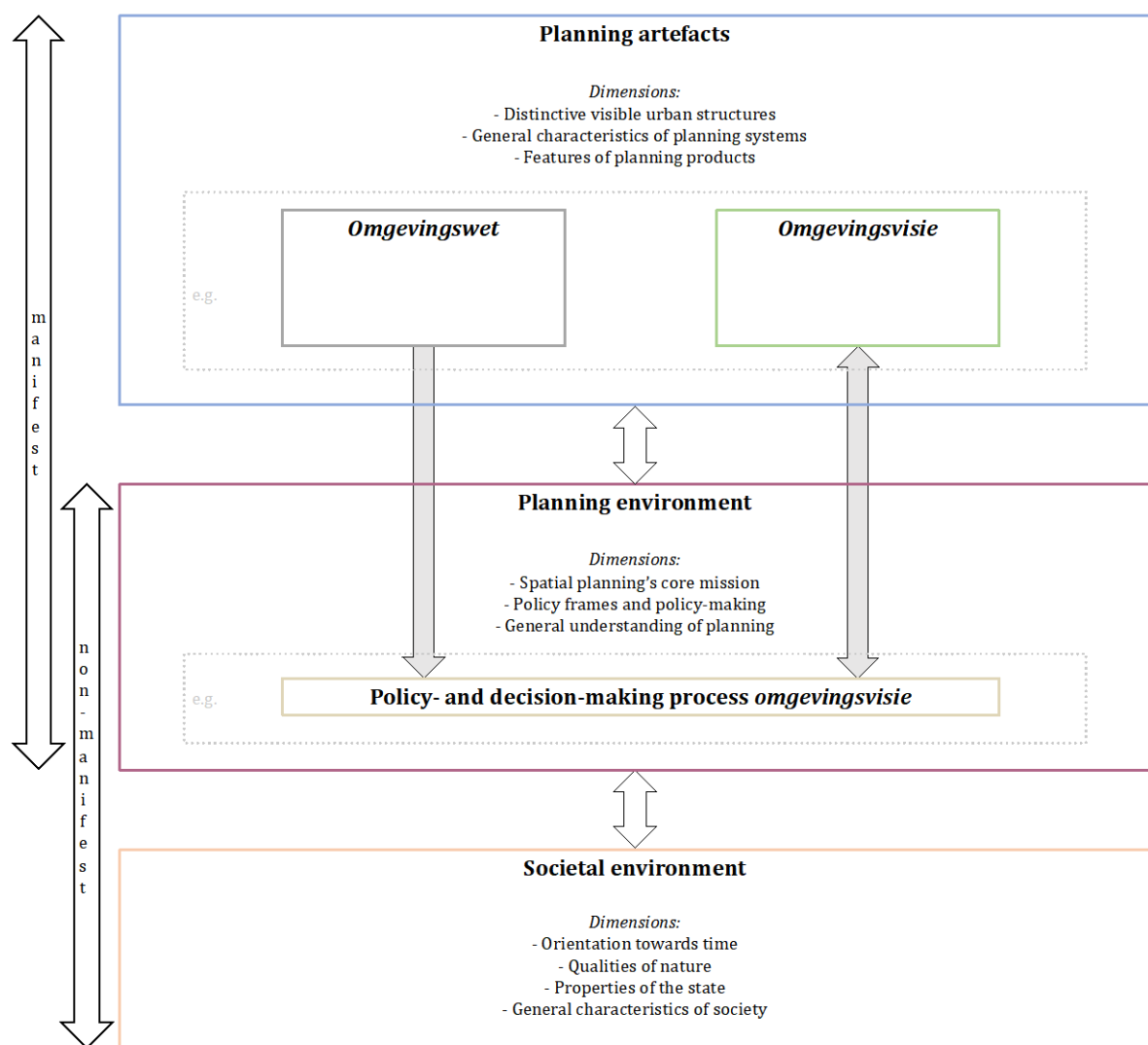
Figure 11: Theoretical model. Adapted from: Othengrafen, 2012, in Knieling & Othengrafen, 2015; Knieling & Othengrafen, 2015; Othengrafen, 2010; Schein, 2004.

The basis for the theoretical model presented in figure 11 is the culturised planning model, that has been discussed in the former paragraph (§2.4) and its three analytical levels, namely the societal environment, the planning environment and planning artefacts. The arrows on the left of the theoretical model indicate whether the (elements of) dimensions of these

analytical levels are manifest or non-manifest. As for the planning environment, these arrows indicate that the elements of its dimensions can either be manifest or non-manifest.

In the model, the planning environment is perceived as an analytical level of "*manifest culture*" (Othengrafen & Reimer, 2013, p. 1274). Two examples of elements of this manifest culture that are most relevant for this research are given, namely the *Omgevingswet* and the *omgevingsvisie*. The *Omgevingswet* fits within this analytical level, because it is a concrete example of planning law (see Othengrafen, 2010; §2.1.2), while the *omgevingsvisie* should be considered part of this analytical level due to the fact that it is both a planning instrument and a planning product (see Othengrafen, 2010; Knieling & Othengrafen, 2015; §2.1.2; cf. Othengrafen, 2010).

The analytical level that underlays the level of planning artefacts is that of the planning environment. This includes, among other things, the objectives and principles that spatial planning is aiming for, the planning process itself, and the structures composing a specific decision-making environment (Knieling & Othengrafen, 2015). Ways of decision-making is, moreover, explicitly mentioned as one of the dimensions of the planning environment (Othengrafen, 2012, pp. 191-193, in Knieling & Othengrafen, 2015, p. 2138). This means that the decision-making process on the (contents of) an *omgevingsvisie* are also part of the planning environment.

The grey arrow between "*Omgevingswet*" (Figure 11) and "*Policy- and decision-making process omgevingsvisie*" (Figure 11) represents the influence of the *Omgevingswet* and its contents on decision-making processes around the *omgevingsvisie*. The fact that an *omgevingsvisie* should be produced by municipalities[24] (art. 3.1, paragraph 1 Ow) is assumed to lead, for example, to the coming into existence of decision-making processes on the *omgevingsvisie* and its contents. There is 'only' a one-sided interaction assumed between the two, because the *Omgevingswet* is a product of the lawmaker (see §2.1.2), meaning that municipalities cannot (directly) influence the contents of this act. The other grey arrow, between "*Policy- and decision-making process omgevingsvisie*" (Figure 11) and "*Omgevingsvisie*" (Figure 11) represents an assumed two-sided interaction. A municipality is responsible for producing an *omgevingsvisie*, and, therefore, for its specific contents (see artt. 3.1 & 3.2 Ow; Kamerstukken II, 2013/14), and after it produced a vision, this vision is assumed to be of influence on the future processes of renewing a vision and creating a new *omgevingsvisie*. To conclude, the white arrows represent more general interactions between the different analytical levels.

2.6   Conceptual Framework

A conceptual framework for this research has been constructed on the basis of the theoretical model in §2.5. The conceptual framework will first be presented in Figure 12, after which an explanation of the model will follow.

---

[24] Strictly speaking, it is a municipal council that is responsible for enacting an *omgevingsvisie* (art. 3.1, paragraph 1 Ow).
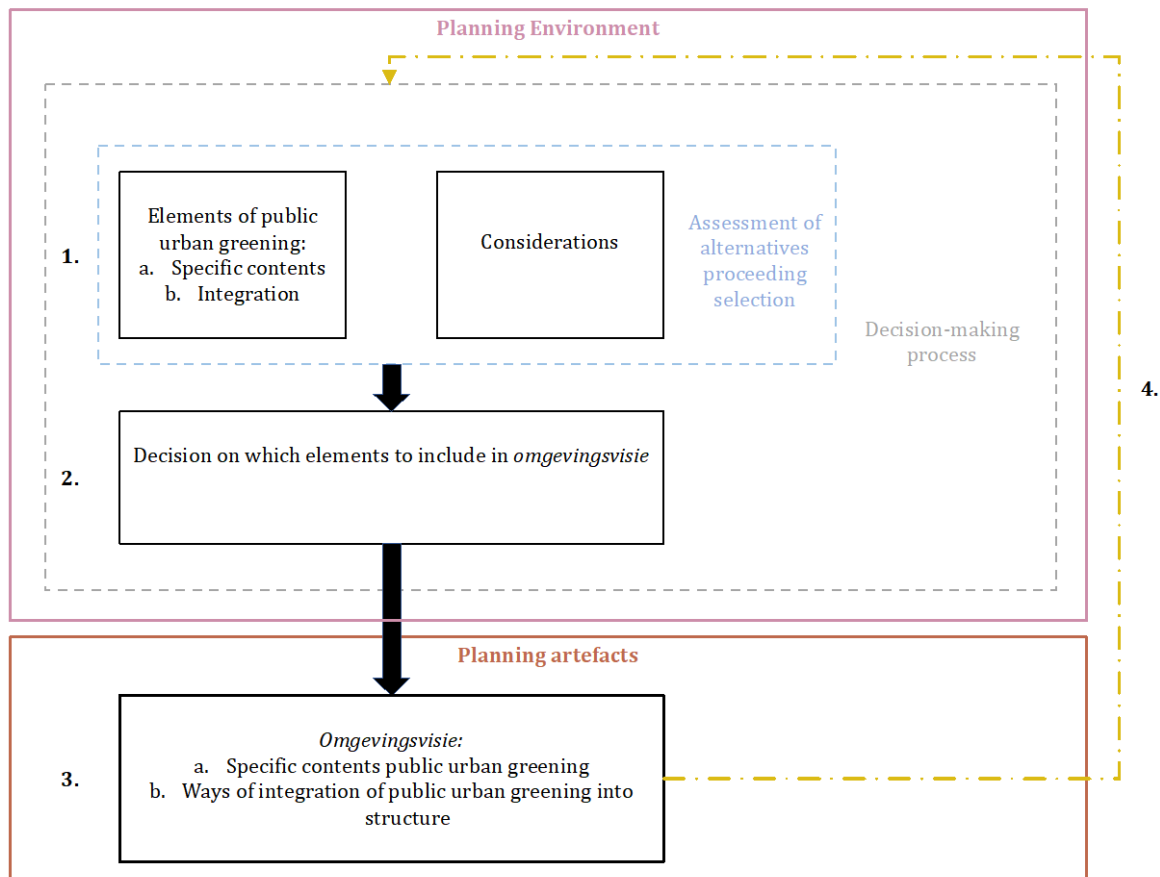
Figure 12: Conceptual framework. Based on figure 1 in §1.2. Author's work, 2020.

Instead of showing the main concepts derived from the theoretical framework in §2.1-§2.4, specifying them further by naming their dimensions, and linking those concepts to one another, the choice has been made to produce a conceptual framework in which the initial schematic representation that formed the conceptual basis for the decision-making support model (see Figure 1) is being shown as an integral part of the larger (planning-cultural) context. This larger (planning-cultural) context is visible in the theoretical model (see Figure 11). The theoretical model shows how the decision-making process on the 'green contents' of an *omgevingsvisie* is situated within this larger context.

The conceptual framework is, as it were, a fragment cut out of the full theoretical model which has been coloured in and detailed further afterwards. It details the process indicated by the grey two-sided arrow between "*Policy- and decision-making process omgevingsvisie*" (Figure 11) and "*Omgevingsvisie*" (Figure 11). This arrow represents the decision-making process on the contents of a municipal *omgevingsvisie*. In the end, the decision made by municipalities concerning these contents will be translated into an *omgevingsvisie* that comes into being as a result of this decision-making process. As such, processes within the planning environment lead the production of a planning artefact.

In the left part of the conceptual framework, the numbers 1-3 indicate the three steps differentiated between in figure 2. Figure 2 is the figure that displays the format of the decision-making support model in this research as it has been imagined initially. These are the steps that municipalities may subsequentially undertake in order to arrive at an informed

decision about how to integrate contents regarding PUGS into an *omgevingsvisie*, following the logics of the so-called rational-comprehensive theory of decision-making (see Anderson, 2014; see §1.2 & §3.1). The yellow arrow, indicated by the number 4, shows the double-sidedness of the relation between the municipality and its employees, part of the planning environment, and the *omgevingsvisie*, part of the level of planning artefacts. It draws attention to the fact that, when following the logics of the culturised planning model (see §2.4), there is assumed to be an interaction between those two. Not only does a municipality formulate the contents of an *omgevingsvisie*, the contents of this concrete *omgevingsvisie* will likely influence the contents of a subsequent *omgevingsvisie* that will be an update of the existing one.

The main reason behind presenting the conceptual framework in this way is the complete lack of academic literature on the topic in question; no single journal article or book (chapter) that discusses ways of integration of public urban greening into an *omgevingsvisie* and/or the considerations behind this choice was published at the time of writing. Because of this, the amount of literature and theories relevant when it comes to this integration was conceived to be so vast, that it was impossible to incorporate all of it in the theoretical framework. After the methodology chapter (Chapter III), the conceptual model will, therefore, be 'coloured in' more. This indicates the highly explorative character of this research (see §1.2).

III. Methodology

In this third chapter, the research methodology that has been applied will be elaborated. Firstly, an explanation will be given about which research philosophy – or actually: philosophies – have been influential during the research process. It will be made clear that both an interpretivist and a post-positivist research paradigm have been applied, but both to different parts of the research, so never simultaneously. What follows is an elaboration of the research approach and the research strategy in §3.2 and §3.3, respectively. In the following paragraph, §3.4, the strategy of data collection that has been applied will be described. This paragraph starts with a sub-paragraph in which the term urban is defined, which was necessary to do, because such a definition was necessary for knowing which *omgevingsvisies* to possibly analyse and which municipalities to approach for conducting qualitative interviews. In the second sub-paragraph of §3.4, the actual methods of data collection used will be presented, namely literature analysis, policy document analysis, and qualitative interviewing. Thereafter, a description of the data analysis methods will be provided in §3.5. It will be explained that the *omgevingsvisies* have been analysed following a three-step approach which, as a first step, includes in vivo coding. The method of data analysis regarding the (transcripts of) the qualitative interviews will also be described in this paragraph. In the sixth and last paragraph of this chapter, a thorough reflection on reliability, validity, and research ethics will be given.

3.1 Research Philosophy

In this research, both an interpretivist and a post-positivist research paradigm have been applied, each to different parts of the research. Klenke (2008) describes the epistemological assumptions of interpretivism as: "*Knowledge is based on abstract descriptions of meanings and constituted through a person's lived experience*" (p. 20). Schwandt (1994) seems to hold a comparable view. He states that "*interpretivists argue that it is possible to understand the subjective meaning of action (grasping the actor's beliefs, desires, and so on) yet do so in an objective manner. (…) Interpretivism assumes an epistemological understanding of understanding (Verstehen[25])*" (Schwandt, 1994, p. 123). In interpretivism, it is that which the interpreter – read: researcher – created by means of reproduction and reconstruction through interpretation the meanings of actions (e.g. Schwandt, 1994).

Although interpretivism as a research paradigm has not been used in this research in a 'classical' way – meaning in the way as described in the previous part of this paragraph, typifying interpretivism as creating knowledge on the basis of an interpretation of meanings of actions –, the idea of creating knowledge on the basis of interpretation of the contents of policy documents and on the basis of interpreting (transcriptions of) conducted semi-structured interviews has been leading a part of the research process. Together with the findings that were formulated on the basis of literature research, these interpretations have informed the decision-making support model. In the research aims (see §1.2), it was also already pointed out that these methods were supposed to be used to, in the end, meet up with the external research aim. This means that although interpretivism as a research paradigm

---

[25] The German term *Verstehen* originates from Max Weber's (2002) work (Schwandt, 1994; 1998).

has been of major influence on how the research has been conducted, it doesn't cover the nature of the research completely.

Another research paradigm that has been of major influence is post-positivism. According to Guba and Lincoln (1994), the ontological position of post-positivism is one of critical realism. This holds the assumption that there is a 'real' reality, but that it is only imperfectly apprehendable. It should be the task of a researcher to investigate this reality to try to come as close as possible to a complete understanding of it, although it can never be fully known (Guba and Lincoln, 1994). In the end, "*knowledge consists of non-falsified* [*sic*] *hypotheses that can be regarded as probable facts or laws*" (Guba and Lincoln, 1994, p. 113). The post-positivist research paradigm is, first of all, applicable to the parts of this research that concern (many of) the values of UGS, namely to those which are instrumental values. As will be shown in chapter IV, researchers often try to measure these values in order to quantify them (see Chapter IV). One example of this is the pursuit of coming to a quantification of the therapeutic value of UGS (e.g. Hartig, Mitchell, De Vries, and Frumkin 2014).

The post-positivist research paradigm has also been applied in relation to design of the decision-making support model. As explained in §1.2, the initial intention was to create a model following the logics of the rational-comprehensive theory of decision-making (see Anderson, 2014), a theory that, in this case, "*specifies the procedures involved in making well-considered rational decisions that maximize the attainment of* [organisational] *goals*" (Anderson, 2014, p. 135). The model has been based on the basic idea that the possibility of reaching rational and legitimate decisions increases when is based on more reliable information (see Hoogerwerf, 2014). In these processes, some kind of cost-benefit analysis usually comes into play (see Anderson, 2014; Hoogerwerf, 2014). Although the advantages of such an approach are acknowledged – otherwise the decision-making support model wouldn't have been supporting on rational-comprehensive theory –, the decision-making model shouldn't be understood as an instrument to 'do the trick' of telling which decisions should be made; it is a an instrument for the mere encouragement of taking relevant information into account, and, therefore, also not a prescriptive model.

3.2   Research Approach

The research approach that has been applied in this research is an abductive one (see Saundrs, Thornhill, & Lewis, 2019). Saunders et al. (2019) state the following about abduction: "*Where you are collecting data to explore a phenomenon, identify themes and explain patterns, to generate a new or modify an existing theory which you subsequently test through additional data collection, you are using an abductive approach*" (p. 153). Abduction can also be named theory elaboration (Costa, Lucas Soares, & Pinho de Sousa, 2017; see Ketokivi & Choi, 2014).

Abductive research usually starts with the observation of a surprising fact. During the research process, the researcher elaborates a theory that provides a plausible explanation for the emergence of this fact (Saunders et al., 2019). Such a surprising fact has been observed during a brief review of *omgevingsvisies*. The ways and level of integration or urban greening seemed to be different for each of these vision documents. The research aim of this research is, in fact, an answer to the curiosity about how such a difference may be explained.

Considerations regarding values of UGS, but also those concerning strategic spatial planning and envisioning, were assumed to be explanatory factors for this difference (see §1.2).

Although the role of existing theory in this thesis is relatively large, the intention hasn't been to test a hypothesis derived from existing theory – and, hence, to use a deductive approach (see Ketokivi & Choi, 2014; Saunders et al., 2019); the central idea was to elaborate existing theory (see Ketokivi & Choi, 2014). According to Ketokivi and Choi (2014), "*theory elaboration focuses on the contextualized logic of a general theory*" (p. 236), meaning that "*successful theory elaboration hinges on the researcher's ability to investigate the general theory and the context simultaneously, in a balanced manner. Therefore, the aim of theory elaboration could be described as reconciliation of the general with the particular*" (p. 236). In case of this research, general theory refers to existing literature on (P)UGS and strategic spatial planning and envisioning, that, until the time of writing, hadn't been related to the municipal *omgevingsvisie* as an instrument specifically. This research focused on the contextualised logic of these theories by transferring them to the specific contexts of (decision-making processes on) urban municipal *omgevingsvisies*, meaning by looking what their meaning and importance is within these specific contexts to which had hadn't been related to before.

In the end, general theory was elaborated – meaning detailed –, so that it became apparent in which ways it is relevant for the specific contexts central in this research. The theoretical framework was, therefore, not a constraint, but something to elaborate more. This meant that the theoretical framework and the conceptual model have been evolving (as meant by Dubois & Gadde, 2002), resulting in the decision-making support model produced.

3.3   Research Strategy

Different authors differentiate between different research strategies, such as case study research and grounded theory research (see e.g. Van Thiel, 2014; Verschuren & Doorewaard, 2010; 2015; Saunders et al., 2009; Creswell, 2013). None of the 'standard' research strategies was found to be fully suitable. Instead, a much more pragmatic attitude towards research strategy has been applied, consisting of literature research, policy document analysis, and qualitative interviewing. How these strategies have been used to collect data will be explained in the next paragraph (§3.4). In Figure 13, an overview of which of these strategies of data collection have been used for meeting up with which of the two internal research aims. Thereafter, an explanation about why two strategies that might seem suitable at first sight, namely case study research and a grounded theory approach are not (fully) applicable.

Internal aim	To be reached by conducting...
I. Exploring the ways in which the theme public urban greening may be integrated into the municipal *omgevingsvisie* (…).	• Policy document analysis.
II. Developing an understanding of which considerations, more specifically those concerning values linked to urban greening and strategic spatial planning and envisioning, may be taken into account when making the decisions in question (…).	• Literature research; • semi-structured qualitative interviews.

Figure 13: The two internal research aims and the means through which they should be reached. In fact, the part left out in this the two research aims ("(…)") compared to how they have been formulated in §1.2 is displayed in right column. Author's work, 2020

By giving a definition of a case study, it becomes apparent why case study research was not suitable. Yin (2014) provides a definition of (the scope of) a case study: "*A case study is an empirical inquiry that investigates a contemporary phenomenon (the "case") in depth and within its real-world context, especially when the boundaries between phenomenon and context may not be clearly evident*" (Yin, 2014, p. 16). Although interviews with various civil servants working at different municipalities have been conducted, these municipalities – or more specifically: their decision-making processes around making *omgevingsvisies* – should not be understood as cases included a case study. The idea was not to create in-depth understandings of the specific cases (see §1.2). Moreover, it is largely explorative in nature (see §1.2), while case-study research is usually highly descriptive in nature (see Creswell, 2013).

It is possible to be very short about why a grounded theory approach was not suitable. According to Verschuren and Doorewaard (2010), the grounded theory approach is a strategy "*that can be used to gain theoretical insights with only the minimum of prior knowledge, and by continuously comparing phenomena that are involved*" (p. 186). Creswell (2013) adds something crucial to understanding this strategy, namely that "*the intent of a grounded theory is to move beyond description and to generate or discover a theory*" (p. 83). Ultimately, the goal is to generate "*a general explanation (a theory) of a process, an action, or an interaction shaped by the views of large numbers of participants*" (Creswell, 2013, p. 83). The fact that a large theoretical framework has been presented in chapter II, combined with the predominant role of literature research in a significant part of the research made it non-applicable in this research.

3.4   Strategy of Data Collection

In this paragraph, a description of the strategy of data collection that has been used will be presented. Since the research aim indicates that this research only focuses on urban municipalities, an explanation of what has been understood as an urban municipality will be given in §3.4.1. Because such a definition directly concerns delimiting the number of municipalities that were to be potentially included in this research, an explanation will be

given in this paragraph instead of in chapter II already. Without such a delimitation, it would have been very ambiguous on which criteria municipalities and their visions were included. Even though this is not a case study, it does matter that these municipalities are urban, given the research aim. §3.4.1 also contains an explanation about why it was important to make a distinction between urban and non-urban municipalities in the context of this research. After this follows a description of how the methods mentioned in the internal research aims (see §1.2) and in figure 16 have been applied to collect data.

3.4.1 Defining the Dutch Urban Municipality: Selection of Potentially to be Included Municipalities

The formulated research aim (see §1.2) delimited the scope of this research, among other things, to urban municipalities in the Netherlands – which means that non-urban and non-Dutch municipalities were excluded from this study beforehand. This has been considered to be necessary, because of two reasons. The main reason for this is that values of green spaces, of which an elaboration can be found in chapter IV, are usually described with regards to green space in urban areas (see e.g. Baycan-Levent et al., 2009).

The indicator of choice for defining the degree of urbanisation of Dutch municipalities is the *omgevingsadressendichtheid*[26] (see CBS, 1992). It is a measure for "*the average address density within a radius of 1 km of an address in the area*" (Den Dulk, Van de Stadt, & Vliegen, 1992, p. 21). The average address density for a municipality is calculated by taking the average of the address densities for all individual addresses within a specific municipality. The CBS' choice for this specific indicator follows from the fact that it expresses that which characterises a city most, namely the degree of concentration of human activities (Den Dulk et al., 1992). Hall (2006) also mentions population size and population density as possible indicators for the degree of urbanisation. Den Dulk et al. (see 1992), however, disqualify both of these indicators.

Following De Beer, Ekamper and Van der Graag (2018) and Oevering (2014), municipalities with a strong or very strong degree of urbanisation, defined on the basis of the address density of the surrounding area, are considered to be urban, while municipalities of the categories non-urban, low and intermediate are regarded as non-urban. The reason behind this choice is, that, in line with the research aim and the research questions, the included *omgevingsvisies* should be only those of clearly urbanised municipalities. All Dutch strongly and very strongly urbanised municipalities are highlighted in Figure 14. An overview of this in tabular form can be found in Annex II.

---

[26] Address density of the surrounding area (Den Dulk et al., 1992).
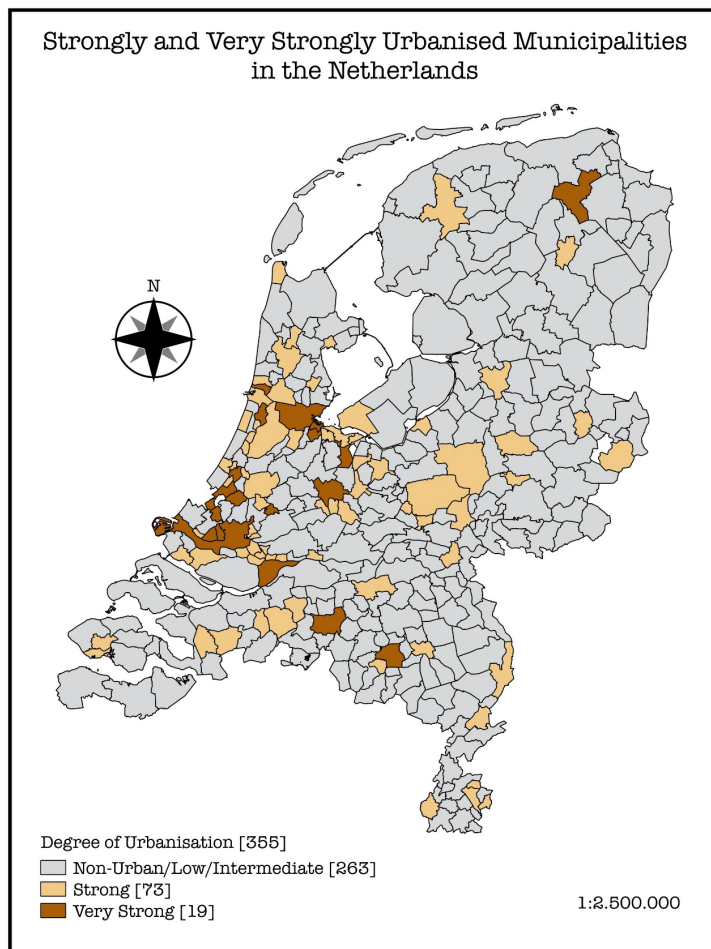
Figure 14: The degree of urbanisation of Dutch municipalities in the year 2019, with a division of municipalities into three different categories. The map is a reduced-size one compared to the original (see Annex IV for original). Author's work, 2020; based on CBS, 2020; layer with Dutch municipalities in the year 2019 retrieved from Esri, 2019.

3.4.2   Data Collection

As argued in §1.2, and as can be seen in figure 13, three different methods for collecting data have been used: literature research, policy document analysis, and qualitative interviewing. In this sub-paragraph, it will be explained how they have been applied in order to provide relevant data.

Because the term data refers to a body of information that can be extracted from many sources, the information collected on the basis of literature research can also be considered as data (Onwuegbuzie & Frels, 2016). Of all three data collection methods used, literature research is the one on which most emphasis has been put. The chapters IV (values of UGS), V (considerations regarding strategic spatial planning and envisioning), and VII (introduction of a steps-based approach for the integration of urban greening into the structure of an *omgevingsvisie*) have largely been based on literature research. Basing these chapters mainly on existing literature seemed necessary for at least two reasons. First of all, the complete lack of literature directly dealing with the inclusion urban greening in *omgevingsvisies* was believed to make it necessary to be the first one making a link between this issue and the already existing body of literature on (values of) UGS, strategic spatial planning and envisioning, and decision-making processes and models. Secondly, a change in the research

aim played an important role in this decision. The latter will be explained in more detail in the part about qualitative interviewing in this sub-paragraph and in chapter 9 (reflection).

For the literature concerning values of UGS, the strategy has mostly been to look for literature containing meta-analyses and literature reviews first. Results of such studies of studies have been described in chapter IV. Doing so was important, because results of various individual studies on one and the same issue might vary, making individual studies possible less generalisable. Thereafter, results from individual studies have been described in order to elaborate certain values of UGS more and to illustrate their meaning.

The literature review on considerations related to strategic spatial planning and envisioning has been performed in a somewhat different way. Healey's (2007) differentiation between four different meanings of the term strategy was considered to be a suitable and useful point of departure, especially because it provides a broad view on what strategy can mean. Generally speaking, other author's provide a much narrower view on what strategic spatial planning is – or: might be. Thereafter, literature about the spirit of the *Omgevingswet* – and, therefore, the spirit on which the municipal *omgevingsvisie* as an instrument supports, has been linked to the more general body of literature on strategic spatial planning and envisioning.

A third part of the literature review concerned finding a way to integrate the results presented before chapter VII into a steps-based decision-making support model. As explained in §1.2, rational planning theory provided a basis for this model to be based on. Several rational planning models for decision-making have been consulted, after which one of them, namely Taylor's (1998) elaborated. The question that has driven this part of the literature research was: what is the relevance of rational planning theory and rational planning models for developing the decision-making support model meant in the research aim? (see §1.2).

The second method for collecting data that has been applied is policy document analysis. More specifically, the policy documents that have been analysed are *omgevingsvisies* of urban municipalities. This results of this analysis formed the basis for chapter VI, the chapter concerning the possible ways of integrating the theme urban green space into the structure of an *omgevingsvisie*. By manually checking which Dutch urban municipalities (as defined in §3.4.1; see Annex II) already had an *omgevingsvisie* by mid-July 2020 published on their internet websites, a list has been made of the *omgevingsvisies* to be potentially analysed. The decision has been made to analyse six out of fifteen available visions. These were the three visions related to the three qualitative interviews with civil servants of three different municipalities that have been included in this study (see later on in this paragraph). The three other visions have been selected by means of random selection of visions from the list of the ten remaining visions. In Figure 15, the *omgevingsvisies* that have been analysed are listed.

Analysed *Omgevingsvisies* of Dutch urban municipalities
Maastricht – *Koester de Balans: Omgevingsvisie Maastricht 2040 (Deel 1)*[27] (Gemeente Maastricht, 2020a)
Groningen – *'The Next City': de Groningse leefkwaliteit* (Gemeente Groningen, 2018)
Eindhoven – *Eindhoven: Kloppend Hart van Brainport. Integrale visie voor de fysieke leefomgeving van Eindhoven* (Gemeente Eindhoven, 2020).
Nijmegen – *Nijmegen: Stad in Beweging. Omgevingsvisie 2020-2040* (Gemeente Nijmegen, 2020).
Zwolle – *Mijn Zwolle van morgen 2030. Omgevingsvisie. Deel 1: Kernopgaven en ambities* (Gemeente Zwolle, 2017).
Deventer – *Expeditie Deventer* (Gemeente Deventer, 2019).

Figure 15: The omgevingsvisies that have been analysed to explore how urban green space as a theme can be integrated into the structure of omgevingsvisies of urban municipalities in the Netherlands. Author's work, 2020.

Lastly, the third data collection method that has been applied is qualitative interviewing. The function of conducting interviews was mainly to support the considerations elaborated in chapter V with empirical data, and to deepen the understanding of how the considerations relate the practice of municipalities producing *omgevingsvisies*. In this research, semi-structured interviews have been conducted (see Van Thiel, 2014). Although the interviewees have been sent an interview guide (see Annex V) beforehand, before the days on which the interviews took place, the order in which the questions have been asked varied from interview to interview (as meant by Van Thiel, 2014). All interviewees can be considered experienced and knowledgeable (as meant by Rubin & Rubin, 2005).

Thirteen interviews have initially been conducted to be analysed and included in this research. Due to a need to change the research aim after conducting the interviews, the information collected during the interviews would not be sufficient to come up with satisfactory answers regarding considerations that may play a role in the decision-making process around the integration of the theme of PUGS into an *omgevingsvisie*. This led to the decision to include only three out of thirteen interviews, and, simultaneously, to drastically increase the importance of literature research, so that satisfactory answers to the research questions could be given. Notes taken during all the interviews provided the basis for an informed guess about which three interviews would provide the largest amount of relevant information. Because this was a drastic decision, choice for doing so will be explained and justified in §3.6 and in chapter IX. At the time of interviewing, the four interviewees that took part in the three interviews included in this study (see Figure 16) work as civil servants at municipalities. They were all in various ways involved in the process of making their municipal *omgevingsvisies*. This makes that the interviews included are so-called expert interviews (see e.g. Bogner, Littig, & Menz, 2009).

An overview of the three interviews that have been analysed can be found in Figure 16. Annex III contains an overview of all thirteen interviews that have been conducted.

№	Interviewee	Organisation	Date
1.	T. van Wanroij	Municipality of Maastricht	May 12, 2020
2.	M. Spreen & E. Tutert	Municipality of Deventer	May 18, 2020
3.	T. Verhoeven	Municipality of Nijmegen	May 29, 2020

Figure 16: The qualitative interviews that have been analysed in this study. Author's work, 2020.

3.5   Data Analysis

The coding process for the policy documents included in this study – read: the *omgevingsvisies* that were listed in Figure 15 – has been conducted following three subsequent steps, namely in vivo coding, using the software programme Atlas.ti, as a first step, defining the ways of integration per *omgevingsvisie* as a second step, and compiling an overview of the possible ways of integration on the basis of the results of the second step as a third step. This is displayed in the figure below (Figure 17).
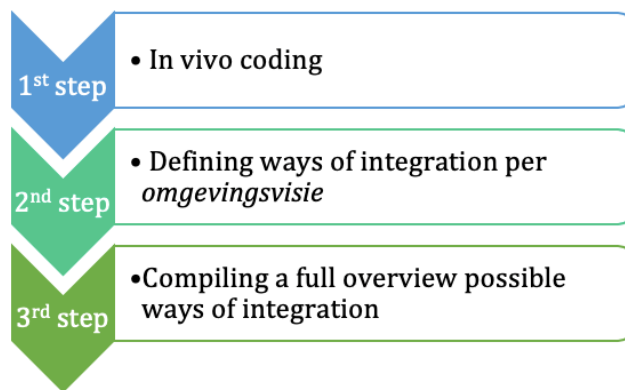
Figure 17: The three subsequent steps that have been conducted in the process of analysing omgevingsvisies within this study. Author's work, 2020.

In vivo coding, the coding method that has been used in the first coding cycle, is a coding method in which "*a code refers to a word or short phrase from the actual language found in the qualitative data record*" (Saldaña, 2016, p. 105). Charmaz (2006) states that they are "*codes of participants' special terms*" (p. 55), and that they "*serve as symbolic markers of participants' speech and meanings*" (p. 55). The latter means that the codes may be of help in understanding "*stories or ideas through the actual words of participants*" (Manning, 2017, p. 1). In vivo coding may be seen as valuable, because it helps the researcher "*to preserve participants' meanings of their views and actions in the coding itself*" (Charmaz, 2006, p. 55). According to Manning and Kunkel (2014, in Manning, 2017), "*researchers often use results of the* [in vivo] *coding to consider how language and social interaction come together to form a social scene*" (p. 2).

The motivations behind applying in vivo coding in this study were different from the ones that were mentioned in, or could directly be deduced from, that which was stated in the foregoing elaboration on what in vivo coding usually holds. The exact wordings used by municipalities in the integration of this theme in their *omgevingsvisies*, for instance in the form of municipality-specific formulated spatial ambitions, were not of major interest for studying how public urban greening was integrated in the structure of the visions (see §1.2 on research aim). In vivo coding has, nevertheless, been used as a coding method, because doing so provided the ability to highlight the exact places of integration into the structure of

the vision documents. Compared to what in vivo coding is usually applied for (see e.g. Saldaña, 2016), the way in which it has been used in this research is much more instrumental and pragmatic, meaning the codes didn't "*serve as symbolic markers of participants' speech and meanings*" (Charmaz, 2006, p. 55).

Alternative coding methods would not have been equally useful. Descriptive coding, for instance, was seen as less useful because descriptive codes are supposed to be summaries of the topic of a passage of qualitative data, to begiven in a word or a short phrase (Saldaña, 2016). They are "*identifications of the topic, not abbreviations of the content*" (Tesch, 1990, p. 119). Using such identifications of topics instead of in vivo codes would have been not as useful as using in vivo codes, because the topic itself, namely (public) urban green space and its specific elements, was already a selection criterium for coding already, meaning that in vivo codes were given to passages concerning (public) urban green space only. The topic was, in other words, already known and served as a selection criterium for coding those passages of interviews that said something about its content – read: ways of integration.

The second step in the analysis of *omgevingsvisies* has to describe the ways of integration for every single *omgevingsvisie* analysed. The in vivo codes have been reviewed, on the basis of which categories of ways of integration have been identified. An overview of these ways of integration in each single *omgevingsvisie* can be found in Annex VII. After doing this for every vision document, the separate overviews for every individual vision document have been integrated into one single overview. This three-step approach can be seen an expression of the choice to apply an interpretivist research paradigm to this part of the research (see §3.1). An overview of categories of ways of integration has been created on the basis of policy document analyses – and not on the basis of already existing theories.

The qualitative interviews have also been analysed by means of using in vivo coding. It was also here that this coding method was perceived to be most useful. The most important criterium for choosing a coding method that was functional in a very direct way. In vivo coding was functional as such, because it made possible that codes contain the words of the interviewee and the core of his or her message, which enabled to determine which parts of the interviews would be suitable to support and complement the results of the literature research that is part of chapter V and VII, so that relevant excerpts could be selected. Just as is the case with the policy document analysis, descriptive coding would also be less relevant here, because descriptive codes would not directly show the contents of what was being said (as meant by Tesch, 1990).

3.6   Reflections on Reliability, Validity, and Research Ethics

The reliability of this study was considered to be more than sufficient. The combination of providing a full description of the research design, including the interview guides used, with making available Atlas.ti files containing coded transcriptions of interviews plus *omgevingsvisies* and the coding map produced was perceived to be sufficient to replicate the research design. References of every piece of literature used have also been included in the thesis. Of course, the choice for, for instance, which values of UGS to elaborate was a somewhat subjective one. By giving a full overview of these values, including the ones not

specifically explained, in figure 18, it has, however, been made explicit which of them have not been described in more detail.

Internal validity has been served by ensuring a strong link between the decision-making support developed and the results presented chapter IV up to and including chapter VII. These results have been key in the formation of this model. External validity was served by the very fact that full completeness of the model regarding possible ways of integration and relevant considerations has never been claimed. It has also never been stated that all possible ways of integration and all considerations mentioned must be taken into account and/or are applicable to every urban municipality in the Netherlands. The model is more of an invitation for municipalities to reflect on which elements of the model are applicable to which extent under their specific (local) circumstances. This means that the decision-making support model can, in principle, be used by all urban municipalities in the Netherlands.

What remains to be done in this chapter is providing a reflection on research ethics. Van Thiel (2014) argues that there are five ethical rules to which have to abide in all parts of the research. These rules are: (1) beneficence, (2) veracity, (3) privacy, (4) confidentiality, and (5) informed consent (Van Thiel, 2014).

The first ethical rule, beneficence, holds that the research aim should be a positive one. Research must not be intended to harm (Van Thiel, 2014), and it has to "*constitute an attempt to contribute to the acquisition of knowledge or the solution of a problem*" (Van Thiel, 2014, p. 154). The paragraphs on the scientific (see §1.4) and societal relevance (see §1.5) of this research contain detailed descriptions about how this research should be beneficial for the field of science and for municipalities, but also for society as a whole. The second ethical rule, veracity, concerns the fact that research may never be misleading (Van Thiel, 2014). This rule has been taken into account and applied by informing interviewees about the main research aim before conducting the interviews, namely in the invitation email for taking part in the interviews, as well as at the beginning of all individual interviews, before asking the questions that were part of the interview guide.

The ethical rules of privacy, confidentiality, and informed consent (see Van Thiel, 2014) have also been respected. Interviewees were also never pushed – meaning: forced – to take part in the study or to answer specific questions in a specific way. Regarding confidentiality, no interviewee spoke the preference to be not mentioned by his or her personal name. They were aware of the fact that the thesis was also going to be published. Informed consent has been assumed to exist, because interviewees have been made aware of the fact that the thesis is going to be published, against which no objections have been made by them. They were all offered the opportunity to first see the results before the thesis before handing it in for a review. Only one of the interviewees stated he wanted to make use of this opportunity.

To conclude this paragraph, one remark is still important to make. As has already been made clear in §3.4.1, not all interviews that have been conducted were analysed for reasons given. This was, however, not seen as ethically very problematic, because the initial intention has never been to conduct more interviews than the number to be used and analysed in the end. The original intention was, as a matter of fact to use all interviews conducted , but the necessary change of the research aim made it seem necessary to increase the relative weight

of literature research at the cost of the relative weight of qualitative interviewing within this research. A more detailed reflection on this will be provided in chapter X.

IV. Considerations Part A: Public Urban Greening and Its Attached Values

This fourth chapter contains an elaboration on the values of (P)UGS. As such it provides an answer to research question (2a), which is, by means of repetition, the follow question: "*Which considerations that can be derived from academic literature on public urban greening are relevant for municipalities to take into account when deciding about the integration of public urban greening into the structure of an omgevingsvisie?*" (§1.3). The values of (P)UGS were perceived to be such considerations, because they might serve as the foundation for policy on PUGS. More specifically with regards to ways of integration of PUGS into a municipal *omgevingsvisie*, this means that they might be used as reasons to integrate PUGS in a specific way. The line of reasoning this as actually quite an obvious and commonsensical one: the more municipalities value these values, the more likely they might be to be willing to give the theme public urban green space a prominent and visible position in their *omgevingsvisies*.

In the first paragraph of this chapter, a more general introduction about values of PUGS will be provided. This mainly means that the concepts of instrumental and intrinsic value will be introduced in relation to PUGS. As will be made clear, these values can be values for someone, values to someone, or values which are neither of both. One of the central points to make in this paragraph is, that PUGS aren't instruments to achieve certain ends, like the provision of recreational space via the creation and preservation of PUGS.

In a second paragraph, a categorisation of values of (P)UGS will provided. Some of these values will be explained and illustrated into more detail. For each category of values, sub-categories are given. Various relevant pieces of academic literature will be linked to these sub-categories. The aim was not to provide an exhaustive overview of studies related to the sub-categories but rather to illustrate the meaning of the values in question. The point of this exercise is to provide a possible starting point for integrating discussions about these values into decision-making processes concerning municipal *omgevingsvisies* – and possibly for taking them into account in spatial planning processes in general.

4.1 Instrumental and Intrinsic Values of Public Urban Green Space

As argued in §2.2, a considerable body of academic literature on values connected to these green spaces is currently available (e.g. Baycan-Levent et al., 2009; Chiesura, 2004). Snep and Opdam (2010) choose to distinguish between two broad categories of values, namely "*the intrinsic value of natural assets, (...) and the use value,* [whereby the latter relates to] *the benefit humans experience from urban ecosystems*" (p. 262). Use value can also be labelled as instrumental value (see Bernstein, 2001; cf. Baycan-Levent et al., 2009). According to Bernstein (2001), "*the value of an item is instrumental just in case it serves as an instrument or means toward some end*" (p. 329). A means should be understood as being "*anything that has value because of its relation to an end*" (McShane, 2007, p. 51). In this case, the item concerns (a part of) a public urban green space. The instrumental value of an item may be seen "*as a function of how well or poorly it serves as an instrument for the fulfilment* [*sic*] *of our purposes, goals or desire*" (Bernstein, 2001, p. 329). Items with instrumental values only are, in

principle, replaceable (Bernstein, 2001). With regards to the physical green environment, Costanza et al. (see 1997) refer to these use values as ecosystem services, with which they mean "*the benefits human populations derive, directly or indirectly, from ecosystem functions*".

When it comes to intrinsic values, on the other hand, it is possible to distinguish between two different kinds of intrinsic values: basic, non-derivative intrinsic value and non-basic, derivative intrinsic value (Zimmerman, 2001; see Bernstein, 2001; Thomson, 1992). Thomson (1992) explains this difference by saying that "*very roughly, the derivatively good inherits its goodness, and the non-derivatively [sic] good does not*" (p. 99). A derivative intrinsic value can be said to be a final value (Rønnow-Rasmussen, 2011), and perceiving intrinsic value in this way is known as an ends account of intrinsic value (Bernstein, 2001). From this specific point of view, an item[27] is said to have value for its own sake (e.g. Bernstein, 2001; Rønnow-Rasmussen, 2011; Zimmerman, 2001). Bernstein (2011) says about this that "*understood in this way, intrinsic value is not valued for some other end, although, as an end, it is a value to someone (or something) whose end it is*" (p. 330) [28]. This, in different wordings, means that "*the ends account of intrinsic value tells us that there are certain items valuable to us as ends, that is, for their own sake*" (Bernstein, 2011, p. 331). Moreover, "*the intrinsic properties of an item may allow it to be instrumentally valuable* [to someone or something]" (Bernstein, 2011, pp. 332).

An example of an intrinsic value from an ends account perspective is peoples' appreciation of nature, without it being an appreciation in the sense of nature fulfilling some kind of concrete function in their eyes. Carroll (1993) describes a very profound variant of this appreciation that holds being moved by nature, an approach that he calls the arousal model for nature appreciation. He states the following:

> Appreciating nature or many of us, I submit, often involves being moved or emotionally aroused by nature. We may appreciate nature by opening ourselves to its stimulus, and to being put in a certain emotional state by attending to its aspects (Carroll, 1993, p. 245).

Carroll (1993) presents his arousal model as complementary to, among other models, the appreciation model that has been presented by Carlson (e.g. 1981). Carlson (1981) argues that if people want a deeper appreciation of nature than just the enjoyment of it, it is necessary to know something about aspects of nature and natural objects. He states that "*this means that for significant aesthetic appreciation of nature, something like the knowledge and experience of the naturalist is essential*" (Carlson, 1981, p. 25). Carroll (1993) expresses his concerns about this view in the following way:

> My major worry about Carlson's [(1981)] stance is that it excludes certain very common appreciative responses to nature – responses of a less intellective, more visceral sort, which we might refer to as "being moved by nature". (…) [In nature,] a

---

[27] The term items should be understood in a broad sense, meaning that it also includes living organisms such as human beings (see Bernstein, 2011).
[28] Ribonowicz and Rønnow-Rasmussen (2000) state that the English word sake has the same origins as the German word *Sache*, a word which can, in this context, best be translated into English as meaning a thing (see Cambridge Dictionary, n.d.-e). The *Sache* is, in this case, an end.

sense of repose or homeyness may be aroused in us. Such responses to nature are quite frequent and even sought out by those of us who are not naturalists. They are a matter of being emotionally moved by nature (p. 245).

(…)

This [response] does not require any special scientific knowledge. Perhaps it only requires being human, equipped with the senses we have (…). Nor need the common sense of our culture come into play. (…) This is not to say that all emotional responses to nature are culture-free but only that the pertinent dimensions of some such arousals may be (pp. 250-251).

What Carroll (see 1993) appears to say is that we don't have to know what to appreciate about nature to appreciate it nevertheless, also not for appreciating it in a very profound and emotional way. This is also what Beatley (2011) seems to be hinting at when he writes about the potential of nature to amaze us, stimulate us, and propel us forward. One of the possible explanations for this might be the notion of biophilia, as introduced in §2.2, that holds the existence of an "*innately emotional affiliation of human beings to other living organisms*" (Wilson, 1993, p. 31). The arousal model is important in the context of integrating the theme public urban greening into an *omgevingsvisie*, because it draws attention the idea that not all ways peoples' of appreciation for (urban) nature might have an intellectual basis, which hints at the idea that the reasons behind the importance of nature and its (intrinsic) values to people might not always be (explicitly) expressible.

Next to this, there is a non-derivative account of intrinsic value, which can also be called the inherent property account of intrinsic value (Bernstein, 2011). Bernstein (2011) states that "*understood in this way, intrinsic value is neither for something (there need be no other end it serves) nor to something (there need be no other whose end it is)*" (p. 330). The value of an item is regarded to depend on the object's intrinsic properties only (Kagan, 1998). This view is, as such, not only an opposite of the instrumental value but also of the ends account of intrinsic value (Bernstein, 2011). Moore (2004) argues that an item has intrinsic value of this kind in case it is (still) valuable if it would be the only thing that existed in the world. This thought experiment is called the method of absolute isolation (Moore, 2004).

This latter point of view, and the non-derivative account in general, comes, however, not without problems, at least when it comes to its usefulness in research. Without seeing the properties of an item as valuable to someone or something, it is, for example, impossible to define what makes an item valuable (see Bernstein, 2011), because this immediately brings in a person who defines the importance. This means that, at the moment of defining the intrinsic value of an item, the properties instantly become valuable to the definer. It would also be of no additional value in the process of deciding which elements of public urban greening should be integrated in an *omgevingsvisie* in which way, because the spatial quality of the living environment, of which public urban greening is a constituent, is an indicator of the relationship between space and its human users (Janssen-Jansen, Klijn, & Opdam, 2009).

4.2   Values of Public Urban Green Space Categorised

It is possible to categorise the instrumental and intrinsic values of PUGS. An attempt to so has been carried out by Baycan-Levent et al. (2009; see Baycan-Levent & Nijkamp, 2005). They come up with five different types – or: categories – of values of UGS that contribute to urban spatial quality: (1) ecological values, (2) economic values, (3) social values, (4) planning values and (5) multidimensional values. Each of these categories also has its own sub-categories (Baycan-Levent et al., 2009). On overview of this in tabular presentation of this totality can be found in Figure 18.

Categories of values of UGS	Sub-categories of broader category
Ecological values	- Intrinsic natural value - Genetic diversity value - Life-support value
Economic values	- Market value
Social values	- Recreational value - Aesthetic value - Cultural symbolisation value - Historical value - Character building value - Therapeutic value - Social interaction value - Substitution value
Planning values	- Instrumental/structural value - Synergetic and competitive value
Multidimensional values	- Scientific value - Policy value

Figure 18: Categories of values of UGS, including their sub-categories. Adapted from: Baycan-Levent et al., 2009, pp. 196-200.

Baycan-Levent et al.'s (2009) work is important because it provides an overview of quite wide range of values of UGS, something which is mentioned in the quote at the start of this paragraph. During doing a literature review, it became apparent that it is, in this sense, different from the lion's share of other studies; other studies usually focus on a more limited number of (categories of) values, such as those only related to human health (e.g. Kondo, Fluehr, McKeon, & Branas, 2018), those connected to the issue of (conserving) urban biodiversity (e.g. Dearborn & Kark, 2010), or those related to potential price increases of houses near UGS (e.g. Daams, Sijtsma, & Veneri, 2019).

In the following sub-paragraphs, the value categories and sub-categories provided by Baycan-Levent et al. (2009) will be elaborated in more detail. For each of them goes that examples of relevant literature and the findings reported in it will be provided. Moreover, the in this context relevant results from the analysis of the qualitative interviews will be described.

4.2.1   Ecological Values

There are three sub-categories of ecological values. The first one is intrinsic natural value. This relates to the contribution of the health and functions of ecosystems, for instance when it comes to enabling wildlife to move in space (see Baycan-Levent et al., 2009). Ecosystem health has various different dimensions (Costanza, 1992). It is, "*in its terms, (…) a measure of*

the overall performance of a complex system that is built up from the behavior of its parts"
(Costanza, 1992, p. 241). In §4.1, attention has been payed already to intrinsic values. They
have been defined as values to – and not: for – someone of something (see §4.1). Relevant
here is the concept of ecocentrism, which is "*the broadest term for worldviews that recognize
intrinsic value in all lifeforms and ecosystems themselves, including their abiotic components*"
(Washington, Taylor, Kopnina, Cryer, & Piccolo, 2017, p. 35). Washington et al. (2017) explain
their view of ecocentrism and nature's intrinsic values in the following way:

> We maintain that nature and life on Earth are inherently good. That is to say nature
> has intrinsic value, irrespective of whether humans are the ones valuing it. It is true
> that, as far as we know at present, we humans are the only species that reflects on and
> applies moral values. However, we can also understand that elements of the
> ecosphere have co-evolved to form the wondrous complexity of the web of life – and
> contend that nature has value, whether humans perceive this or not (p. 37).

Taking into account the problems with intrinsic value as value in an item's own right,
intrinsic value should, in the context of this research, be understood as value for an item's
own sake (see §4.1). The item is, in this case, an ecosystem. Therefore, intrinsic values within
the range of this subcategory are those that valuable to the ecosystem and its parts. There is
no need for those values to be also valuable to humans, although humans may also perceive
those values as valuable to them – but not: for them. In essence, this view of intrinsic values is
a theory of intrinsic values that "*frees humanity from its anthropocentric obsession that it is all
about our valuing. It states clearly that nature has intrinsic value, whether or not humans
perceive and acknowledge this*" (Washington et al., 2017, p. 38), and a theory in which it is
assumed that "*values are already there* [in ecosystems]*, discovered not generated by the*
[human] *valuer*" (Rolston, 2002, p. 118).

The second sub-category of ecological values is genetic diversity value. The sub-category
relates to the fact that "*urban green spaces can be a genetic reservoir, while providing richness
indices, genetic difference, genetic habitats for a diversity of urban wildlife (such as birds and
insects) distance, phenotypic trait analysis, biodiversity and preserving a diversity of urban
resources (such as trees and index, keystone processes, health index, plants)*" (Baycan-Levent et
al., 2009, p. 197). Beninde, Veith, and Hochkirch (2015) conducted a meta-analysis that
included data from 75 cities spread over all inhabited continents "*on the importance of
individual habitat variables for determining levels of intra-urban biodiversity*" (Beninde et al.,
2015, p. 582). They state that it is meta-analysis of its kind (Beninde et al., 2015). In figure 19,
an overview of their results is provided for the local landscape factors they included. This
figure shows the effects sizes of these landscape factors on species richness (summary effect
size), the sample size (N), and the p-value (p). All but one of the biotic factors – meaning:
factors concerning vegetation – were found to have a significant positive effect on species
richness, while eight out of ten of the effects are significant[29] ones. There is also a significant
positive effect of the size of a green area on species richness. The same goes for the total
(percentual) proportion of vegetative cover of the total urban area and the presence of
corridors between different green spaces (Beninde et al., 2015).

---

[29] Those effects which are significant have been marked with one or more *-symbols behind the p-
values.
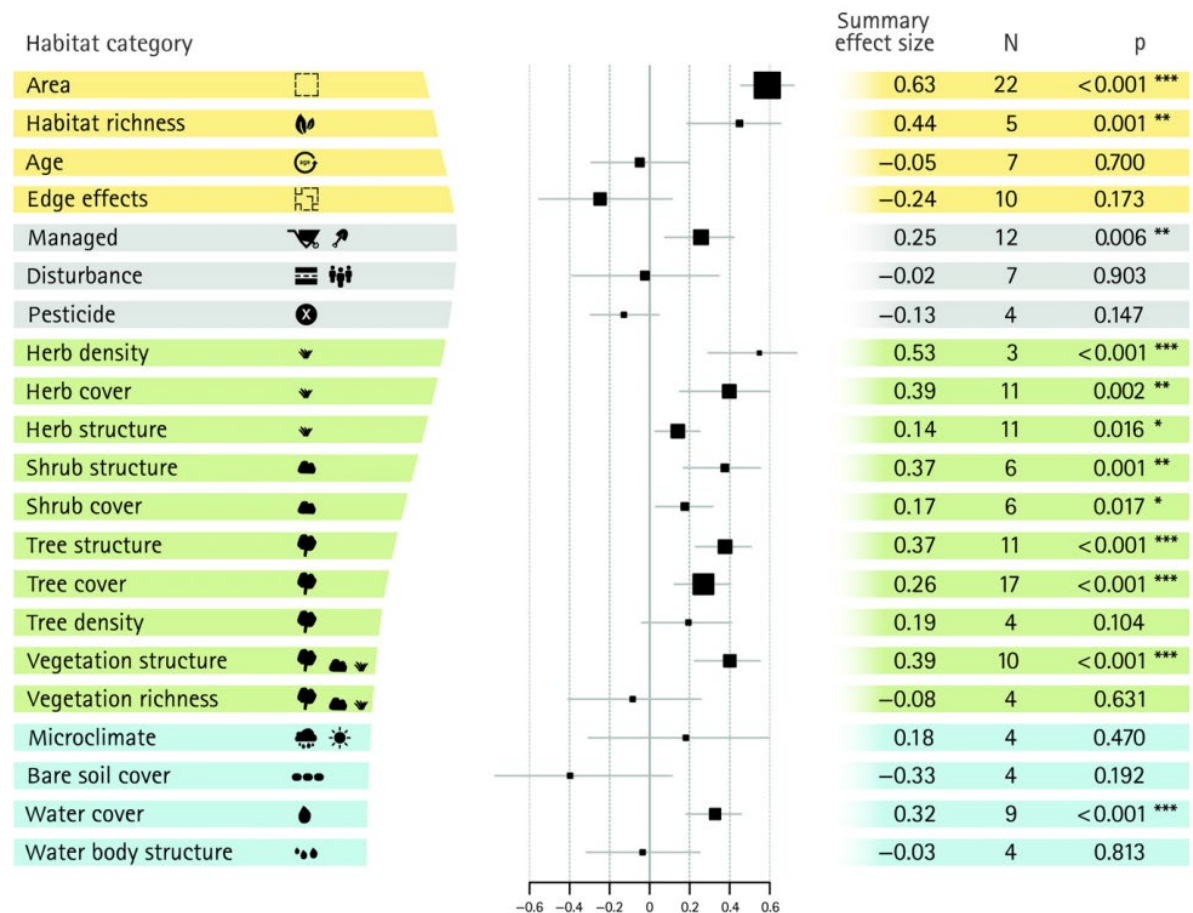
Figure 19: Summary effect sizes of random-effect models for all local factors calculated for species richness; size of square of summary effect corresponds to sample size of model. Orange: design variables; grey: management variables; green: biotic variables; blue: abiotic variables. Reprinted from: Beninde et al., 2015, p. 585.

Finally, the third sub-category of ecological values is life-support value. This sub-category is related to the moderating qualities of UGS regarding the impact of human activities (Baycan-Levent et al., 2009). One of these moderating effects can be observed when it comes to air pollution. According to Mayer (1999), "*emission of air pollutants is caused by different anthropogenic processes which can be categorised into the source groups motor traffic, industry, power plants, trade, and domestic fuel*" (p. 4029), and "*air quality in cities is getting worse as the population, traffc, industrialisation and energy use increase*" (p. 4036). Elmqvist et al. (2015) state that "*urban vegetation is widely reported to improve air quality*" (p. 102). Urban woodlands and trees have a role in mitigating these effects, for instance when it comes to lowering particulate matter (PM_{10}) concentrations (e.g. Beckett, Freer-Smith, & Taylor, 1998). Generally speaking, it can be said that the larger the tree cover in cities, the larger their air pollution removal effect[30] (McDonald et al., 2007; Nowak, Crane, & Stevens, 2006).

One important remark should, however, be made here, namely with regards to that which Vos, Maiheu, Vankerkom, and Janssen (2013) call the green paradox. They did research on

---

[30] Nowak et al. (2006) state that the pollution removal values for pollution will be different for each city. Removal capacity is dependent on "*the amount of tree (…), pollution concentration (…), length of in-leaf season (…), amount of precipitation (…), and other meteorological variables that affect tree transpiration and deposition velocities*" (Nowak et al., 2006, p. 117).

the effect of roadside urban vegetation on local air quality, meaning air quality on a street level. Their conclusion is that presence of roadside urban vegetation, and especially of trees, might lead to significant increases in pollution, especially for traffic-related air pollutants because they are an obstruction to the wind flow that should dilute this pollution (Vos et al., 2013). City-average air quality is, however, expected to be positively influenced by these same elements of roadside urban vegetation (see Tallis, Taylor, Sinnett, & Freer-Smith, 2011; Vos et al., 2013). Vos et al. (2013) conclude the following about this paradox concerning the role of planners:

> There is need for a paradigm shift: rather than asking "How to use urban vegetation to improve local air quality", our results suggest that urban planners and policy makers should better start from the question "How can urban vegetation be used without significantly deteriorating the local air quality" (p. 119).

4.2.2 Economic Values

Baycan-Levent et al. (2009) mention market value as the only sub-category of economic values. Their definition is broad, in the sense that it "*stems from* [all of] *its production and employment functions*" (Baycan-Levent et al., 2009, p. 197). This means that UGS can be used to deliver products, that it might provide new jobs related to its development, maintenance, and governance (Bayan-Levent et al., 2009) , and that "*their presence can create an increase in the economic value of an area that is reflected by hedonic prices and affects the real estate market*" (Bayan-Levent et al., 2009, p. 197).

Various studies addressing the increase of the economic value of an area due to the presence of UGS are available. Daams et al. (2019) show that there is a positive price effect of attractive urban green space on housing prices in the Dutch city of Amsterdam. A positive price effect – meaning: an increase in housing prices – between 7.1% and 9.3% has been found for houses within 0.25 km distance of attractive urban green space. For houses within 0.75 km to 1 km distance, this price increase is appeared to be 1.7% to 2.3%. No significant price effects were found for houses outside of the range of 1 km (Daams et al., 2019). Daams et al.'s (2019) results indicate that there is a distance decay in the positive price effect.

Daams et al. (2019) are not the only ones finding price increases due to the presence of UGS. Czembrowski and Kronenberg (2016) found only a significant positive price effect for the presence of large parks – and not for small and medium-sized ones – on housing prices in the Polish city of Lodz. On the basis of their observations, the conclude, however, that they "*can assume that "greenery sells" in more general terms*" (Czembrowski and Kronenberg, 2016, p. 17). Similar effects have been observed in the Danish city of Aalborg (Panduro & Veie, 2013), the Dutch city of Apeldoorn (Luttik, 2000), the Chinese city of Shenzhen (Wu, Wang, Li, Peng, & Huang, 2015), and the Czech city of Prague (Melinchar & Kaprová, 2013). A comparison of all of these studies might lead to the conclusion that the exact price effects are not easily expressible in general terms, and that it, (also) in this respect, might be important to differentiate between different kinds of UGS. Generally speaking, however, there seems to be a price effect on housing prices, at least for certain types of urban green space.

4.2.3 Social Values

As shown in figure 18, Baycan-Levent et al. (2009) distinguish eight sub-categories of social values. Due to this relatively large number of sub-categories, an elaboration on all of these values would be to extensive for this thesis. Therefore, all eights sub-categories will be introduced briefly in tabular form (Figure 20), after which the sub-category therapeutic value will be explained in further detail. This specific sub-category has been chosen to elaborate further because of the fact that a relatively large body of literature is dedicated to it, but also because therapeutic value concerns that which is probably very precious to many people, namely their physical and mental health.

Sub-category	Description
Recreational value	Valuing urban green spaces for their sports and sightseeing possibilities
Aesthetic value	Valuing aesthetic qualities of urban green spaces that contribute to quality of life
Cultural symbolization value	Symbolising national and local self-images and aspirations, stimulation of local cultural moods and a sense of belonging and identity, and enhancing cultural life by providing venues for festivals, celebrations, and performances
Historical value	Provision of natural and cultural values for current generations and preservation of local natural and cultural heritage for future generations
Character building value	Using UGS for purposes of personal development though their
Therapeutic value	Provision of a 'niche' that meets peoples' psychosomatic needs
Social interaction value	Provision of opportunities for all different kinds of people to interact
Substitution value	UGS as providers of alternatives for shortcomings in other fields (e.g. providing opportunities for flat-dwellers to be outside)

Figure 20: The eight sub-categories of ecological values. Adapted from: Baycan-Levent, 2009, pp. 197-199.

Concerning the therapeutic value of UGS, the WHO Regional Office for Europe (WHO/Europe, 2016) argues that "*the mechanisms underlying links between green space access and health are likely to be complex and interacting. Access to green space may produce health benefits through various pathways (…), some of which may have a synergistic effect*" (p. 3). Various authors have addressed these pathways. Hartig et al. (2014) identify four of them that, according to them, have received relatively much attention in academic literature: (1) air quality, (2) physical activity, (3) social cohesion, and (4) stress reduction (cf. Lachowycz & Jones, 2013; Villanueva et al., 2015; Kuo, 2015). They state the following about these four pathways:

> The pathways emphasize different aspects of nature, as physical environment, as setting for (individual and social) behavior, and as experience. Contact with nature involves all these aspects, so multiple pathways are likely to be engaged simultaneously and affect one another (Hartig et al., 2014, p. 212).

The figure below (Figure 21) shows "*the different pathways and possibilities for effect modification by individual or contextual variables*" (Hartig et al., 2014, p. 212):
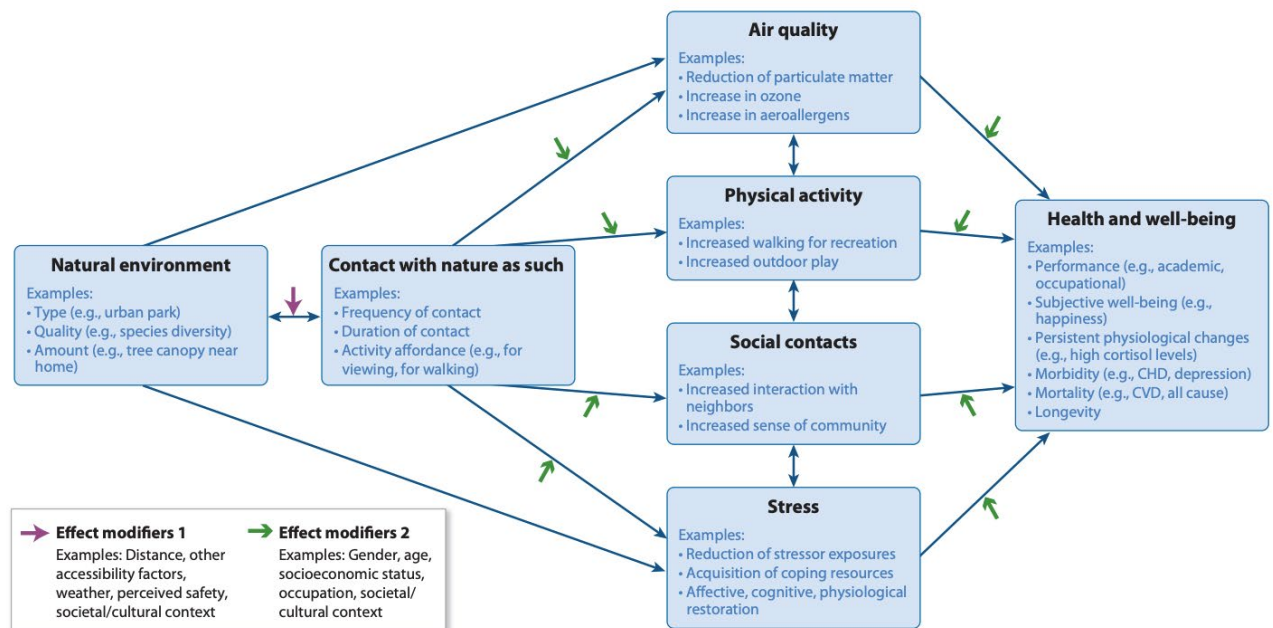
Figure 21: Pathways through which the natural environment, including urban nature, might affect health of large segments of the population. Four pathways go through contact with nature, while air quality and stress might also affect health without the presence of conscious engagement with nature. The green and purple arrows represent effect modifiers. Reprinted from: Hartig et al., 2014, p. 213).

The effects of the natural environment on human health and well-being apply both for nature of non-human origin and urban nature (see Hartig et al., 2014). Moreover, the pathways through which the natural environment affect human health (see Figure 21) intertwine (Hartig et al., 2014). This can, for example, be an intertwining of the pathways of physical activity and stress reduction, as Thomson Coon et al. (see 2011) show. On the basis of a systematic literature review of academic literature on the effects of indoor physical activity versus outdoor physical activity in natural environments on mental and physical health, they conclude that "*compared with exercising indoors, exercising in natural environments was associated with greater feelings of revitalization and positive engagement, decreases in tension, confusion, anger, and depression, and increased energy*" (Thompson Coon et al., 2011, p. 1761), and that "*some promising effects on self-reported mental wellbeing immediately following exercise in nature (…) are not seen following the same exercise indoors*" (Thompson Coon et al., 2011, p. 1761). The fact that these pathways appear to be intertwined also indicates that social values might, at lease to some degree, be seen as intertwined, because, in the case of the example of such intertwinement provided here, therapeutic value is dependent on the provision of recreational value, i.e. UGS providing the possibility to engage in physical activity in those spaces.

Kondo et al. (2018) conducted a systematic literature review of studies that specifically focused on the effects of UGS on human health. They argue that while there are many reviews focusing on the impact of exposure to the natural environment on human health, very few of them focused on the exposure to UGS in particular. The studies they included in their review address the effect of exposure to UGS on all kinds of health issues – or: health outcome

measures –, such as depression, hypertension and blood pressure in general, and attention (capacities) (Kondo et al., 2018). On the basis of their review, they conclude the following:

> Findings in all health outcome categories were mixed. However, we found consistent negative association between urban green space exposure and mortality (all cause, cardiovascular and respiratory), measurements of heart rate (short-term), and violence, and positive association between urban green space exposure and attention and mood.
>
> (…)
>
> In most cases, it is not possible to observe patterns of findings of association between urban green space exposure and health outcomes. The number of studies is too low to make generalizations about birth outcomes, blood pressure, heart rate variability, cancer, diabetes, or respiratory symptoms. Results were mixed, or no association was found in general, in studies of urban green space exposure and general health, depression, and stress (via cortisol concentration) (Kondo et al., 2018, pp. 21-22).

Hartig et al. (see 2014) seem to agree with Kondo et al. (2018, p. 22) that more research might be needed do make definitive conclusions. They conclude the following:

> Evidence suggests that contact with nature has a small effect on health and well-being in comparison to structural characteristics such as income, employment, or education, and behavioral characteristics such as smoking. (…) A small beneficial effect on a large number of people is [however] a large contribution to population health.
>
> (…)
>
> The evidence for some benefits, such as short-term restorative effects, is already quite strong. That said, nature contact should not be assumed always and automatically to be good for health; we have more to learn about for whom, when, how, and in which contexts it offers benefits (pp. 221-222).

Although Kondo et al. (2018) argue that the evidence for some effects is not (fully) unambiguous, results of individual studies might be seen as promising, for instance regarding the effects on depression and other psychological conditions. Beyer et al. (2014), for instance, found that more neighbourhood green space was associated with lowers levels of depression, anxiety, and stress, with the largest effect on depression symptoms. Maas et al. (2009) also found effects on depression and anxiety symptoms, and they argue that the "*strong relation* (…) *found, particularly for anxiety disorder and depression, suggests that mental health in particular might be affected by the amount of local green space*" (Maas et al., 2009, p. 971). They explicitly state, however, that the effect found are correlations and not causations. The positive health might be caused by direct stress and fatigue recovery mechanisms and by other mechanisms of green spaces that affect human health, but they might as well (also) be related to mechanisms such as physical activity (Maas et al., 2009). Park proximity has, however, been linked to physical activity in many studies (Wolch, Byrne, & Newell, 2013),

indicating that though enabling people to engage in physical activity, urban parks (also) indirectly promote human health.

Planning Values

Planning values as a category of values of UGS has two different sub-categories: instrumental/structural value and synergetic and competitive value (Baycan-Levent et al., 2009). To avoid that one confuses this with the term instrumental value, as opposed to intrinsic value, only the term structural value will be used in the remains of this thesis to describe the former sub-category. Structural value refers to the fact that UGS are part of the urban landscape structure, and that they can be valuable as instruments in urban planning process (Baycan-Levent et al., 2009). The structural value of UGS can become apparent in various ways.

An example in which structural value of UGS becomes apparent is related to the influence of urban greening on a city's microclimate. This influence encompasses, among other things, the following functions of urban greening: "*providing shade, reducing air temperature, reducing heat island effects, modifying microclimate, reducing wind speed followed by reducing solar radiation, relative humidity, glare and reflection*" (Roy, Byrne, & Pickering., 2009, p. 358). In the face of climate change, the Intergovernmental Panel on Climate Change (IPCC; 2014) warns for the "*increasing frequency and intensity of extreme heat, including urban heat island effect*" (p. 59). It also proposes a role for "*urban planning to reduce heat islands*" (IPCC, 2014, p. 77). The heat island effect is, in other words, very much of a present-day issue to address. Oke (1995) explains the meaning of the urban heat island effect as follows:

> An urban heat island (UHI) is simply the characteristic warmth of a town or city. It is almost ubiquitous, in the sense that it is found in cities of all climatic regions. It is due to human modifications of the surface and atmospheric properties which accompany urban development and is probably the best example of inadvertent climate change. (…) The heat island effect is (…) defined on the basis of temperature differences between urban and rural regions (p. 81).

Kleerekoper, Van Esch, and Salcedo (2012, p. 30) list seven different causes of the urban heat island effect, for instance a lower evaporation in urban areas compared to non-urban areas due to the use of more hard surfaces that 'seal' the ground and, simultaneously, the use of less vegetation. They argue that "*vegetation cools the environment actively by evaporation and transpiration (evapotranspiration) and passively by shading surfaces that otherwise would have absorbed short-wave radiation*" (Kleerekoper et al., 2012, p. 31). Therefore, they have the potential to create a Park Cool Island (PCI; Kleerekoper et al., 2012). The cooling effect of vegetation is, for example, reported by Shashua-Bar and Hoffman (2000) and Feyisa, Dons, and Meilby (2014). Findings that this cooling effect can have a range of more than 1 km from a park is not exceptional (e.g. Upmanis, Eliasson, & Lindqvist; Jáuregui, 1990; Ca, Asaeda, Fujino, & Murakami, 1995).

On the basis of their meta-analysis on the cooling effect of UGS, Bowler, Buyung-Ali, Knight, and Pullin (2010) conclude that the average temperature reduction during daytime due to the presence of urban parks is 0.94 °C (see Figure 22). They conclude that "*there is evidence*

that air temperature beneath both individual trees (...) and clusters of trees (...) are lower than temperatures in an open area, at least during the day" (Bowler et al., 2010, p. 152), which indicates that not only parks but also individual trees might be able to provide cooling effects. The cooling effects is, moreover, not exclusively caused by trees but also be other types of vegetation (Bowler et al., 2010). They warn, however, that "*further empirical research is necessary in order to efficiently guide the design and planning of urban green space, and specifically to investigate the importance of the abundance, distribution and type of greening*" (Bowler et al., 2010, p. 147).
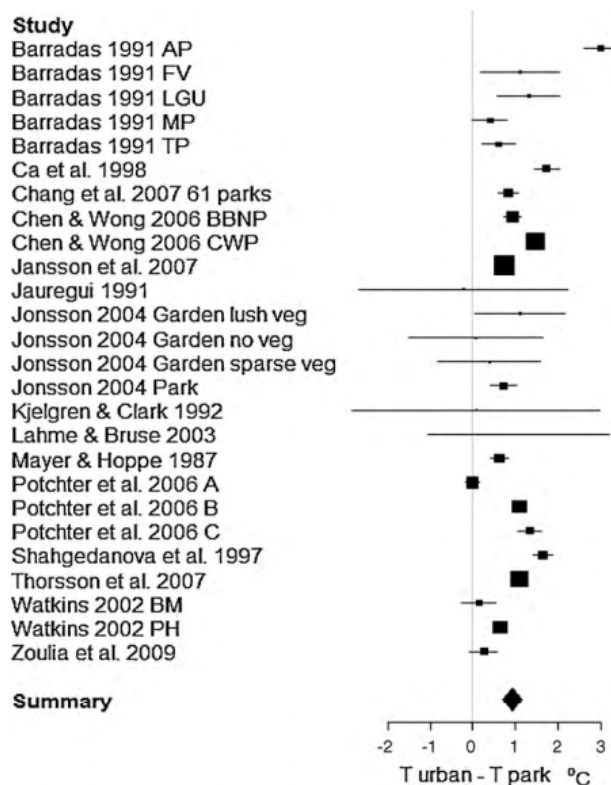
Figure 22: The 26 average effect sizes (squares), spread over 16 different studies, that have been used by Bowler et al. (2010) to calculate a weighted average effect size of 0.94 °C (under "Summary"). The effect sizes express the differences in temperature between the built-up, urban area and the park area in an urban context ($T_{urban} - T_{park}$ °C). Reprinted from: Bowler et al., 2010, p. 152.

The second sub-category of planning values is synergetic and competitive value. Baycan-Levent et al. (2009) summarise what this sub-category is about as follows:

> This value of urban green spaces is related to their quality. The competitive value quality of green spaces helps to define the identity of towns and cities, which can enhance their attractiveness for living, working, investment and tourism. Therefore, urban green spaces can create a synergy among different types of land use, their presence can create an increase in the economic value of an area, and they can also contribute positively to the competitiveness of cities.

Competitiveness can be understood as "*the ability of an economy to attract and maintain firms with stable or rising market shares in an activity while maintaining stable or increasing standards of living for those who participate in it*" (Storper, 1997, p. 20). Arvanitidis, Lalenis, Petrakos, and Psycharis (2009) argue that the role of UGS in local economic development is

widely recognised in academic literature. On the basis of their own statistical analyses, they conclude that their findings support the idea that urban greening leads contributes to the economic development of cities. Additional urban green space appears to promote economic development, although there are diminishing returns on investment (Arvanitidis et al., 2009). Wolf (2003) provides a concrete example of the sub-category of synergetic and competitive value. In her research, she shows that "*business districts having trees were characterized as being higher in visual quality and comfort, as providing more positive interaction with merchants, as having higher-quality products, and generally appearing to be better maintained and kept up*" (Wolf, 2003, p. 123). Respondents also claimed that they were willing to travel for longer and for longer distances, but also to visit inner-city local business districts more often and for a longer amount of time. In the end, urban tree canopy might have the potential to have a positive influence on retailers' business revenues in the districts in question (Wolf, 2003).

Multidimensional values, the fifth value category distinguished by Baycan-Levent et al. (2009), will not be discussed in further detail. Briefly said, its subcategories are scientific value and policy value. Scientific value concerns UGS functioning as "*a laboratory for the pursuit of science*" (Baycan-Levent et al., 2009, p. 199). Policy value relates to public authorities' budgets allocated to, and to their actual expenditures on green spaces, but also to the revenues which these authorities might receive, for instance in the form of entrance fees payed by visitors or tourism taxes (Baycan-Levent et al., 2009). Because both of these sub-categories were perceived to be not directly relevant in relation to urban quality of life and fulfilling general needs of society as a whole, two factors which are at the core of the function of an *omgevingsvisie* (see art. 1.3 Ow), they are not elaborated any further. So-called urban green space disservices (e.g. Escobedo, Kroeger, & Wagner, 2011; Lyytimäki & Sipilä, 2009; Nowak & Dwyer, 2007; Zhang, Ricketts, Kremen, Carney, & Swinton, 2007), meaning "*impacts or costs that negatively affect human well-being*" (Roy et al., 2009, p. 353), and paradoxical effects such as gentrification of areas, and, consequentially to possible displacement of lower-income households (Wolch et al., 2014) are recognised and considered to be important to take into account in decision-making processes. For this thesis, however, they were not elaborated any further, since this would extend its scope too much.

V.   Considerations Part B: Strategic Spatial Planning and Envisioning

In this chapter, an answer will be provided to the following research question: "*Which considerations that can be derived from academic literature on strategic spatial planning and envisioning are relevant for municipalities to take into account when deciding about the integration of public urban greening into the structure of an omgevingsvisie?*" (sub-question (2b), §1.3). Although there might be countless ways to approach this question, the choice has been made to focus on two issues, namely the different meanings of the term strategy and the so-called spirit of the *Omgevingswet* (see also §2.1.2).

As explained in §1.1 and §2.1.2, the *omgevingsvisie* is an instrument that should contain strategic spatial policy. Therefore, it is important to know what the meaning of the word strategy is. In the first paragraph of this chapter, attention will be paid to the multiple meanings of this term. The point of this is to bring about that what makes an *omgevingsvisie* a strategic vision is not something which speaks for itself; there are multiple possible ways to make an *omgevingsvisie* an instrument of strategic spatial planning. The conscious and/or unconscious choice for a specific interpretation of the word strategy, or for a specific combination of a couple of interpretations, might have choices for the contents of an *omgevingsvisie*. If an *omgevingsvisie* is, for instance, seen as an instrument for containing orienting goals (see Healey, 2007), this has possible consequences for how it is eventually going to look like. Given the nature of this kind of interpretation of strategy, it might be likely that an *omgevingsvisie* will especially contain textual descriptions of goals (see Healey, 2007).

After introducing the multiple meanings of the term strategy, a more thorough explanation than the one that has already been given in §2.1.2. It is important to grasp this spirit of the law because it is decisive for how an *omgevingsvisie* should be given policy content. To an important degree, this spirit of the law is described in the *Omgevingswet* itself, in one single law article to be precise: art. 1.3 Ow, the article containing the two societal objectives. As will be shown in §5.2, the relationship between these possibly seemingly contradicting societal objectives is complex (see Kamerstukken II, 2013/14). A link with the values of PUGS (see Chapter IV) will also be made.

5.1   Strategy and Its Multiple Meanings

Although the term strategy (in strategic spatial planning) might seem self-evident for many spatial planners and others considered with spatial policy, the term might be a more complex one than one would possibly expect initially. This becomes apparent in Healey's (2007, p. 180) differentiation between four different meanings of the term strategy (see Figure 23), whereby she differentiates between strategy as physical structure, strategy as orienting goals, strategy as a framework of principles, and strategy as an inspirational vision.

Strategy as…	Underpinned by…	Expressed through…
Physical structure	Morphological analysis	Plans as maps and designs
Orienting goals	Socio-spatial analysis to identify threats to goals	Policy statements about programmes of action to achieve goals
A framework of principles	Systematic technical and interactive search procedures to reduce uncertainty	Framing concepts, projects and programmes; policy criteria
An inspirational vision	Interactive processes to imagine futures and mobilise attention	Metaphors, storylines and manifestos

Figure 23: Healey's (2007) differentiations between four different meanings of the term strategy. Adapted from: Healey, 2007, p. 180.

Strategy as physical structure refers to the structuring of spatial patterns. In the Dutch context, this interpretation of strategy is visible in the former instrument of the *structuurplan*[31] (Healey, 2007; see §2.1.1 & §2.1.2). This means that structures are imagined in a comparable way as structures of buildings. Urban areas were perceived to have structures, offering a framework that should be given content by making detailed area-development schemes and concrete building projects (Burtenshaw, Bateman, & Ashworth, 1991, Hall, 1998, & Webber, 1964, in Healey, 2007).

A second way of interpreting strategy is seeing it as orienting goals (Healey, 2007). Mintzberg (1994) calls this view on strategy a calculating style of management. He makes a distinction between planning and strategic thinking (Mintzberg, 1994). Planning, in his view, involves analysis, meaning "*breaking down a goal or set of intentions into steps, formalizing those steps so that they can be implemented almost automatically, and articulating the anticipated consequences and results of each step*" (Mintzberg, 1994, p. 108). It means a fixation on a destination and a calculation of what should be done in order to arrive at the preferred destination – which is to say: to arrive at the goals set initially (see Mintzberg, 1994)[32].

The question is whether strategy as orienting goals is applicable to the *omgevingsvisie*, at least in the way it is explained by Healey (2007) and Mintzberg (1994). As argued in §2.3, the *omgevingsvisie* was intended to be an instrument for laying down strategic policy that doesn't change all the time due to external factors. It was also explained that the instruments to be used for the actual realisation of policy (goals) laid down in an *omgevingsvisie*, such as the *programma*, were intended by the lawmaker to provide flexibility with respect to how to reach these policy goals (see §2.3; Kamerstukken II, 2013/14). Strategic policy in *omgevingsvisies* was, to use other words, intended to be largely rigid, while implementation by means of other instruments was supposed to provide flexibility in how to reach these goals, as long as the implementation wouldn't do violence this strategic policy (see Kamerstukken II, 2013/14). Out of this follows that goals shouldn't be formulated in such a way that they don't provide flexibility when it comes to their realisation; goals should leave

---

[31] Municipal structure plan (Van der Cammen, De klerk, Dekker, & Witsen, 2012).
[32] Mintzberg (see 1994) also expresses that he sees objections to this view.

room for interpretation. They might, however, be formulated in a textual form, while leaving more room for interpretation at the same time. Because of this, meaning of strategy as orienting goals might, in relation to the *omgevingsvisie*, be somewhat different from how it has been defined by Healey (2007) and Mintzberg (1994).

That policies formulated in *omgevingsvisies* usually leave room for interpretation can, for instance, be concluded on the basis of what Tim van Wanroij, process manager at the planning department of municipality of Maastricht and project leader for the development of the municipal *omgevingsvisie* of Maastricht, states about the *omgevingsvisie* of the municipality of Maastricht:

> With a strategical vision, we actually mean that it is a coat rack document for everything related to the development, use, and spatial design. (…) It is the starting point where all other policy documents and assessment frameworks which are in some way related to the physical living environment should be derived from. (…) The law [*Omgevingswet*] (…) leaves much room for interpretation and customisation. (…) If I speak for myself, I always say that we should reach some kind of intermediate level [between two 'extreme' levels of detail]. This means that you (…) don't stop at saying "we want to be a sustainable, green city", and that we [only] write that down, but we also don't determine which kind of tree to plant at street level. (…) In between this, we made many area-specific statements about for which area we would like to see which character, which atmosphere, which quality of the physical living environment (T. van Wanroij, personal communication, May 12, 2020).

A third way of interpreting strategy is by seeing it as a framework of principles (Healey, 2007). According to Van Gorp (2001), a frame is usually understood as being an "*organizing principle that transforms fragmentary information into a structured and meaningful whole*" (Van Gorp, 2001, p. 5, quoted in Fischer, 2003, p. 144). Schön and Rein (2004) argue that public policy supports on frames, supplying public policies with structures of beliefs, perception, and appreciation. In the context of urban strategy-making, Healey (2007) states the following about framing in spatial strategy-making:

> [Framing in spatial strategy-making comprises] generating framing ideas and organising concepts through which an urban region is 'summoned up' to become 'visible' in a governance context. It involves 'framing' and 'naming' the phenomena of an urban 'region' (…), converting a fluid and dynamic complex of diverse relations into some kind of conceptual entity. Such a frame, or way of 'seeing', is inevitably a simplified and selective viewpoint. But if sufficient actors buy into the frame and the discourses it generates, then the frame accumulates the power to flow from the institutional site of its formation to other arenas and practices and to generate consequences in its turn (p. 25).

In the quoted fragment, Healey (2007) describes a frame of an urban region as a kind of conceptual entity, a way of seeing an urban region. As such, a concrete *omgevingsvisie* might be seen as a frame, as Albrechts (see 2010) makes clear:

> Visions or frames of reference are not just `out there', waiting to be discovered. On the contrary, we have to construct them. This is not a linear, but rather a dialectic (back-casting and forecasting) process. Envisioning is the process by which individuals – or preferably groups – develop visions of future states for themselves, their organisation, their city, or their region that are sufficiently clear and powerful (p. 1122).

The quote above fits within Albrechts's (2004) definition of strategic spatial planning that has already been provided in §2.3, namely the following: "*Strategic spatial planning is a public-sector-led (…) socio-spatial* [*sic*] *(…) process through which a vision, actions, and means for implementation are produced that shape and frame what a place is and may become*" (p. 747). Out of this definition, and out of what has been said so far about strategy as a framework of principles – which means: as a framing 'device' –, follows that an *omgevingsvisie* is a 'device' for providing a vision on what a municipality is and what it want to be in the future. Municipalities might want to be aware of the power such a frame has. This has to do with the fact that frames, as structures of beliefs, perception, and appreciation (Schön & Rein, 2004) might both enable and constrain its own behaviour, meaning they are structuring structures (see Giddens, 1984)[33].

Closely related to strategy as a framework of principles is a fourth interpretation of strategy, namely strategy as an inspirational vision (see Healey, 2007). What Healey (see 2007) means with this remains relatively unclear throughout her book, but she at least seems to refer to imagining urban futures which are expressed through metaphors, storylines and manifestos (Healey, 2007). This view on strategy is closely linked to that of strategy as framework, because imagining urban features is also an exercise of framing what a city might or should become in the future. As examples of cities of imagination, Healey (2007) mentions Ebenezer Howard's Garden Cities of To-Morrow and Le Corbusier's *Cite Radieuse*. A more recent example is China's Sponge City Construction initiative (see e.g. Jia, Wang, Zhen, Clar, & Yu, 2017; Liu, Jia, & Niu, 2017).

5.2   The Spirit of the *Omgevingswet*

It has already been explained in §2.3 and §5.1 that the objectives an *omgevingsvisie* contains should be implemented though the utilisation of other instruments, just as already has been mentioned that an *omgevingsvisie* should offer continuity and certainty (see §2.3 & §5.1; Kamerstukken II, 2013/14). This makes it questionable whether or not it is desirable that municipalities envision utopian futures. Utopian thinking concerns "*the capacity to imagine a future that departs significantly from what we know to be a general condition in the present*" (Friedmann, 2000, p. 462). Gunder and Hillier (2007) argue – or even: warn – that "*utopias are unachievable ideal objects that stimulate and tease us with their desirability, yet seldom if ever, materially or otherwise, successfully deliver*" (p. 472).

Central to the question of which kinds of futures municipalities may imagine in their *omgevingsvisies* is the issue of the spirit of the *Omgevingswet*, an issue that has already been

---

[33] The idea of structures as both enabling and constricting for human actions and social systems has been derived from Giddens's (1984) structuration theory.

mentioned in §2.1.2. Van der Schoot et al. (2017) argue that this spirit the law concerns the intentions behind the introduction of the act, the philosophy on which the act is based, to be found in the documents compiled around parliamentary discussions about the act. The question is what the relationship between the spirit of the *Omgevingswet* and the ways of integration of elements of public urban green space is. Central to this question is the relationship between the two societal objectives, which are, by means of repetition, described as follows:

> With a view to ensuring sustainable development, the habitability of the country and the protection and improvement of the living environment, this Act aims to achieve the following interrelated objectives:
> a. to achieve and maintain a safe and healthy physical environment and good environmental quality, and
> b. to effectively manage, use and develop the physical environment in order to perform societal needs (Ministry of Infrastructure and the Environment, 2017a, pp. 2-3).

The explanation behind these societal objectives in the explanatory memorandum accompanying the *Omgevingswet* (Kamerstukken II, 2013/14), one of the documents that expresses the spirit of the law in case of the *Omgevingswet* (Van der Schoot et al., 2017), holds that the *Omgevingswet*, and, therefore, also an *omgevingsvisie*, should contribute to both strengthening the economy and the quality of the physical living environment. It should leave room for private and public initiatives, while, at the same time, a safe healthy, and pleasant-to-live-in living environment are at the heart of what is to be accomplished. The lawmaker intends to achieve a better balance between both societal objectives. This should be accomplished by offering the possibility for weighing both objectives against one another on the level of specific areas on the one hand and by improving the quality of the living environment in case it isn't of a sufficient level. The lawmaker argues that, to make this possible, individual interest, like those considering nature and environment, should remain visible (Kamerstukken II, 2013/14).

This is where the values of (P)UGS (see Chapter IV) come into play. By making these values visible and explicit during the decision-making process on the contents of an *omgevingsvisie*, decision-makers, for instance those at municipalities, have the possibility to explicitly weigh these values against economic stakes, although it has already been shown that these don't necessarily collide (see Chapter 4; see e.g. Baycan-Levent et al., 2009). Having done so enables municipalities to explicate the results of this weighing exercise in their *omgevingsvisies*. Costanza (2000) gives a description of what this might mean for the nature of a vision on an urban future: "*The most critical task facing humanity today is the creation of a shared vision of a sustainable and desirable society, one that can provide permanent prosperity within the biophysical constraints of the real world in a way*" (p. 2).

It might be the case that the results of weighing exercise described in the former part don't have to be visible in every single part of an *omgevingsvisie*, as Marlies Spreen, a landscape architect working for the municipality of Deventer, makes clear. When it comes to formulating (general) ambitions in an *omgevingsvisie*, she states the following:

You want to be a municipality in which developments constantly take place, also economic ones. You want to be a city in which people find it pleasant to live and work, and in which the business climate is attractive. Next to this, you also want good accessibility. In all those qualities together, there is an integrality, because you want all of them to be applicable to you" (M. Spreen & E. Tutert, personal communication, May 18, 2020).

Spreen stresses that it is only in later stages that a municipality starts to decide for which specific place which ambition is most important (M. Spreen & E. Tutert, personal communication, May 18, 2020), which is, for instance, done in the development directions chapter in which preferred development directions for the sub-areas of the municipality have been laid down. Her statement not to be in conflict the lawmaker's intentions behind the *omgevingsvisie*. Since the two societal objectives are objectives of the *Omgevingswet* (see art. 1.3 Ow), they necessarily also apply to the *omgevingsvisie*. Because municipalities are, however, obliged to attain both societal as much as possible (see Kamerstukken II, 2013/14, pp. 393-394), it makes sense to initially state that the (initially formulated) ambitions are to reach all kind of objectives perfectly, although municipalities might also choose to already internalise the results of the weighing exercise in the formulation of general ambitions.

In an elaboration on art. 1.3 Ow, the article containing the two societal objectives, that is part of the explanatory memorandum accompanying the *Omgevingswet*, the lawmaker gives a more detailed explanation of the relation between both objectives (Kamerstukken II, 2013/14). The part "*with a view to ensuring sustainable development*" (Ministry of Infrastructure and the Environment, 2017a, p. 2) is explained by giving a definition of sustainable development that is synonymous to the one used in the *Brundtland Report* (*Our Common Future*; Kamerstukken II, 2013/14; see Annex art. 1.1 Ow, in Ow), holding that "*sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs*" (World Commission on Environment and Development [WCED], 1987, p. 43). It is also explicitly stated that, on the basis of art. 1.3, no conclusions can be made about the importance of specific interests in relation to one another, and, moreover, the individual societal objectives are not standing in each other's way. This means that that activities that (mainly) contribute to societal objective (b.), such as developing a road, are not necessarily hindered because of the existence of societal objective (a.). Essential is, however, that the *Omgevingswet* obliges to search for solutions that meet both societal objectives as much as possible. If this isn't possible, interests should be weighed against one another (Kamerstukken II, 2013/14).

Another aspect of the spirit of the *Omgevingswet* is the fact municipalities are obliged to take into account policies of other administrative authorities, as can be read in art. 2.2 Ow: "*when performing its duties and exercising its powers by virtue of this Act* [(*Omgevingswet*)]*, an administrative body shall take account of the duties and powers of other administrative bodies*" (Ministry of Infrastructure and the Environment, 2017a, p. 4). This is because they are part of the larger context within which municipalities construct their *omgevingsvisies*. The obligation to take spatial policies of other administrative authorities into account also follows out of the obligation for authorities to collect the necessary information for making policy and to properly substantiate the decisions made (Kamerstukken II, 2013/14), which follows out of

the principles of sound administration, laid down in the *Algemene wet bestuursrecht* (Kamerstukken II, 2013/14; see Awb).

Important to understand in this respect is that there is no plan hierarchy in the Netherlands, meaning that, in this case, the *omgevingsvisie* of one administrative authority doesn't have legal effects on that of another. This has to do with both the already mentioned principle of separation of policy and normative standards and the state-structure that has been laid down in the Constitution (Kamerstukken II, 2013/14); according to the Constitution, there is no difference in democratic legitimacy national, provincial, and municipal (Kamerstukken II, 2013/14; see GW [*Grondwet*]).

VI. Ways of Integration: Embedding Visions on Public Urban Green Spaces in the Structure of an *Omgevingsvisie*

This sixth chapter provides an answer the research sub-question (1d), which has been formulated as follows: "*Which ways of integrating elements of public urban greening into the structure of an omgevingsvisie can be recognised in already existing omgevingsvisies of urban municipalities in the Netherlands?*" (§1.3). The results presented here are the result of the policy document analysis process that has been described in §3.5. For all six individual *omgevingsvisies* analysed, an overview of the ways of integration of elements of public urban green space into the structure of these vision documents has been created (see Annex VII). These six individual overviews have been translated an integrated into one overview, that will be presented here. A couple of remarks should be made before the actual presentation of the overview.

Firstly, it is important to understand what the exact relationship between the values of UGS and considerations regarding strategic spatial planning and envisioning on the one hand and (possible) ways of integration on the other is. For the values of UGS goes that the ways of integration should be considered as vehicles to express to which extent certain values are appreciated by municipalities. If, for instance, the planning values in the form of structural values are highly valued, for example by valuing the temperature-reducing effect of UGS (see §4.2.4), specific ways of integration can serve as means to express this, such as the a map displaying the urban heat island effect combined with descriptions about how UGS may play a role in fighting this effect (see e.g. Gemeente Nijmegen, 2020).

Secondly, possible ways of integration sometimes go together. Whether they do so is something which follows out of nothing more than common sense. If, for example, a map of a strategy would be made, the map is, for what it displays, dependent on the description of that strategy in plain text – and if there is no description, this might be problematic, given the fact that the *Omgevingswet* literally holds that an *omgevingsvisie* must describe the elements given in art. 3.2 Ow. Lastly, pictures without an accompanying text have not been included, because it's not clear what their exact function is. They could just as well be serving as a means for increasing the aesthetic quality of a vision, without necessarily presenting a vision on the desired future of a city.

With this being said, the overview of possible ways of integration will be presented in figure 24. Thereafter, some concrete examples derived from the *omgevingsvisies* that have been analysed will be provided.

PUGS possibly to be integrated in...	More specifically expressed through e.g....
Preface	▪ Plain text
Summary	▪ Plain text
Description of current state/situation	▪ Plain text ▪ Maps
Description of contents existing policy	▪ Plain text
Description of trends and developments	▪ Plain text
Spatial frameworks	▪ Plain text ▪ Maps
Area profiles (excluding area profile green space)	▪ Plain text ▪ Maps
Area profile green space	▪ Plain text ▪ Maps
Description of ambitions, missions, sub-missions, and goals	▪ Plain text
Definition of themes for future policy	▪ Plain text
Development directions	▪ Plain text ▪ Maps ▪ Images ▪ Tables
Development principles/point of departure for developments	▪ Plain text
Realisation strategy	▪ Plain text
Representations of possible and/or desired future states	▪ Plain text ▪ Images
Summary results OER (*omgevingseffectrapportage*; environmental effects report)	▪ Plain text
Omgevingswaarden (environmental values; general, non-definitive statements)	▪ Plain text

Figure 24: Possible ways of integrating elements of public urban green space into the structure of a municipal omgevingsvisie of an urban municipality. Author's work, 2020; based on Annex VII.

A first example of a possible way of integration is in the description of trends and developments. The *omgevingsvisie* of the municipality of Eindhoven, for instance, contains the following passage regarding the current state of health and the environment:

> Green and water contribute to more biodiversity (flora and fauna) and a healthy living environment. It provides cleaner air, cooling, and invites to go outside and to move. Eindhoven is a city with lots of green [space]. The three landscape parks (*Dommelpark*, Brainport Park, and *Genneper Parken*) connect the city with green [space] in the region (...). Situated in Eindhoven are important components of the nature network that contribute to the presence of special plant and animal species. These are mostly located in the landscape parks and near the *Dommel*, *Beatrixkanaal*, and *Eindhovensch Kanaal*[34]. In the city centre, green [space] is not very much present, apart from [that green space] adjacent to the *Dommel* (Gemeente Eindhoven, 2020, p. 26).

---

[34] The *Dommel* is a river that runs through Eindhoven (see Waterschap De Dommel, n.d.; Gemeente Eindhoven, 2020). The Dutch term *kanaal* means canal (see Van Dale, 2015).

Another example is that of spatial frameworks. The municipality of Maastricht gives a possible definition of what such a framework might comprise:

> [The spatial framework is] a coherent totality of the physical structures in the city that determines the development urban development in the long term (…). The framework of public spaces creates the conditions to develop areas and to stimulate the desired use of the city (Gemeente Maastricht, 2020a, p. 64).

The *omgevingsvisie* of the municipality of Maastricht contains several spatial frameworks in the form of maps (see Gemeente Maastricht, 2020a). In figure 25, one of these frameworks is (partly) displayed. It concerns a framework in which the individual frameworks for (1) water, green space, nature, and landscape, (2) main infrastructure, park and ride, and train tracks, and (3) liveability, pedestrian and bicycle routes have been integrated into a single framework. The framework water, green space, nature, and landscape (three different shades of green plus the colour blue) have been used as a basis on which the other two frameworks are being portrayed (see Gemeente Maastricht, 2020a). Because image 31 concerns an example, it is not necessary to understand the map in full detail. The point to be made is spatial frameworks can be displayed in maps, and that they can both concern frameworks regarding a specific theme or integral frameworks in which several individual frameworks have been integrated (see e.g. Gemeente Maastricht, 2020a). For now, it would be enough to understand that the framework for water, green space, nature, and

Figure 25: Cut-out of the complete spatial framework for the municipality of Maastricht, created by integrating three individual frameworks into one single framework. Reprinted from: Gemeente Maastricht, 2020a, p. 77.

The municipality of Nijmegen also provides an example of spatial framework represented in a map. In this map, a number of frameworks have been integrated into one framework (see Figure 26). Most important to know is that the urban green structure is displayed in the colour green (see Gemeente Nijmegen, 2020, pp. 38-39).
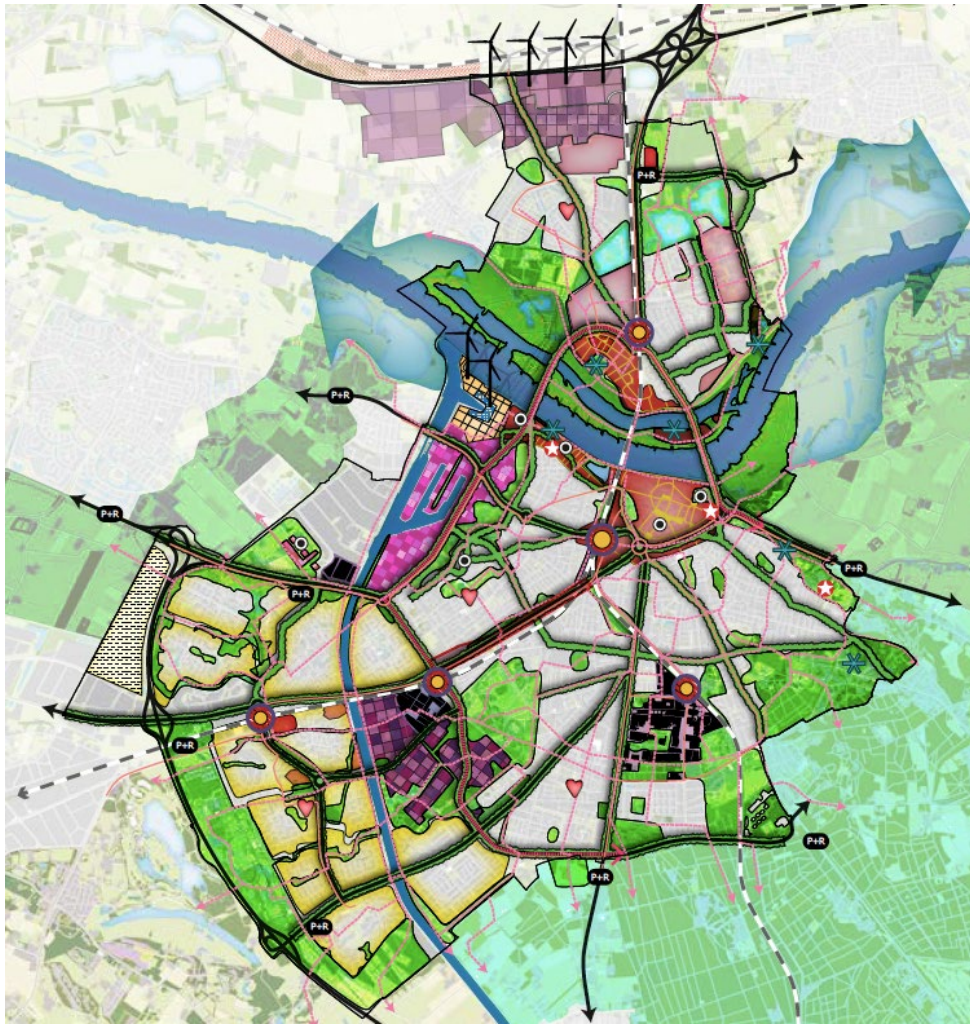
Figure 26: Omgevingsvisie map (omgevingsvisiekaart) of the municipality of Nijmegen. Reprinted from: Gemeente Nijmegen, 2020, p. 38.

A third and last example that will be provided in this chapter is that of PUGS as integrated in area profiles and/or as an area profile in and of itself. The municipality of Maastricht describes its area profiles as "*a description and categorisation of the different areas within the city in which maintaining existing qualities* [within these areas] *and the prioritisation of future missions is being mentioned*" (Gemeente Maastricht, 2020a, p. 64). An example of an integration of UGS within an area profile can be found in a map that is part of the *omgevingsvisie* of Nijmegen (see Figure 27). Although, strictly speaking, this is not explicitly labelled as such, but as a (visualisation of) of one of the eight so-called spatial solutions that have been defined (see Gemeente Nijmegen, 2020), it seems to function as an area profile within the definition that have been provided by the municipality of Maastricht (cf. Gemeente Maastricht, 2020a, p. 64). The green parts of the map represent the urban green structure (see Gemeente Nijmegen, 2020, p. 39).

Figure 27: Cut-out of the map included in the paragraph about the spatial solution for the larger city centre area (see Gemeente Nijmegen, 2020, pp. 74-79). De facto, it functions as an area profile (cf. Gemeente Maastricht, 2020a, p. 64). Reprinted from: Gemeente Nijmegen, 2020, p. 76.

It is also possible to create an area profile for the green space in a broad sense. This is what the municipality of Maastricht has done in its *omgevingsvisie*. An area profile named green and natural areas has been created. Within this profile, the municipality differentiates between five different areas: (1) cultural and natural landscape, (2) urban landscape, (3) river landscape, (4) urban green zones, and (5) nature (reservation) areas (Gemeente Maastricht, 2020a, p. 112). A map has been created to visualise the area profile (see Figure 28). Tim van Wanroij (Municipality of Maastricht) describes the idea behind the choice of his municipality to create an area profile for green and natural areas specifically as follows:

> Within the borders of our municipality, there are a couple of natural and green areas to be named in which we don't want development of built-up areas. (…) By saying for a couple of areas (…), for instance for the *Stadspark Maastricht* [(City Park Maastricht)], that we don't want houses [to be developed], (…) we say that within these places [that fall within the area profile for green and natural areas] green and nature are dominant. They are priority number one, and the rest comes is secondary (T. van Wanroij, personal communication, May 12, 2020).

Figure 28: Cut-out of the map visualising the area profile called green and natural areas. From the top to the bottom, the legend says (1) cultural and natural landscape, (2) urban landscape, (3) river landscape, (4) urban green zones, and (5) nature (reservation) areas. Reprinted from: Gemeente Maastricht, 2020a, p. 113.

VII. Forming an Omgevingsvisie: A Steps-Based Approach

So far, main research question (1) and (2) have been answered. What remains is coming up with an answer to mean research question (3), concerning the translation of the considerations and ways of integration into the structure of a decision-making support model. As already mentioned briefly before, namely in §1.2 and §3.2, the model that has been produced was based on a rational planning model of decision-making. In this chapter, a couple of such models will be introduced in more detail. The logics on which these models are based have been used to translate the results so far into a decision-making support model.

Rational planning is one of the many theoretical concepts used within the field of spatial planning, one of which is rational planning (see e.g. De Roo, 2013; De Roo, 2018). Rational planning might be a confusing term because all spatial planning is, in principle, rational; such a thing as non-rational planning doesn't exist. There are only different types of rationality that apply to different types of planning (Alexander, 2000). Rational planning, as relating to spatial planning in general, concerns "*planning that has and can give reasons justifying a course of action*" (Alexander, 2000, p. 243). Within the rational planning paradigm specifically, as one of the many paradigms within spatial planning, it is common to present spatial planning processes my means of using stages – or: steps – (e.g. Taylor, 1998, p. 68; Brooks, 2019, p. 88; Van der Cammen et al., 2012, p. 52), which might, because of this very fact, be called a steps-based approach. This is actually also the case with rational decision-making models in general (Kuruvilla & Dorstewitz, 2009, p. 266; see e.g. Anderson, 2014, pp, 134-135).

It was already in 1955 that Myerson and Banfield (1955) mentioned the essential assumption behind a rational planning model is "*that a planned course of action which is selected rationally is most likely to the attainment of the relevant ends*" (Myerson & Banfield, 1955, p. 314). Faludi (1987) argues that rational planning theory makes an essential distinction between means and ends, meaning between formal and substantive rationality. Rational models usually follow a linear rationality, meaning they assume that one should define ends first, after which policy makers can go through distinct steps in order to reach these ends (Kuruvilla & Dorstewitz, 2009). As already said, these steps concern "*the procedures involved in making well-considered rational decisions that maximize the attainment of* [organisational] *goals*" (Anderson, 2014, p. 135), and the possibility of reaching a rational and legitimate outcome increases when they are based on more reliable information. The following example of a rational planning model is given by Taylor (1998):
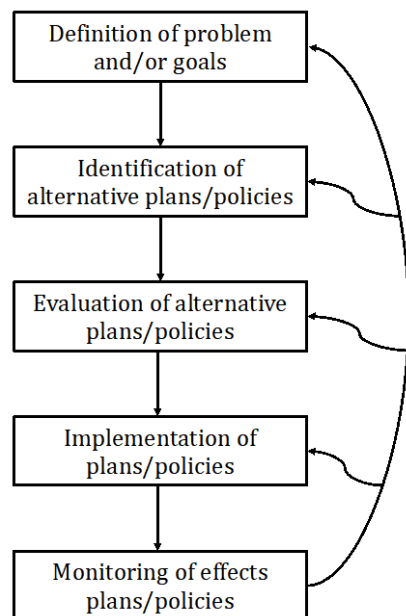
Figure 29: Taylor's (1998) model of planning as a process of rational action. Adapted from: Taylor, 1998, p. 68.

Taylor (1998) explains the model and its five stages as follows:

> First there must be some problem or goal which prompts the need for a plan of action. From an analysis of this, a definitions of the problems or goals is arrived at. (…) The second stage is to consider whether there are alternative ways of solving the problem (or achieving the aim), and if there are, to clarify these. The third stage is to evaluate which of the feasible alternatives is most likely to achieve the desired end. (…) The process of planning does not end when a decision has been made, for the chosen policy or plan then needs to be implemented. That is why (…) [the model of figure 29] shows 'implementation' as a further (fourth) stage in the process. There is yet a fifth stage which involves monitoring the effects of the plan to see whether it achieves the desired ends. A rational planning process is thus an ongoing or continuous one. Rarely are objectives met perfectly, and even if they are other objectives (or problems) invariably arise. Hence the feedback loops in (…) [the model of figure 29], indicating that a rational process of planning has no final end-state (pp. 68-69).

Van der Cammen et al. (2012, pp. 51-54) present a planning cycle that they created on the basis of a literature review. Apart from the difference in shape compared to Taylor's (1998) model – a cycle (see Van der Cammen et al., 2012, p. 52) versus a linear process with feedbacks (see Taylor, 1998, p. 68; Figure 29) –, they explicitly differentiate between *ex ante* and *ex post* evaluation. Presenting the decision-making process in a cycle has, however, the drawback that it is harder to visualise feedbacks. That's why Taylor's (1998) model was considered to be more well-suited to serve as an example.

By means of conducting a thought experiment, one might try to translate rational planning models, for instance the one made by Taylor (1998; see Figure 29), into a rational model that supports envisioning decision-making process, more specifically regarding the inclusion of public urban greening into the structure of an *omgevingsvisie*. Creating a decision-making support model has already been indicated as the external research aim (see §1.2). Taking into

account the nature of an *omgevingsvisie* as an instrument (see §2.1.2 & §5.2), all considerations regarding values of UGS (see Chapter IV) and strategic spatial planning and envisioning (see Chapter V), but also the possible ways of integration (see Chapter VI), such a model might consist of the following steps:

1
- 1a) Defining main challenges and problems faced by a municipality;
- 1b) defining current qualities of the area to be preserved and possibly strengthened;
- 1c) defining which policies of which administrative authorities should be taken into account

2
- Defining the preferred general nature of the *omgevingsvisie* (e.g. defining what strategy means to a municipality)

3
- Evaluating how much 'weight' to attribute to each value of UGS

4
- Defining more specific objectives (e.g. defining core themes, missions, foci, etc.)

5
- Assessing concrete alternatives for integrating the theme public urban green space into the *omgevingsvisie*;

6
- Implementation

7
- Evaluation *ex post*

Figure 30: Steps that have been identified for integration into the decision-making support model.

In the next chapter (Chapter VIII), dedicated to the conclusions of this research and to the discussion of these conclusions, an explanation will follow on the foundations on which these steps are based. These foundations derive from the results section (Chapter IV up and until Chapter VII). They will also be presented in the context of the final decision-making support model.

Rational planning in general has received heavy criticism from the 1960s onwards. These criticisms addressed for instance its possible autocratic tendencies, since the planning process is dominated by professionals, an overestimation of planners' cognitive abilities and their abilities to predict and control (Lawrence, 2010), meaning rationality is, in fact, bounded and not as unbounded as might be assumed in the rationalist paradigm (see e.g. Forester, 1984), and a failure to integrate substantive issues such as social and environmental needs (Lawrence, 2010). Allmendinger (2002) argues, however, that "*nevertheless, the rational process approach still provides the best way of approaching (…)* [real-world environments in and about which absolute rationality cannot always be reached] *because even if the programme chosen will not fully meet the objectives at least it is moving public action in the right direction*" (p. 61).

In the logics behind the decision-making support model, it was even taken a step further: the model does not prescribe the steps that municipalities *must* take; it 'only' provides them with a tool that might have the potential to inspire them and support them in designing the

decision-making process in such a way that the decision on how to integrate public urban greening as a theme in an *omgevingsvisie* is an informed one (see §1.2). As such, it does rule out the possibility for municipalities to apply an approach inspired on communicative and collaborative planning theory (see e.g. Healey, 1992; Sager, 2017; Tewdwr-Jones & Allmendinger, 1998; Martens, 2013).

One thing that is important to understand is the role of the human factor in the process of strategic spatial planning. While certain steps of a decision-making support model, such as the one produced in this thesis, may be followed, the outcomes of decision-making process cannot, so to speak, be calculated by a computer, since humans the ones making decisions. What this human factor might mean in the practice of decision-making is illustrated by Ton Verhoeven, a policy maker working who works for the municipality of Nijmegen and who is involved in making green and water policy, argues that producing an *omgevingsvisie* might provide the chance to come to a thorough integration of public urban greening into such a vision document – although he also point at the importance of who is leading the process of making an *omgevingsvisie* when it comes to how large these chances are (see T. Verhoeven, personal communication, May 29, 2020). About this, he states the following:

> In the first two or three years, we struggled with making an *omgevingsvisie*. [Initially, the process of producing our *omgevingsvisie*] was led by a spatial planner (...) and someone who is involved in a totally different field, namely arts and culture. Only when this task was reassigned to (...) an urban designer/landscape architect and a sustainability coordinator, (...) we run more than we're standing still. But yes, it was at that moment when a very good and clear process started in which we could give any kind of input. (...) For us [green and water policy makers], this was a golden opportunity to get some things in the *omgevingsvisie* which would otherwise never have been integrated at all (T. Verhoeven, personal communication, May 29, 2020).

Verhoeven states that he believes this change really made a difference, because project leaders who are very much focused on environmental law would say that only existing policy should be integrated into an *omgevingsvisie*. According to him, it is due to the fact that the new project leaders had a different focus that they were less dogmatic concerning this issue, and that they didn't ask every single time whether the 'green input' was already existing policy (see T. Verhoeven, personal communication, May 29, 2020). If they would have been more dogmatic, this might have been problematic, because, as Verhoeven states there was only "*an old policy plan* [concerning urban green space] *which was made in the year 2007 (...)* [which was] *not very up to date anymore, but we were not allowed to replace it, because the Omgevingswet says that we should not make new sectoral policy* (T. Verhoeven, personal communication, May 29, 2020). What can, among other things, be concluded out of this statement is that the decision-making model is not suitable for predicting the best outcome; it is 'only' an assisting, supporting tool – although such a tool might possibly play in important role in the envisioning process. A strategy is not born because input has been put into a model but in the interaction between policy makers involved.

VIII. Conclusion and Discussion

This chapter will be dedicated to drawing conclusions from the results of this study presented so far. These results will also be submitted to a discussion. No strict differentiation has been made between the conclusion and the discussion because both were seen as very much interrelated. When it comes to the structure of this chapter, this chapter has been built up as follows: in a first paragraph, a summarised version of the answers to the research questions, which have been given in the previous chapters, will be provided. Thereafter, the final step to answering to the external research aim (see §1.2) will be given in a second paragraph by presenting the decision-making support model that was to be created. The contents and structure of this model follow out of the answers that have been given to the research questions. After presenting the model, an explanation of the model and some remarks related to it will be provided.

8.1   Answers to Research Questions: A Summary of the Results

The first main research question was formulated as follows: "***How can the theme public urban greening be integrated into the structure a municipal omgevingsvisie?***" (§1.3). Sub-question (1a) asked to come up with a definition of public urban greening. On the basis of literature research, a definition has been formulated in §2.2. What is especially important about this definition that it includes notion that there is a grey area between the two extremes of being fully public and fully private areas. The idea of an area being fully public, without any private parties being involved when it comes to ownership and/or management, has been charaterised as an idea type. UGS also don't have to be (relatively) large (see §2.2; Swanwick et al., 2003). Urban green space should also be seen as a term for a wide variety of different kinds of spaces; it does not only concern parks (see §2.2).

Sub-question (1b) asked to explain what an *omgevingsvisie* is. Because this definition has been given already more than once, it will not be repeated again here. The point of coming to a definition was also not to provide a definition for the sake of providing a definition, but to enable people to grasp what the essence of an *omgevingsvisie* should be. It is the first starting point of working with an *omgevingsvisie* – or of doing research on *omgevingsvisie*-related topics. What is meant by this can, for instance, be seen in the answer that was given to the third sub-question of main research question (1), namely the following question: "*To what extent does the nature of the municipal omgevingsvisie as an instrument allow elements of public urban greening to be included in this vision?*" (§1.3). The answer that has been given to this question was that public urban greening not only *can* but also *should* be integrated in a municipal *omgevingsvisie*. This reason for this is that it should concern the whole living environment in an integral way – which is exactly the core of the definition that was created (see §2.2; Kamerstukken II, 2013/14).

Sub-questions (1d) and (1e) ask for an exploration of the ways in which elements of public urban greening is integrated into the structure of already existing *omgevingsvisies* of urban municipalities in the Netherlands, and for a subsequent categorisation of these ways of integration, respectively (see §1.2 & §1.3). To avoid all too much repetition, is considered to be sufficient to refer to annex VII for an answer to sub-question (1d) and to chapter VI for an

answer to sub-question (1e). The categories of ways of integration include, among other things, spatial frameworks, within area profiles or as an area profile in and of itself, and within realisation strategies (see Chapter VI). The complete overview of possible ways of integration (see Figure 24) was included in the decision-making support model.

The second main research question was formulated as follows: "**Which considerations may be of importance for urban municipalities to take into account when making decisions about how to integrate elements of urban greening into the structure of their *omgevingsvisies*?**" (§1.3). Its two sub-questions were formulated using the following wordings:

> 2a. Which considerations that can be derived from academic literature on public urban greening are relevant for municipalities to take into account when deciding about the integration of public urban greening into the structure of an *omgevingsvisie*?
> 2b. Which considerations that can be derived from academic literature on strategic spatial planning and envisioning are relevant for municipalities to take into account when deciding about the integration of public urban greening into the structure of an *omgevingsvisie*? (§1.3).

With respect to sub-question (2a), these considerations were interpreted as being the values of (P)UGS. It has been argued that the reason behind this choice is that these values might serve as the foundation for policy on PUGS, which means that they might be used as reasons to integrate PUGS in a specific way (see introduction Chapter IV). Much has already been said about the values of PUGS that were elaborated in §4.2. Before that, a differentiation was made between intrinsic and instrumental values (of UGS). The reason for paying so much attention was, first of all, to point at the fact these values don't necessarily have to be valuable for us to be values. Secondly, it directed attention towards to fact that values don't always have to be recognised by us to be present (see §4.1).

Sub-question (2b) has been answered in chapter V. The answer given was twofold. First of all, the multiple meanings of the word strategy as differentiated between by Healey (2007) have been elaborated. It has been argued that this differentiation is an important one with regards to answering sub-question (2), because "*the conscious and/or unconscious choice for a specific interpretation of the word strategy, or for a specific combination of a couple of interpretations, might have choices for the contents of an omgevingsvisie*" (introduction Chapter V). The second part of the answer has been given by elaborating on the spirit of the *Omgevingswet* and how this spirit is contained within art. 1.3 of the *Omgevingswet*. It has been argued that these two societal objectives might seem to contradict one another, but that municipalities should try to reach both of them as much as possible. Because no statements about which of both should prevail over the other in case there is a collision of interests related to both societal objectives (see §5.2; Kamerstukken II, 2013/14), the statement was made that values of UGS have the potential to inform a decision on which of both objectives should be seen as most important to reach in specific circumstances (see introduction Chapter 5). How urban greening is integrated into the structure of *omgevingsvisie* will partially depend on which interests are regarded most highly, and also on the choice for how important the individual societal objectives are in relation to one another. This means, for instance, that if achieving and maintaining a safe and healthy physical environment and good environmental quality is

found to be more important than effectively managing, using and developing the physical environment in order to perform societal needs (as meant by Ministry of Infrastructure and the Environment, 2017a), a municipality might choose to give PUGS a more prominent position in its *omgevingsvisie*. The means for giving it a position – or, in other words, for integrating it – are the ways of integration described in chapter VI.

The last main research question, main research question (3), was defined as follows:

> How can an overview of alternative ways of integrating public urban greening into the structure of an *omgevingsvisie*, as meant in main question (1), and the considerations, as meant in main question (2), be translated into a decision-making support model that can be used by municipalities for making decisions on the integration of public urban greening into the structure of their *omgevingsvisies*? (§1.3).

In order to answer this question, two sub-questions were formulated. They were formulated in the following way:

> <u>3a.</u> Which (elements of) already existing decision-making (support) models are relevant for creating the decision-making support model that can be utilised by urban municipalities as a supporting tool in deciding about how to integrate elements of public urban greening into the structure of their *omgevingsvisie*?
> <u>3b.</u> How can (elements of) already existing decision-making (support) models which are relevant for creating the decision-making support model, as meant in sub-question (3a), be used to produce a decision-making support model that can be utilised by urban municipalities as a supporting tool in deciding about how to integrate elements of public urban greening into the structure of their *omgevingsvisie*? (§1.3)

Already from the start of this thesis onwards, it has been made clear that the models that would potentially be seen as relevant are those that stem from rational(-comprehensive) theories about decision-making (see §1.2). In chapter VII, this has further been specified to rational planning theory and its rational planning models. In many instances, rational planning models are displayed as steps-based processes (see e.g. Taylor, 1998, p. 68; Brooks, 2019, p. 88; Van der Cammen et al., 2012, p. 52). Explicitly stated was that, different from what would be the case with rational planning models, the idea was not to create a model that helps municipalities to identify and the one single way of integration that appears to be most rational following a (post-)positivist calculative logic; the idea behind the decision-making support model was to help municipalities to come to well-informed decisions about how to integrate urban greening into the structure of their *omgevingsvisies* (see chapter VII).

In §8.2, the paragraph in which the decision-making support model will be introduced, an explanation will be given about how these steps were defined. This will be done in the explanation on the model, after introducing the model itself. In doing so, an answer will also be given to sub-question (3b). Although it might be unusual to answer sub-questions in a conclusion, the choice has been made to nevertheless do so, because all the information necessary to answer this question has already been given throughout the thesis. Moreover,

the model will provide visual support to come to a better understanding of the answer to sub-question (3b).

8.2   The Decision-Making Support Model: Inclusion of Public Urban Greening in the Municipal *Omgevingsvisie*

As said in the introduction of this chapter, the decision-making support model will be presented in this paragraph. The model will first be presented on the next page, after which an explanation will follow about the model and the line of reasoning behind its structure.

(1a) Defining main challenges and problems faced	(1b) Defining current qualities of the area	(1c) Defining relevant policies of other administrative authorities

Considerations regarding strategic spatial planning and envisioning

Defining preferred general nature of the *omgevingsvisie*...
(**2a**)...on the basis of defining the preferred definition(s) of strategy to use:

- Strategy as physical structure;
- strategy as orienting goals;
- strategy as a framework of principles;
- strategy as an inspirational vision.

(**2b**) ...and on the basis of a reflection on how both societal objectives of the *Omgevingswet* relate to each other.

Considerations regarding public urban greening

(**3**) Evaluating how much 'weight' to attribute to each value of urban green space by taking into account values of (public) urban green space:

- Ecological values (intrinsic natural value, genetic diversity value, & life-support value);
- economic values (market value);
- social values (recreational value aesthetic value, cultural symbolisation value, historical value, character building value, therapeutic value, social interaction value, & substitution value);
- planning values (structural value & synergetic and competitive value).

(**4**) Defining more specific objectives (e.g. defining core themes, missions, foci, etc.)

Ways of integration

(**5**) Assessing concrete alternatives for integrating the theme public urban green space into the *omgevingsvisie*:

- Preface (plain text);
- summary (plain text);
- description of current state/situation (plain text);
- description of contents existing policy (plain text & maps);
- description trends and developments (plain text);
- spatial framework (plain text & maps);
- area profiles (excluding area profile green space; plain text & maps);
- area profile green space (plain text & maps);
- description of ambitions, goals, missions, sub-missions, and goals (plain text);
- definition of themes for future policy (plain text);
- development directions (plain text, maps, images, & tables);
- development principles (plain text);
- realisation strategy (plain text);
- representations of possible and/or desired future states (plain text & images);
- summary results OER (*omgevingseffectrapportage*; environmental effects report; plain text);
- *omgevingswaarden* (environmental values; general, non-definitive statements; plain text).

(**6**) Implementation;
(**7**) evaluation *ex post.*

Figure 31: The decision-making support model. Striped double-sided arrows on the left side represent possible feedbacks during the decision-making process, so before implementation, while the blue line and its arrows on the right side represent feedback after implementation.

Step 1 of the model presented above consists of three sub-steps, indicated by the numbers (1a), (1b), and (1c). Sub-step (1a) concerns defining the main challenges and problems faced by a municipality. As shown in chapter VII, the logics behind rational planning models is that "*first,* [*sic*] *there must be some problem or goal which prompts the need for a plan of action*" (Taylor, 1998, p. 68). Decision-making in general has also been typified §1.2 as choosing a

specific way of action among different alternative ways of action, in order to come to a solution for a particular problem. This means that in order to shape the contents of an *omgevingsvisie* during the course of a decision-making process, one should know for which problems and challenges an answer should be created in an *omgevingsvisie*. Speaking in terms of planning cultures. Speaking in terms of planning cultures, problem and challenge conceptions might 'flow' from the societal environment into the planning environment (see §2.4). An example of such a problem might, for instance, be the possible increase in urban heat island effects due to climate change (see §4.2.4).

Sub-step (1b) concerns the obligation laid down in the *Omgevingswet* to provide a "*a description of the main features of the quality of the physical living environment*" (Ministry of Infrastructure and the Environment, 2017a, p. 17; see art. 3.2, paragraph a Ow). Looking at the fact that the term problem has been defined as a difference between the current and the desired state (see §1.2), a current state must first be defined in order to know what course of action might be taken in order to come to a desired state. Sub-step (1b) goes hand in hand with sub-step (1a), because the identification of problems and challenges is dependent on a definition of the current state of affairs. When using the example of climate change and the increase in the urban heat island effect again, this means that there is a problem regarding this effect because the current physical structures of the city don't cool down the city well enough. Knowing the current situations enables municipalities to take actions in order to eventually arrive at solutions, which can, for instance, be formulated in an *omgevingsvisie*.

Then there is also sub-step (1c). This step follows from what has been laid down in art. 2.2 Ow: "*when performing its duties and exercising its powers by virtue of this Act* [(*Omgevingswet*)]*, an administrative body shall take account of the duties and powers of other administrative bodies*" (Ministry of Infrastructure and the Environment, 2017a, p. 4; see art. 2.2 Ow). Because creating an *omgevingsvisie* as a duty for a municipality by virtue of the *Omgevingswet* (see art. 3.2, paragraph a Ow), these policies need to be taken into account. Because these policies need to be taken into account anyway, it might be useful to take them into account as early as possible. Therefore, this (sub-)step has been placed at the very beginning of the model.

Step 2 of this model consists of two sub-steps. Both, however, concern considerations regarding strategic spatial planning and envisioning (see Chapter V). Because an *omgevingsvisie* is free of form, meaning no specific requirement concerning its form and contents, apart from what was laid down in art. 3.2 Ow, are set (see §2.1.2; Kamerstukken II, 2013/14). Making an *omgevingsvisie* is, however, a form of strategic spatial planning (Kamerstukken II, 2013/14). Therefore, it might be useful for municipalities to reflect on what they perceive this term means, and, subsequently, to translate this into ideas and ambitions for how the final *omgevingsvisie* should be going to look like when it comes to its form. This also seems to fit within the rational planning theory paradigm, because setting goals at the beginning of a decision-making process (see Chapter VII; Taylor, 1998) is not only possible with regards to the urban environment but also for a vision itself. This is exactly what sub-step (2a) is related to.

In the second sub-step of step 2, sub-step (2b), municipalities are encouraged to think about how both societal goals of the *Omgevingswet* (see art. 1.3 Ow) relate to one another and what

their individual meaning is. By including this sub-step in the model, the hope is that it is an incentive to do research into what is expected of them. It has been argued in §5.2 that because these objectives are objectives of the *Omgevingswet*, they necessarily also apply to the *omgevingsvisie*. In this same paragraph, it has also been shown that the relationship between both societal objectives is somewhat complex: they should both be reached as much as possible, one does not prevail over the other, if specific developments are conflicting with one of both objectives, this doesn't mean that the development cannot take place, and both of the objectives should be more in balance than they are now (see §5.2; Kamerstukken II, 2013/14). This complexity is not integrated into the law article containing both societal objectives (see art. 1.3 Ow). Therefore, more preparation might be necessary for municipalities to fully understand what their prescribed task is.

Next, considerations regarding PUGS are at the heart of step 3 of the model. This step has been included to encourage municipalities to integrate discussions and reflection on these values and their value to the municipality. As already concluded in §8.1, having and/or gaining knowledge about these values might be of help when it comes to the decision how elements of urban green space will be integrated into the structure of an *omgevingsvisie*. It has been argued in chapter VI that ways of integration are, as a matter of fact, vehicles for expressing which values are appreciated by municipalities. In case such values are instrumental (see §4.1), they represent (the basis for) answers to the challenges and problems identified under sub-step (1a). Being the basis for answers means that values, of course, are not the solutions themselves, but that they can inform decisions for specific solutions, possibly leading to better-informed policy. If the decision-making support model indeed helps municipalities to do so, which it potentially can, the model is societally relevant as meant in §1.5.

Step 4 of the model is, in essence, the step in which municipalities are tempted to evaluate on and write down the results of step 1 up and until step 3. They are encouraged to formulate specific (informed) objectives for their *omgevingsvisie* to be made. No way in which they can do so is prescribed in the model. It would, however, fit within the logics of rational planning to formulate more concrete and well-informed objectives, so that the means to reach them – this means: the specific ways of integration – can eventually be selected (see Chapter VII).

Step 5 of the model concerns assessing possible ways of integration and seeing to whether they are suitable to reach the objectives which were set. When, for instance, following Taylor's (1998) rational planning model, the second step after identifying the problem and/or goals, would be to identify alternative possibilities of doing so. While the identification of the problem and goals was central to steps 1 up and until step 4 of the model, step 5 is concerned with these alternative possibilities. The results of the policy document analysis that has been conducted (see Chapter VI) already give municipalities an idea of these possibilities, but they are encouraged to think about other possibilities themselves, because the results might not show all possibilities available. The latter can, among other things, be explained by the fact that they were based on the analysis of a limited number and that municipalities have just started making *omgevingsvisies*, making it plausible that there is still a much to discover when it comes to possible ways of integration.

Municipalities are encouraged to reflect on how their assessment of alternatives during the implementation of step 5 relates to the results of steps 1 up and until 4, both while still considering possible ways of integration and when having made a preliminary choice for specific ways of integration. This is displayed as a feedback process with the striped double-sided arrows on the left side of the model. Speaking in terms of Taylor's (1998) rational planning model, this is an evaluation of the alternatives. Municipalities can ask themselves questions like: are the values of PUGS that we appreciate (step 3) visible enough in how we would like to integrate elements of public urban green space into our omgevingsvisie? How to the ways of integration we would like to choose fit within how we initially wanted our vision to look like in terms of its form and its strategic nature (step (2a))?

The last two steps of the model, step 6 and step 7, are shown in a grey rectangle. This colour indicates that the focus is not what these two steps specifically hold. It has been made clear from the beginning onwards, namely in §1.2 about the research aim, that the central idea behind the decision-making support model in this research has been to mainly address that part of the decision-making process which precedes the actual selection. The focus was on informing decisions, not about their implementation. Making definitive statements about how intentions to integrate public urban greening in specific ways are implemented is also tricked if done so on the basis of the results that have been presented, because they don't contain information on how this is done. Even though it might seem as if it is just a question of writing intentions down in an *omgevingsvisie*, it is not clear whether it is that uncomplicated in reality. Step 6 fits within rational planning models in general, since they usually contain the element of implementation. The whole these models is actually to eventually implement solutions for problems and reaching initially specified goals (see Chapter VII). Step 7 is specifically derived from Van der Cammen et al.'s (2012, pp. 51-54) rational planning cycle. This last step is related to the idea of revising *omgevingsvisies* to keep them up to date.

Specific recommendations for municipalities on how to they might use the decision-making support model presented here will be provided in §9.2. Therefore, these will not be discussed here in further detail. Two remarks should, however, be made. Firstly, the model should be considered as sort of an ideal type, which means that it is 'solely' an anthropogenic construct that, when considering the proposed structure for a decision-making process, has no clear empirical basis and that might be a simplification of reality. This is to say that the structure of the decision-making support model was based on theoretical insights, not on direct empirical research into the structure of such (possibly complex) processes around the creation of *omgevingsvisies*. Future emipirical research would have to show to which extent the model matches what happens in reality during the decision-making processes in question. Especially given the fact that this research is very much explorative in nature, this was not seen as problematic (see §1.2).

Secondly, it is important to understand that because an *omgevingsvisie* should contain integral policy (see §2.1.2), public urban greening is not an issue which stands on its own. Therefore, decision-making processes might not be focused on public urban greening only. The model presents a hypothetical situation in which these processes would only be about urban greening, but they might not be in practice. It is also in these situations that the model can be helpful, since part of the process will still be about urban greening, looking at the fact that the lawmaker expects municipalities to include this theme in their visions (see §1.1 &

§8.1). In a complex reality that asks for integral decisions to be made, it might be necessary to take more values than 'only' those of urban green space into account in order to create an *omgevingsvisie* with integral policy. This means that municipalities still might need to find out which other values are important. Given the limited scope of this thesis, it was, however, not possible to address these other values as well. Municipalities might, however, use the model as a basis to 'plug in' their own ideas about which other considerations might play a role in which part of the model.

IX. Recommendations

The recommendations chapter consists out of two paragraphs. In the first paragraph, three recommendations for future research will be made. These recommendations are ideas that might form the basis for researchers to design a study that builds on these recommendations. The second paragraph of this chapter, in its turn, focuses on the recommendations for praxis. Given the fact that the decision-making support model produced is supposed the be a tool that may be used by municipalities, the recommendations in this paragraph concern some issues related to how to might do so.

9.1 Recommendations for Future Research

The results of this research do not only consist of answers to research questions. Although these answers are what might normally be called the results of research, the 'yields' of conducting this research were also that multiple new questions emerged during the whole research process. These questions have been translated into recommendations for future research. Three of these recommendations will be discussed in this paragraph.

A first would be to use a different method for doing research on the different ways of integration of the theme public urban green space into a municipal *omgevingsvisie*. Findings on possible ways of integration, elaborated in chapter VI, have been based on policy document analysis, with *omgevingsvisies* being the policy documents. Another way exploring which possibilities for integration is to organise a thought experiment in which a researcher would formulate possibilities on the basis of literature research. Literature which is not directly related to the *omgevingsvisie* might be useful for exploring what the possibilities for integration are. This possibly gives a broader image of the possibilities than policy document analysis does.

A second recommendation that can be made is for researchers to conduct research on whether, and to which degree, the decision-making support model and its steps is representing what actual happens during decision-making processes around an *omgevingsvisie*. Researchers might try to reconstruct such processes on the basis of what employees of municipalities involved in the decision-making process around their *omgevingsvisie* tell them. They could collect the necessary data for doing so by means of conducting (qualitative) in-depth interviews with these employees, and/or organise focus groups with expert employees of multiple municipalities to collectively review the decision-making support model produced in this research and/or collectively try to come to a decision-making support model, without having seen the model produced in this research. In doing so, researchers may try to describe in which ways these processes are different from the simplified representation in the decision-making support model.

An third and last recommendation to be made here is for researchers to do research on how municipalities (can) create ambitions (to be) formulated in an *omgevingsvisie*. Because an *omgevingsvisie* is an integral document. If ambitions of a municipality are being formulated, this means that probably multiple departments of a municipality will be involved. These might all have their own ambitions – and they possibly all have (somewhat) different

interests. Researchers may look into how such a situation of (partially) conflicting interests and ambitions may be transcended in order to arrive at common ambitions which can be endorsed by all different departments. This can, for instance, potentially be done by means of undertaking a case study in which the researcher is actively participating in inter-departmental meetings in which such ambitions are supposed to be created. Another possibility is to conduct in-depth interviews with stakeholders from different department.

9.2   Recommendations for Praxis

Now the model has been presented, the question is how it might be applied. Since it was explicitly not meant to become a prescriptive model (see e.g. §1.2), the subsequent steps in the model are not necessarily to be followed in the order given, although, following the logics of rational planning theory and models, it would be wise to do so. Possibly, the 'messy' realities of decision-making processes might, however, be not (fully) in accordance with how decision-making processes occur in the reality of the planning praxis. Certain conditions might make it also unfavourable or even impossible to follow all steps in the order in which they are given.

Taking into account that it is not always possible or preferable to shape decision-making processes in full accordance with the decision-making support model, the advice would at least be to take into account all the steps individually, so without necessarily following them in the order given. This, for instance, means that municipalities take into account the values of PUGS when they decide on how to integrate public urban greening into an *omgevingsvisie*. Possibly, this not only leads to better-informed decisions, but also to an increase in the quality of the living environment. The considerations are an appeal to municipalities for coming to a profound positive valuation of (public) urban green space. Kellert (2012) points at how crucial this is:

> I will argue that our fitness and fulfilment [*sic*] as individuals and as a society require ongoing physical and psychological connection to the nonhuman world. If we deny or subvert our inherent need to affiliate with nature, we invite our decline every bit as surely as we do with the more obvious threats of war and disease. (…) Despite (…) [environmental and social] challenges, (…) [I am not writing about] impending disaster. I am confident that humanity can restore a positive and nurturing relationship to nature born of a profound realization of human self-interest. This recognition will require, however, a much deeper and fuller understanding of the many ways we are inherently inclined to affiliate with nature, and of its role in our health, fitness, an capacity to flourish as individuals and as a society (p. xi).

If that which Kellert (2012, p. xi) states in the quote above is viewed within the context of decision-making on how to integrate public urban greening into the structure of an *omgevingsvisie*, taking into account the considerations regarding values of PUGS mentioned in the decision-making support model is, so to say, a vehicle to come to a more harmonious relationship with the nonhuman world – and to provide an answer to, among other things, the crises mentioned in the preface of this thesis. In case municipalities don't find intrinsic

values of green space very interesting to take into account, it would be helpful to take into account the instrumental values of UGS, even if it were out of mere human self-interest only.

Telling municipalities how to eventually integrate public urban greening is not desirable, especially not given the fact that the lawmaker provides municipalities with a lot of freedom when it comes the contents of an *omgevingsvisie*, as has been explained in §2.1.2. Some possibilities for them have been provided in chapter VI, but that shouldn't stop municipalities from coming up with different possibilities. Here, it becomes very clear why the model made was named a decision-making support model instead of a decision-making model; the model should be used as a starting point for a reflection on how to organise the decision-making process in question, (possible) ways of integration, and the considerations that may have a role to play in these discussions, not as a definitive answer to those questions.

X.   Reflection

In this final chapter of the thesis, a reflection on three aspects will be provided. First of all, a reflection will be given with regards to the research methods used. This will largely be dedicated to the decision to not include the majority qualitative interviews conducted initially. In a second paragraph, a reflection on the results and conclusions will be given. The third paragraph of this chapter will address some brief reflections on the working process of conducting research.

10.1   Research Methods

I feel the need to explain why I decided not to include ten out of thirteen interviews conducted. Initially, I wanted to focus on the possible elements of urban greening that municipalities may integrate into their *omgevingsvisie*. After conducting the interviews, I came to the conclusion that it would be better to shift attention to ways of integration into the structure instead, and I changed the research aim and the research questions accordingly. This seemed necessary, because after performing all the interviews, and a subsequent brief review of existing municipal *omgevingsvisies*, I discovered that I overestimated the level of detail municipalities used in these vision documents. Making statements about possible individual elements would, given the absence of a relatively large level of detail, not be of much societal relevance, since I considered possible conclusions like "municipalities can include elements like trees and flowerbeds" as already self-evident to municipalities.

With the shift to focusing on ways of integration instead of on the elements to possibly integrate came also a shift in the relative amount of focus the considerations received. Initially, the intention was to approach these considerations in a highly explorative way. After the change of the research aim to focusing on ways of integration, it seemed much more interesting to me to pay more attention to the question which considerations might be playing a role when it comes to the decision about how to integrate urban greening into an *omgevingsvisie*. In my view, this would increase the societal relevance of my research, because it would mean that more attention was going to be paid to the arguments that might inform a decision to integrate urban greening in a specific way, also in the decision-making support model.

Due to these changes, there was a need to change the (relative importance) of the methods of data collection used. Shifting towards focusing on ways of integration, combined with the increase of the relative amount of emphasis on considerations, were reasons to not include all interviews conducted. Although the interviews were definitely of value, they became, relatively speaking, less valuable after the change of the research aim. Ways of integration and relevant considerations related ways of integration were, namely, not discussed in detail during the interviews. The considerations that have been discussed during the interviews were mainly relevant in relation to the elements to possibly include, which would have been of relevance under the initial research aim but not so much under the new one. Significantly increasing the relative importance of literature research was chosen as a mitigation measure to enable me to still answer the main research question regarding considerations.

I realise that a decision to not include a large part of the interviews conducted is not necessarily preferable and ideal, but it is important to know that this decision has not been made lightly. After some time of reflection on this issue, I decided to do what would be best in the light of reaching the research aim – namely drastically increasing the 'weight' of literature research and decreasing that of qualitative interviewing. Looking back, I now still believe that this was the right decision. The large body of literature on values of UGS and strategic spatial planning and envisioning enabled me to inform the decision-making support model more thoroughly than I expect would have been possible if I would have mainly focused on the qualitative interviews.

What this whole dilemma whether to still use all interviews or not has made very clear to me is that although qualitative interviewing might be popular among students as a research method, and although it might seem to be easier to hem than, for instance, quantitative methods, it actually isn't. To get the information necessary to answer a research question, it is critical to ask exactly the right questions and to keep asking interviewees to explain relatively general statements in more detail. Opting for increasing the relative importance of literature research in my thesis also made me appreciate theoretical research (even) more. The fact that I was able to use existing academic literature to answer research questions revealed very clearly to me that the choice conducting empirical research, and more precisely in the form of qualitative interviewing, should not always be self-evident.

Another important point to be addressed concerns the shortcomings of the method used to explore how the theme public urban green space may be integrated in *omgevingsvisies* of urban municipalities. Methods of data collection and data analysis regarding these vision documents were described in §3.4.2 and §3.5, respectively. A first possible shortcoming is that the number of vision documents analysed was relatively small (see §3.4.2). A second possible shortcoming is that results with regards to ways of integration (see Chapter VI) have solely been based on policy document analysis. Given the highly explorative character of this research (see §1.2), this was not considered to be highly problematic for now. It would, however, possibly have been problematic in case this research wouldn't be so explorative. I also considered it to be not very realistic to both conduct a large amount of theoretical research, in the form of literature research, and an analysis of all *omgevingsvisies* of urban municipalities within the relatively limited scope of a master thesis. The same goes for the possibility that existed to conduct a thought experiment in which academic literature served as a basis out of which possible ways of integrations were to be extracted (as meant in §9.1).

10.2   Results and Conclusions

Although literature the body of literature on values of UGS and decision-making processes is large – the results regarding those two issues are, after all, (almost) fully based on literature research –, a link with the *omgevingsvisie* as an instrument hasn't been made before. That fact the findings meant here were based on findings derived from existing academic literature indicates that existing literature might be relevant too if applied in new contexts. Especially for the considerations related to values of (public) urban greening goes that because findings are largely derived from results of studies of studies (meta-analyses and large literature reviews), external validity for these specific findings is high. Since it was never claimed that

all elements of the model are applicable to every urban municipality in the Netherlands, the decision-making support model produced has a high external validity.

Of course, it is possible that one sees not making such statements as a 'trick' to increase external validity, but the truth is that it might even be impossible to create a detailed model of which all elements necessarily apply to all urban municipalities. All municipalities are different, and they all operate in different societal and physical contexts. This could, for instance, practically mean that certain ways of integration theoretically exist, but that out of participation processes around an *omgevingsvisie* (see e.g. Erdkamp, 2019b) follows that lack of public support for specific ways of integration makes it highly unrecommendable to integrate it in this particular way. Therefore, a municipality might see a theoretically existing possibility of integration as practically impossible. Another example could be that certain municipalities don't have specific expertise when it comes to mapping, combined with the circumstances that they don't want to or just cannot hire (external) people qualified to make maps that, for instance, display green networks throughout the city.

It might also be seen as a drawback that not all values of (P)UGS have been elaborated in detail in chapter IV. This creates a potential situation in which municipalities cannot take every single value in account to a comparable extent, at least not when they would only take into account the findings of this thesis regarding such values. Because all values found were at least mentioned in chapter IV, in case they were not elaborated specifically, it was assured as much as possible that no information about these values was willingly kept from municipalities and other readers of this thesis. Given how many (sub-)values there are, and also how much could be written about every single one of them, even a Ph.D. dissertation on nothing more than these values would not provide enough space to present all the details. By elaborating some of the (sub-)values in more detail, while only mentioning others briefly, quality was chosen over quantity.

Lastly, the results of this research might be interpreted as showing the drawbacks of (only) using cost-benefit analyses and other positivism-oriented approaches in decision-making processes. When trying to quantify the considerations that have been described in this thesis, one might run into the difficulty of how to quantify non-quantitative considerations, such as aesthetic and genetic diversity value. It doesn't seem likely that any quantification of both represents the importance of these values to people. More generally speaking, it might be hard to quantify intrinsic values, because these values are important to people – and not necessarily for them in an instrumental sense. Quantification of such intrinsic values means making them instrumental, which might mean changing the type of value. More generally, it should, therefore, be concluded that it is vital to approach the decision-making support model, that was based on rational decision-making models stemming from a (post-)modernist tradition, in a non(-post)-modernist way.

Reference List

Alberti, M., Marzluff, J. M., Shulenberger, E., Bradley, G., Ryan, C., & Zumbrunnen, C. (2003). Integrating Humans into Ecology: Opportunities and Challenges for Studying Urban Ecosystems. *BioScience*, *53*(12), 143–158.

Albrechts, L. (2004). Strategic (Spatial) Planning Reexamined. *Environment and Planning B: Planning and Design*, *31*(5), 743–758.

Albrechts, L. (2010). More of the same is not enough! How could strategic spatial planning be instrumental in dealing with the challenges ahead? *Environment and Planning B: Planning and Design*, *37*(6), 1115–1127.

Alexander, E. R. (2000). Rationality Revisited: Planning Paradigms in a Post-Postmodernist Perspective. *Journal of Planning Education and Research*, *19*(3), 242–256.

Allmendinger, P. (2002). *Planning Theory*. New York, NY, United States: PALGRAVE.

Anderson, J. E. (2014). *Public Policymaking* (8th ed.). Stamford, CT, United States: Cengage Learning.

Arvanitidis, P. A., Lalenis, K., Petrakos, G., & Psycharis, Y. (2009). Economic aspects of urban green space: a survey of perceptions and attitudes. *International Journal of Environmental Technology and Management*, *11*(1–3), 143.

Atkinson, R. (2003). Domestication by Cappuccino or a Revenge on Urban Space? Control and Empowerment in the Management of Public Spaces. *Urban Studies*, *40*(9), 1829–1843.

Backes, Ch. W. (2017). De kleur van de Omgevingswet. *Tijdschrift Voor Omgevingsrecht*, *17*(2), 68–74. https://doi.org/10.5553/to/156850122017017002005

Bai, X., Van der Leeuw, S., O'Brien, K., Berkhout, F., Biermann, F., Brondizio, E. S., Cudennec, C., Dearing, J., Duraiappah, A., Glaser, M., Revkin, A., Steffen, W., & Syvitski, J. (2016). Plausible and desirable futures in the Anthropocene: A new research agenda. *Global Environmental Change*, *39*, 351–362.

Barkhuysen, T., Den Ouden, W., & Schuurmans, Y. E. (2012). The Law on Administrative Procedures in the Netherlands. *The Law on Administrative Procedures in the Netherlands*. https://doi.org/10.5553/nall/.000005

Barkhuysen, T., De Kruif, C., Den Ouden, W., & Schuurmans, Y. E. (2014). *Bestuursrecht in het Awb-tijdperk*. Deventer, the Netherlands: Wolters Kluwer.

Baycan-Levent, T. and Nijkamp, P. (2005). Evaluation of Urban Green Spaces. In D. Miller & D. Patassini (Eds.), *Beyond Benefit Cost Analysis: Accounting for Nonmarket Values in Planning Evaluation* (pp. 63–87). Aldershot, United Kingdom: Ashgate.

Baycan-Levent, T., Vreeker, R., & Nijkamp, P. (2009). A Multi-Criteria Evaluation of Green Spaces in European Cities. *European Urban and Regional Studies*, *16*(2), 193–213.

Beatley, T. (2011). *Biophilic Cities: Integrating Nature into Urban Design and Planning*. Washington, D.C., United States: Island Press.

Beatley, T. (2016). *Handbook of Biophilic City Planning & Design*. Washington, D.C., United States: Island Press.

Beatley, T., & Newman, P. (2013). Biophilic Cities Are Sustainable, Resilient Cities. *Sustainability*, *5*(8), 3328–3345.

Beckett, K. P., Freer-Smith, P. H., & Taylor, G. (1998). Urban woodlands: their role in reducing the effects of particulate pollution. *Environmental Pollution*, *99*(3), 347–360.

Beninde, J., Veith, M., & Hochkirch, A. (2015). Biodiversity in cities needs space: a meta-analysis of factors determining intra-urban biodiversity variation. *Ecology Letters*, *18*(6), 581–592.

Bernstein, M. (2001). Intrinsic Value. *Philosophical Studies*, *102*(3), 329–343.

Beyer, K., Kaltenbach, A., Szabo, A., Bogar, S., Nieto, F., & Malecki, K. (2014). Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin. *International Journal of Environmental Research and Public Health*, *11*(3), 3453–3472.

Boeve, M. N., Groothuijse, F. A. G., Van 't Lam, V. M. Y., Smorenburg-Van Middelkoop, L., & Uylenburg, R. (2016). *Omgevingsrecht* (5th ed.). Groningen & Amsterdam, the Netherlands: European Law Publishing.

Bogner, A., Littig, B., & Menz, M. (Eds.). (2009) *Interviewing Experts*. New York, NY, United States: Palgrave Macmillan

Booth, P. (2011). Culture, planning and path dependence: some reflections on the problems of comparison. *Town Planning Review*, *82*(1), 13–28.

Bowler, D. E., Buyung-Ali, L., Knight, T. M., & Pullin, A. S. (2010). Urban greening to cool towns and cities: A systematic review of the empirical evidence. *Landscape and Urban Planning*, *97*(3), 147–155.

Brooks, M. (2019). *Planning Theory for Practitioners*. London & New York, NY, United Kingdom & United States: Routledge.

Burgers, J. (2000). Urban landscapes: On public space in the post-industrial city. *Journal of Housing and the Built Environment, 15*(2), 145-164.

Byrne, J., Sipe, N., & Searle, G. (2010). Green around the gills? The challenge of density for urban greenspace planning in SEQ. *Australian Planner*, *47*(3), 162–177.

Ca, V. T., Asaeda, T., Fujino, T., & Murakami, M. (1995). Effects of Greening on the Climate of Tama New Town. *Environmental Systems Research*, *23*, 223–228.

Cambridge Dictionary. (n.d.-a). Meaning of choice in English. Retrieved April 3, 2020, from https://dictionary.cambridge.org/dictionary/english/choice

Cambridge Dictionary. (n.d.-b). Translation of propriété – French–English dictionary. Retrieved June 20, 2020, from https://dictionary.cambridge.org/dictionary/french-english/propriete

Cambridge Dictionary. (n.d.-c). Translation of régulation – French–English dictionary. RetrievedJune 20, 2020, from https://dictionary.cambridge.org/dictionary/french-english/regulation?q=r%C3%A9gulation

Cambridge Dictionary. (n.d.-d). Translation of accès – French–English dictionary. Retrieved June 20, 2020, from https://dictionary.cambridge.org/dictionary/french-english/acces

Cambridge Dictionary. (n.d.-e). Translation of Sache – German–English dictionary. Retrieved July 11, 2020, from https://dictionary.cambridge.org/dictionary/german-english/sache?q=Sache

Carmona, M. (2019). Principles for public space design, planning to do better. *URBAN DESIGN International*, *24*(1), 47–59.

Carlson, A. (1981). Nature, Aesthetic Judgment, and Objectivity. *The Journal of Aesthetics and Art Criticism*, *40*(1), 15–27.

Carroll, N. (1993). On being moved by nature: Between religion and natural history. In S. Kemal & I. Gaskell (Eds.), *Landscape, Natural Beauty and the Arts* (pp. 244–266). Cambridge, United Kingdom: Cambridge University Press.

Carson, R. (1998). *The Sense of Wonder* (Reprinted ed.). New York, NY, United States: HarperCollins.

Centraal Bureau voor de Statistiek. (1992). Sociale kerncijfers. *Mens En Maatschappij*, *67*, 442–451. Retrieved from https://ugp.rug.nl/MenM/article/view/13759/11263

Centraal Bureau voor de Statistiek. (2019). Stedelijkheid. Retrieved August 6, 2020, from https://www.cbs.nl/nl-nl/nieuws/2019/44/meeste-afval-per-inwoner-in-minst-stedelijke-gemeenten/stedelijkheid

Centraal Bureau voor de Statistiek. (2020, February 21). *Gebieden in Nederland 2019* [Dataset]. Retrieved from https://opendata.cbs.nl/statline/#/CBS/nl/dataset/84378NED/table?ts=1584544493152

Charmaz, K. (2006). *Constructing Grounded Theory: A Practical Guide through Qualitative Analysis*. London, & Thousand Oaks, CA, United Kingdom & United States: SAGE Publications.

Chiesura, A. (2004). The role of urban parks for the sustainable city. *Landscape and Urban Planning*, *68*(1), 129–138.

Costa, E., Lucas Soares, A., & Pinho de Sousa, J. (2017). Institutional networks for supporting the internationalisation of SMEs: the case of industrial business associations. *Journal of Business & Industrial Marketing*, *32*(8), 1182–1202.

Costanza, R. (1992). Toward an operational definition of ecosystem health. In R. Costanza, B. G. Norton, & B. D. Haskell (Eds.), *Ecosystem health: New goals for environmental management* (pp. 239–256). Washington, D.C., & Covelo, CA, United States: Island Press.

Costanza, R. (2000). Visions of alternative (unpredictable) futures and their use in policy analysis. *Conservation Ecology*, *4*(1): 5. https://core.ac.uk/download/pdf/194184377.pdf

Costanza, R., D'Arge, R., De Groot, R., Farber, S., Grasso, M., Hannon, B., ... Raskin, R. G. (1997). The value of the world's ecosystem services and natural capital. *Nature*, *387*(6630), 253–260.

Creswell, J. W. (2013). *Qualitative Inquiry and Research Design: Choosing Among Five Approaches* (3th ed.). Thousand Oaks, CA, and London, United States & United Kingdom: SAGE Publications.

Cybriwsky, R. (1999). Changing patterns of urban public space. *Cities*, *16*(4), 223–231. https://doi.org/10.1016/s0264-2751(99)00021-9

Czembrowski, P., & Kronenberg, J. (2016). Hedonic pricing and different urban green space types and sizes: Insights into the discussion on valuing ecosystem services. *Landscape and Urban Planning*, *146*, 11–19.

Daams, M. N., Sijtsma, F. J., & Veneri, P. (2019). Mixed monetary and non-monetary valuation of attractive urban green space: A case study using Amsterdam house prices. *Ecological Economics*, *166*, 106430. https://doi.org/10.1016/j.ecolecon.2019.106430

Dearborn, D. C., & Kark, S. (2010). Motivations for Conserving Urban Biodiversity. *Conservation Biology*, *24*(2), 432–440.

De Beer, J., Ekamper, P., & Van der Graag, N. (2018). Grote steden groeien sneller dan de rest van Nederland. *Demos: Bulletin over Bevolking En Samenleving*, *34*(2), 1–4. Retrieved from https://nidi.nl/wp-content/uploads/2019/11/demos-34-02.pdf

De Groot, R. S., Alkemade, R., Braat, L., Hein, L., & Willemen, L. (2010). Challenges in integrating the concept of ecosystem services and values in landscape planning, management and decision making. *Ecological Complexity*, *7*(3), 260–272.

De Groot, R. S., Wilson, M. A., & Boumans, R. M. J. (2002). A typology for the classification, description and valuation of ecosystem functions, goods and services. *Ecological Economics*, *41*(3), 393–408.

Den Dulk, C. J., Van de Stadt, H., & Vliegen, J. M. (1992). Een nieuwe maatstaf voor stedelijkheid: De omgevingsadressendichtheid. *Maandstatistiek van de Bevolking*, *40*, 14–27. Retrieved from https://www.historisch.cbs.nl/detail.php?nav_id=0-1&id=3359007

De Roo, G. (2013). *Abstracties van Planning*. Groningen, the Netherlands: Coöperatie InPlanning UA.

De Roo, G. (2018). Ordering Principles in a Dynamic World of Change – On social complexity, transformation and the conditions for balancing purposeful interventions and spontaneous change. *Progress in Planning*, *125*, 1–32.

Dessouroux, C. (2003). La diversité des processus de privatisation de l'espace public dans les villes européennes. *Belgeo*, *3*(1), 21–46.

Dubois, A., & Gadde, L. E. (2002). Systematic combining: an abductive approach to case research. *Journal of Business Research*, *55*(7), 553–560.

Eerste Kamer der Staten-Generaal. (n.d.). *Algemene Maatregel van Bestuur*. Retrieved from https://www.eerstekamer.nl/begrip/algemene_maatregel_van_bestuur

Elmqvist, T., Setälä, H., Handel, S. N., Van der Ploeg, S., Aronson, J., Blignaut, J. N., Gómez-Baggethun, E., Nowak, D. J., Kronenberg, J., & De Groot, R. (2015). Benefits of restoring ecosystem services in urban areas. *Current Opinion in Environmental Sustainability*, *14*, 101–108.

Erdkamp, J. F. (2019a) *Advanced Research Methods: Assignment 6*. Unpublished assignment related to the master Spatial Planning: Planning, Land and Real Estate Development, Radboud University Nijmegen.

Erdkamp, J. F. (2019b). *Burgerparticipatie bij het opstellen van omgevingsvisies: Een typering van de Nederlandse planningscultuur onder de Omgevingswet aan de hand van een studie naar de vorming van de Maastrichtse en Utrechtse omgevingsvisie.* Bachelor thesis, Radboud University Nijmegen. Retrieved from https://theses.ubn.ru.nl/bitstream/handle/ 123456789/8569/Erdkamp%2C_Jay_1.pdf?sequence=1

Erdkamp, J. F. (2020). *Integration of Urban Green Spaces in Dutch Municipal Omgevingsvisies.* Unpublished essay, Radboud University Nijmegen.

Escobedo, F. J., Kroeger, T., & Wagner, J. E. (2011). Urban forests and pollution mitigation: Analyzing ecosystem services and disservices. *Environmental Pollution*, *159*(8–9), 2078– 2087.

Esri. (2019, November 18). *Gemeentegrenzen 2019* [Shapefile]. Retrieved from http://hub.arcgis.com/datasets/e1f0dd70abcb4fceabbc43412e43ad4b_0

Faludi, A. (1973). *Planning Theory*. Oxford, United Kingdom: Pergamon.

Faludi, A. (1987). *A Decision-centred View of Environmental Planning*. Oxford, United Kingdom: Pergamon.

Feyisa, G. L., Dons, K., & Meilby, H. (2014). Efficiency of parks in mitigating urban heat island effect: An example from Addis Ababa. *Landscape and Urban Planning*, *123*, 87–95.

Fischer, F. (2003). *Reframing Public Policy: Discursive Politics and Deliberative Practices*. Oxford, United Kingdom: Oxford University Press.

Forester, J. (1984). Bounded Rationality and the Politics of Muddling Through. *Public Administration Review*, *44*(1), 23–31.

Friedmann, J. (1973). *Retracking America: A Theory of Transactive Planning*. Garden City, NY: Anchor/Doubleday.

Friedmann, J. (2000). The Good City: In Defense of Utopian Thinking. *International Journal of Urban and Regional Research*, *24*(2), 460–472.

Friedmann, J. (2002). *The Prospect of Cities*. Minneapolis, MN, & London, United States & United Kingdom: University of Minnesota Press.

Fromm, E. (1964). *The Heart of Man: Its Genius for Good and Evil*. New York, NY, United States: Harper & Row.

Fromm, E. (1973). *The Anatomy of Human Destructiveness*. New York, NY, United States: Holt, Rinehart and Winston.

Gemeente Deventer. (2019). *Expeditie Deventer* [Omgevingsvisie]. Retrieved from
      https://omgevingswet.deventer.nl/documenten/omgevingsvisie-deventer.pdf

Gemeente Eindhoven. (2020). *Eindhoven: Kloppend Hart van Brainport. Integrale visie voor de*
      fysieke leefomgeving van Eindhoven [Omgevingsvisie]. Retrieved from
      https://www.eindhoven.nl/sites/default/files/2020-06/Omgevingsvisie%20-
      %20juni%202020.pdf

Gemeente Groningen. (2018). *'The Next City': de Groningse leefkwaliteit* [Omgevingsvisie].
      Retrieved from https://gemeente.groningen.nl/sites/default/files/Omgevingsvisie-
      gemeente-Groningen.pdf

Gemeente Maastricht. (2020a). *Koester de Balans: Omgevingsvisie Maastricht 2040 (Deel 1)*
      [Omgevingsvisie]. Retrieved from https://maastricht.parlaeus.nl/user/showdoc/
      env=help/action=view/id=85778/type=pdf/Bijlage_2__Omgevingsvisie_Maastricht_2
      040_-_deel_1.pdf

Gemeente Maastricht. (2020b). *Omgevingsvisie Maastricht 2040: Deel 2* [Omgevingsvisie part
      II]*. Retrieved from* https://maastricht.parlaeus.nl/user/showdoc/env=help/
      action=view/id=85779/type=pdf/Bijlage_3_-_Omgevingsvisie_Maastricht_2040_-
      _deel_2.pdf

Gemeente Maastricht. (2020c). Omgevingsvisie. Retrieved August 6, 2020, from
      https://www.gemeentemaastricht.nl/omgevingsvisie

Gemeente Nijmegen. (2020). *Nijmegen: Stad in Beweging. Omgevingsvisie 2020-2040*
      [Omgevingsvisie]. Retrieved from https://online.ibabs.eu/ibabsapi/publicdownload.
      aspx?site=Nijmegen&id=fc97b5a9-b28c-4595-a412-65f30a393bc7

Gemeente Veenendaal. (2017). *Startnotitie Omgevingsvisie* [Preliminary memorandum].
      Retrieved from https://veenendaal.raadsinformatie.nl/document/5909594
      /1/13_2_Startnotitie_Omgevingsvisie_-_startnotitie

Gemeente Zwolle. (2017). *Mijn Zwolle van morgen 2030. Omgevingsvisie. Deel 1: Kernopgaven*
      en ambities [Omgevingsvisie]. Retrieved from
      https://www.zwolle.nl/sites/default/files/Omgevingsvisie%20deel%201%20-
      %20DEF%2023-11-2017.pdf

Giddens, A. (1984). *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley
      & Los Angeles, CA, United States: University of California Press.

Girling, C. L., & Kellett, R. (2005). *Skinny Streets and Green Neighborhoods: Design for*
      Environment and Community. Washington, D.C., United States: Island Press.

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. In N. K.
      Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 105–117).
      Thousand Oaks, CA, United States: Sage Publications.

Gunder, M., & Hillier, J. (2007). Planning as Urban Therapeutic. *Environment and Planning A: Economy and Space*, *39*(2), 467–486.

Hall, T. (2006). *Urban Geography* (3th ed.). Abingdon, United Kingdom: Routledge.

Hambrecht, R., & Gielen, S. (2005). Essay: Hunter-gatherer to sedentary lifestyle. *The Lancet*, *366*, 60-61.

Hardy, E. M. J., & Wenders, D. W. M. (2019). *Boom Basics Bestuursrecht*. The Hague, the Netherlands: Boom Juridische Uitgevers.

Hartig, T., Mitchell, R., De Vries, S., & Frumkin, H. (2014). Nature and Health. *Annual Review of Public Health*, *35*(1), 207–228.

Healey, P. (1992). Planning through debate: the communicative turn in planning theory. *Town Planning Review*, *63*(2), 143–162.

Healey, P. (1997). The revival of strategic spatial planning in Europe. In P. Healey, A. Khakee, A. Motte, & B. Needham (Eds.), *Making strategic spatial plans* (pp. 3–19). London, United Kingdom: UCL Press.

Healey, P. (2007). *Urban Complexity and Spatial Strategies: Towards a Relational Planning for Our Times (RTPI Library Series)* (1st ed.). Abingdon, United Kingdom: Routledge.

Hidalgo, H. K. (2014). Biophilic design, restorative environments and well-being. In J. Salamanca, P. Desmet, A. Burbano, G. Ludden, & J. Maya (Eds.), *Proceedings of the Colors of Care: The 9th International Conference on Design & Emotion* (pp. 535–544). Bogotá, Colombia: Ediciones Uniandes.

Hobma, F. A. M., & De Jong, P. (2016). *Planning and Development Law in the Netherlands. An Introduction*. The Hague, the Netherlands: Instituut voor Bouwrecht.

Hoogerwerf, A. (2014). Beleidsvoorbereiding: het ontwerpen van beleid. In A. Hoogerwerf & M. Herweijer (Eds.), *Overheidsbeleid: Een inleiding in de beleidswetenschap* (9th ed.; pp 65–81). Alphen aan den Rijn, the Netherlands: Kluwer.

Human Development Report Office. (2019). *Human Development Report 2019*. New York, NY, United States: United Nations Development Programme.

Intergovernmental Panel on Climate Change. (2014). *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Field, C. B., V. R. Barros, D. J. Dokken, K. J. Mach, M. D. Mastrandrea, T. E. Bilir, M. Chatterjee, K. L. Ebi, Y. O. Estrada, R. C. Genova, B. Girma, E. S. Kissel, A. N. Levy, S. MacCracken, P. R. Mastrandrea, & L. L.White (Eds.)]. Cambridge & New York, NY, United Kingdom & United States: Cambridge University Press.

Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. (2019). *Global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*. Bonn, Germany: IPBESSecretariat.

James, P., Tzoulas, K., Adams, M. D., Barber, A., Box, J., Breuste, J., … Ward Thompson, C. (2009). Towards an integrated understanding of green space in the European built environment. *Urban Forestry & Urban Greening*, *8*(2), 65–75.

Janssen-Jansen, L. B., Klijn, E. H., & Opdam, P. (2009). *Ruimtelijke kwaliteit in gebiedsontwikkeling*. Gouda, The Netherlands: Habiforum.

Jauregui, E. (1990). Influence of a large urban park on temperature and convective precipitation in a tropical city. *Energy and Buildings*, *15*(3–4), 457–463.

Jia, H., Wang, Z., Zhen, X., Clar, M., & Yu, S. L. (2017). China's sponge city construction: A discussion on technical approaches. *Frontiers of Environmental Science & Engineering*, *11*(4), 18. https://doi.org/10.1007/s11783-017-0984-9

Kagan, S. (1998). Rethinking Intrinsic Value. *The Journal of Ethics*, *2*(4), 277–297.

Kambites, C., & Owen, S. (2006). Renewed prospects for green infrastructure planning in the UK 1. *Planning Practice and Research*, *21*(4), 483–496.

Kamerstukken I, 2018/19, 34 986, annex to nr. D

Kamerstukken II, 2002/03, 28 916, nr. 3.

Kamerstukken II, 2013/14, 33 962, nr. 3.

Keller, D. A., Koch, M., & Selle, K. (1996). 'Either/or' and 'and': first impressions of a journey into the planning cultures of four countries. *Planning Perspectives*, *11*(1), 41–54.

Kellert, S. R. 2005. *Building for Life: Designing and Understanding the Human-Nature Connection*. Washington, D.C., United States: Island Press.

Kellert, S. R. (2012). *Birthright: People and Nature in the Modern World*. New Haven, CT, & London, United States & United Kingdom: Yale University Press.

Ketokivi, M., & Choi, T. (2014). Renaissance of case research as a scientific method. *Journal of Operations Management*, *32*(5), 232–240.

Kleerekoper, L., Van Esch, M., & Salcedo, T. B. (2012). How to make a city climate-proof, addressing the urban heat island effect. *Resources, Conservation and Recycling*, *64*, 30–38.

Klenke, K. (2008). *Qualitative Research in the Study of Leadership*. Bingley, United Kingdom: Emerald.

Knieling, J., & Othengrafen, F. (2009). *Planning Cultures in Europe: Decoding Cultural Phenomena in Urban and Regional Planning*. (J. Knieling & F. Othengrafen, Eds.). Farnham, England: Ashgate.

Knieling, J., & Othengrafen, F. (2015). Planning Culture—A Concept to Explain the Evolution of Planning Policies and Processes in Europe? *European Planning Studies*, *23*(11), 2133–2147.

Koeman, N. S. J. (2010). *Een wereld te winnen: enkele beschouwingen over de toekomst van het omgevingsrecht*. Amsterdam: Vossiuspers UvA.

Kondo, M., Fluehr, J., McKeon, T., & Branas, C. (2018). Urban Green Space and Its Impact on Human Health. *International Journal of Environmental Research and Public Health*, *15*(3), 445.

Koontz, H., & Weihrich, H. (2007). *Essentials of Management* (7th ed.). New Delhi, India: Tata McGraw-Hill Education.

Korsse, D. (2014). *Ruimtelijke ordening op niveau: Een juridisch onderzoek naar provinciale en nationale instructieregels op grond van hoofdstuk 4 van de Wro*. The Hague, the Netherlands: Stichting Instituut voor Bouwrecht.

Kramer, J. (2019, March 14). Milieurecht Totaal, hoofdstuk 4 Wm, aant. 1.12: Toekomstige ontwikkelingen. Retrieved from https://www.navigator.nl/document/idpassac5bc0af9b3347598c56952df109ffcf?ctx=WKNL_CSL_692

Kuo, M. (2015). How might contact with nature promote human health? Promising mechanisms and a possible central pathway. *Frontiers in Psychology*, *6*, 1093.

Kuruvilla, S., & Dorstewitz, P. (2009). There is no "point" in decision-making: a model of transactive rationality for public policy and administration. *Policy Sciences*, *43*(3), 263–287.

Lachowycz, K., & Jones, A. P. (2013). Towards a better understanding of the relationship between greenspace and health: Development of a theoretical framework. *Landscape and Urban Planning*, *118*, 62–69.

Lawrence, D. P. (2000). Planning theories and environmental impact assessment. *Environmental Impact Assessment Review*, *20*(6), 607–625.

Lee, I. M., Shiroma, E. J., Lobelo, F., Puska, P., Blair, S. N., & Katzmarzyk, P. T. (2012). Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. *The Lancet*, *380*(9838), 219–229.

Lyytimäki, J., & Sipilä, M. (2009). Hopping on one leg – The challenge of ecosystem disservices for urban green management. *Urban Forestry & Urban Greening*, *8*(4), 309–315.

Li, K., Dethier, P., Eika, A., Samsura, D. A. A., van der Krabben, E., Nordahl, B., & Halleux, J. M. (2019). Measuring and comparing planning cultures: risk, trust and co-operative attitudes in experimental games. *European Planning Studies*, 1–21.

Liu, H., Jia, Y., & Niu, C. (2017). "Sponge city" concept helps solve China's urban water problems. *Environmental Earth Sciences*, *76*(14), 473. https://doi.org/10.1007/s12665-017-6652-3

Luttik, J. (2000). The value of trees, water and open space as reflected by house prices in the Netherlands. *Landscape and Urban Planning*, *48*(3–4), 161–167.

Maas, J., Verheij, R. A., De Vries, S., Spreeuwenberg, P., Schellevis, F. G., & Groenewegen, P. P. (2009). Morbidity is related to a green living environment. *Journal of Epidemiology & Community Health*, *63*(12), 967–973.

Madanipour, A. (2003). *Public and Private Spaces of the City*. London & New York, NY, United Kingdom & United States: Routledge.

Madanipour, A. (2012). "Introduction," "The Changing Nature of Public Space in City Centres," and "Whose Public Space?": from Whose Public Space?: International Case Studies in Urban Design and Development (2010). In M. Larice & E. Macdonald (Eds.), *The Urban Design Reader* (2nd ed., pp. 443–458). London & New York, NY, United Kingdom & United States: Routledge.

Manning, J. (2017). In vivo coding. In J. Matthes (Ed.), *The international encyclopedia of communication research methods* (pp. 1–2). New York, NY, United States: Wiley-Blackwell. Retrieved from https://doi.org/10.1002/9781118901731.iecrm0270

Mäntysalo, R., Kangasoja, J. K., & Kanninen, V. (2015). The paradox of strategic spatial planning: A theoretical outline with a view on Finland. *Planning Theory & Practice*, *16*(2), 169–183.

Martens, K. (2013). Communicative planning theory: change needed to change practice [Working Paper, Institute for Management Research, Radboud Universiteit Nijmegen, Nijmegen]. Retrieved from https://www.academia.edu/8584601/Communicative_planning_theory_change_needed_to_change_practice

Mayer, H. (1999). Air pollution in cities. *Atmospheric Environment*, *33*(24–25), 4029–4037.

McDonald, A. G., Bealey, W. J., Fowler, D., Dragosits, U., Skiba, U., Smith, R. I., Donovan, R. G., Brett, H. E., Hewitt, C. N., & Nemitz, E. (2007). Quantifying the effect of urban tree planting on concentrations and depositions of PM10 in two UK conurbations. *Atmospheric Environment*, *41*(38), 8455–8467.

McShane, K. (2007). Why Environmental Ethics Shouldn't Give Up on Intrinsic Value. *Environmental Ethics*, *29*(1), 43–61.

Meijer, J. H., Oldenziel, H. A., & De Vos, H. W. (2016). *'The making of' van de stelselherziening omgevingsrecht* [PDF article published by the Ministry of Instrastructure and the Environment]. Retrieved from
https://www.omgevingswetportaal.nl/documenten/publicaties/2016
/12/16/the-making-of...-de-omgevingswet

Melichar, J., & Kaprová, K. (2013). Revealing preferences of Prague's homebuyers toward greenery amenities: The empirical evidence of distance–size effect. *Landscape and Urban Planning*, *109*(1), 56–66.

Meyer, V. J., Hoekstra, M. J., & De Josselin de Jong, F. (2006). *Het ontwerp van de openbare ruimte*. Nijmegen, the Netherlands: SUN.

Myerson, M., & Banfield, E. C. (1955). *Politics, Planning and the Public Interest: The Case of Public Housing in Chicago*. New York, NY, United States: Free Press.

Michiels, F. C. M. A. (2001). *Kleur in het omgevingsrecht*. The Hague, the Netherlands: Boom Lemma.

Michiels, F. C. M. A. (2016). *Hoofdzaken van het bestuursrecht* (8th ed.). Deventer, the Netherlands: Wolters Kluwer.

Ministry of Infrastructure and the Environment. (2014, June 17). *Omgevingswet: 'Ruimte voor ontwikkeling, waarborgen voor kwaliteit'* [Factsheet]. Retrieved from
https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/publicaties/2014
/06/17/ienm-factsheet-omgevingswet/ienm-factsheet-omgevingswet.pdf

Ministry of Infrastructure and the Environment. (2017a). *(Unofficial) Translation of the Environment and Planning Act* [Legislative bill]. Retrieved from
https://www.government.nl/binaries/government/documents/reports/2017/02/28
/environment-and-planning-act/EnglishtranslationEnvironmentAct.pdf

Ministry of Infrastructure and the Environment. (2017b). *(Unofficial) Translation of (Parts of) the Explanatory Memorandum to the Environment and Planning Act* [Explanotory memorandum]. Retrieved from
https://www.government.nl/binaries/government/documents/reports/2017/02/28
/environment-and-planning-act-%E2%80%93-explanatory-
memorandum/EnglishtranslationExplanatorMemorandumEnvironmentAct.pdf

Ministry of the Interior and Kingdom Relations. (2019, February 1). *Toelichting bij consultatieversie Omgevingsregeling* [Explanation to consultation version of the *Omgevingsregeling*]. Retrieved from
https://www.omgevingswetportaal.nl/documenten/publicaties/2019/02/01/toelich
ting-bij-consultatieversie-omgevingsregeling

Mintzberg, H. (1994). The Fall and Rise of Strategic Planning. *Harvard Business Review*, *72*(1), 107–114.

Moore, G. E. (2004). *Principia Ethica*. Mineola, NY, United States: Dover Publications.

Nadin, V., & Stead, D. (2013). Opening up the Compendium: An Evaluation of International Comparative Planning Research Methodologies. *European Planning Studies*, *21*(10), 1542–1561.

NASA. (2020). Carbon Dioxide. Retrieved July 29, 2020, from https://climate.nasa.gov/vital-signs/carbon-dioxide/

Needham, B. (2007). Belangen, rechten en plichten bij publieke ruimte. In AIR & A. Lengkeek (Eds.), *Stedelijkheid als rendement: privaat initiatief voor publieke ruimte*. Rotterdam, the Netherlands: Trancity.

Needham, B. (2014). *Dutch Land-use Planning: The Principles and the Practice*. New York, United States: Taylor & Francis.

Németh, J., & Schmidt, S. (2011). The privatization of public space: modeling and measuring publicness. *Environment and Planning B: Planning and Design*, *38*(1), 5–23.

Nowak, D. J., Crane, D. E., & Stevens, J. C. (2006). Air pollution removal by urban trees and shrubs in the United States. *Urban Forestry & Urban Greening*, *4*(3–4), 115–123.

Nowak, D. J., & Dwyer, J. F. (2007). Understanding the Benefits and Costs of Urban Forest Ecosystems. In J. E. Kuser (Ed.), *Urban Community and Forestry in the Northeast* (2nd ed.; pp. 25–46). Dordrecht, the Netherlands: Springer.

Oevering, F. (2014, October 2). De stad als kraamkamer: Steden zijn de motor van de demografische ontwikkeling. Retrieved from https://economie.rabobank.com/publicaties/2014/oktober/de-stad-als-kraamkamer/#Voetnoot3

Oke, T. R. (1995). The heat island of the urban boundary layer: characteristics, causes and effects. In J. E. Cermak, A. G. Davenport, E. J. Plate, & D. X. Viegas (Eds.), *Wind Climate in Cities* (pp. 81–107). Dordrecht, the Netherlands: Kluwer Academic Publishers.

Oldenziel, H. A., & De Vos, H. W. (2018a). *Systeem en kerninstrumenten van de Omgevingswet*. Deventer, the Netherlands: Wolters Kluwer.

Oldenziel, H. A., & De Vos, H. W. (2018b). Totstandkoming, systeem en doelen van de Omgevingswet. *Tijdschrift Voor Omgevingsrecht*, *18*(3). https://doi.org/10.5553/to/156850122018018003008

Ollongren, K. H. (2020, May 20). *Nieuwe datum inwerkingtreding Omgevingswet* [Letter to the speaker of the Tweede Kamer der Staten-Generaal]. Retrieved from https://www.rijksoverheid.nl/binaries/rijksoverheid/documenten/kamerstukken/2 020/05/20/kamerbrief-over-nieuwe-datum-inwerkingtreding-omgevingswet/kamerbrief-   over-nieuwe-datum-inwerkingtreding-omgevingswet.pdf

Onwuegbuzie, A. J., & Frels, R. (2016). *Seven Steps to a Comprehensive Literature Review*. Thousand Oaks, CA, & London, United States & United Kingdom: SAGE Publications.

Organisation for Economic Co-operation and Development. (2017). *The Governance of Land Use in the Netherlands: The Case of Amsterdam*. Paris, France: OECD Publishing

Othengrafen, F. (2010). Spatial planning as expression of culturised planning practices: The examples of Helsinki, Finland and Athens, Greece. *Town Planning Review*, *81*(1), 83–110.

Othengrafen, F. (2012). *Uncovering the Unconscious Dimensions of Planning: Using Culture as a Tool to Analyse Spatial Planning Practices*. London & New York, NY, United Kingdom & United States: Routledge.

Othengrafen, F., & Reimer, M. (2013). The Embeddedness of Planning in Cultural Contexts: Theoretical Foundations for the Analysis of Dynamic Planning Cultures. *Environment and Planning A: Economy and Space*, *45*(6), 1269–1284.

Pacione, M. (2013). *Urban Geography*. Abingdon, United Kingdom: Taylor & Francis.

Panduro, T. E., & Veie, K. L. (2013). Classification and valuation of urban green spaces—A hedonic house price valuation. *Landscape and Urban Planning*, *120*, 119–128.

Panpatte, S., & Takale, V. D. (2019). To Study the Decision Making Process in an Organization for its Effectiveness. *The International Journal of Business Management and Technology*, *3*(1), 73–78.

Peeters, M. (2005). The Concept of Precaution as Shaped by the Courts. In F. A. M. Stroink & E. C. H. J. van der Linden (Eds.), *Judicial Lawmaking and Administrative Law* (pp. 57–60). Antwerp & Oxford, Belgium & United Kingdom: Intersentia.

Peschardt, K.K., Schipperijn, J., & Stigsdotter, U. K. (2012). Use of Small Public Urban Green Spaces (SPUGS). *Urban Forestry & Urban Greening*, *11*(3), 235–244.

Planbureau voor de Leefomgeving. (2020, May 26). Trends in Global CO_2 and Total Greenhouse Gas Emissions [PBL report; revised version of 2019 report]. Retrieved from https://www.pbl.nl/sites/default/files/downloads/pbl-2020-trends-in-global-co2-and-total-greenhouse-gas-emissions-2019-report_4068.pdf

Radboud Universiteit. (n.d.). Programme Outline: Master's Specialisation in Urban and Regional Mobility. Retrieved from https://www.ru.nl/opleidingen/master/urban-and-regional-   mobility/curriculum-and-courses/

Rabinowicz, W., & Rønnow-Rasmussen, T. (2000). A Distinction in Value: Intrinsic and for Its Own Sake. *Proceedings of the Aristotelian Society, 100*, 33–51.

Reimer, M. (2016). Planungskultur – eine Bestandsaufnahme. *DisP - The Planning Review*, *52*(4), 18–29.

Rijksoverheid. (2020, May 20). Nieuwe datum inwerkingtreding Omgevingswet: 1 januari 2022. Retrieved from https://www.rijksoverheid.nl/actueel/nieuws/ 2020/05/20/nieuwe-datum-inwerkingtreding-omgevingswet-1-januari-2022

Rijksoverheid. (n.d.). Nieuwe omgevingswet maakt omgevingsrecht eenvoudiger. Retrieved from https://www.rijksoverheid.nl/onderwerpen/omgevingswet/vernieuwing-omgevingsrecht

Rolston, H. (2002). Naturalizing Callicott. In W. Ouderkirk & J. Hill (Eds.), *Land, Value, Community: Callicott and Environmental Philosophy* (pp. 107–122). Albany, NY, United States: State University of New York Press (SUNY Press).

Rønnow-Rasmussen, T. (2011). Personal Value. Oxford, United Kingdom: Oxford University Press.

Rosenzweig, R., & Blackmar, E. (1992). *The Park and the People: A History of Central Park*. Ithaka, NY, & London, United States and United Kingdom: Cornell University Press.

Roy, S., Byrne, J., & Pickering, C. (2012). A systematic quantitative review of urban tree benefits, costs, and assessment methods across cities in different climatic zones. *Urban Forestry & Urban Greening*, *11*(4), 351–363.

Rubin, H. J., & Rubin, I. S. (2005). *Qualitative Interviewing: The Art of Hearing Data* (2nd ed.). London, & Thousand Oaks, CA, United Kingdom & United States: SAGE Publications.

Sagan, C. (1994). *Pale Blue Dot: A Vision of the Human Future in Space*. New York, NY, United States: Random House.

Sager, T. (2017). Communicative Planning. In M. Gunder, A. Madanipur, & V. Watson (Eds.), *The Routledge Handbook of Planning Theory* (pp. 93–104). New York, NY, & London, United States & United Kingdom: Routledge.

Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers* (3rd ed.). Thousand Oaks, CA, & London, United States & United Kingdom: SAGE Publications.

Saunders, M. N. K., Thornhill, A., & Lewis, P. (2019). *Research Methods for Business Students* (8th ed.). New York, NY, United States: Pearson Education Limited.

Schein, E. H. (2004). *Organizational Culture and Leadership*. San Francisco, CA, United States: Jossey-Bass.

Schlössels, R. J. N., & Zijlstra, S. E. (2017). *Bestuursrecht in de sociale rechtsstaat: Band 1*. Deventer, the Netherlands: Wolters Kluwer.

Schön, D. A., & Rein, M. (1994). *Frame Reflection*. New York, NY, United States: Basic Books.

Schwandt, T. A. (1994). Three Epistemological Stances for Qualitative Inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *Handbook of Qualitative Research* (pp. 189–213). Thousand Oaks, CA, United States: SAGE Publications.

Schwandt, T. A. (1998). Constructivist, Interpretivist Approaches to Human Inquiry. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Landscape of Qualitative Research: Theories and Issues* (pp. 221–259). Thousand Oaks, CA, United States: SAGE Publications.

Seerden, R., & Heldeweg, M. A. (1996). In R. Seerden, & M. A. Heldeweg (Eds.), *Comparative environmental law in Europe: an introduction to public environmental law in the EU member states* (pp. 269–311). Antwerp, Belgium: Maklu.

Seerden, R., & Stroink, F. A. M. (2002). *Administrative Law of the European Union, Its Member States and the United States*. Antwerp & Groningen, Belgium & the Netherlands: Intersentia.

Shashua-Bar, L., & Hoffman, M. E. (2000). Vegetation as a climatic component in the design of an urban street. *Energy and Buildings*, *31*(3), 221–235.

Snep, R., & Opdam, P. (2010). Integrating nature values in urban planning and design. In K. J. Gaston (Ed.), *Urban Ecology* (pp. 261–286). Cambridge, United Kingdom: Cambridge University Press.

Spitters, J. G. H. (2020, May 29). Module Wabo en omgevingsvergunning 2013/2905: Inleiding Omgevingswet (incl. parlementaire stukken). Retrieved from https://www.navigator.nl/document/ida202b144d2c5486c9125cc19f4d4e399?ctx=WKNL_CSL_692

Staeheli, L. A., & Mitchell, D. (2006). USA's Destiny? Regulating Space and Creating Community in American Shopping Malls. *Urban Studies*, *43*(5/6), 977–992.

Staeheli, L. A., & Mitchell, D. (2007). Locating the public in research and practice. *Progress in Human Geography*, *31*(6), 792–811.

Steffen, W., Rockström, J., Richardson, K., Lenton, T. M., Folke, C., Liverman, D., Summerhayes, C. P., Barnosky, A. D., Cornell, S. E., Crucifix, M., Donges, J. F., Fetzer, I., Lade, S. J., Scheffer, M., Winkelmann, R., & Schellnhuber, H. J. (2018). Trajectories of the Earth System in the Anthropocene. *Proceedings of the National Academy of Sciences*, *115*(33), 8252–8259.

Storper, M. (1997). *The Regional World: Territorial Development in a Global Economy*. New York, NY, United States: Guilford Press.

Swanwick, C., Dunnett, N., & Woolley, H. (2003). Nature, Role and Value of Green Space in Towns and Cities: An Overview. *Built Environment*, *29*(2), 94–106.

Tallis, M., Taylor, G., Sinnett, D., & Freer-Smith, P. (2011). Estimating the removal of atmospheric particulate pollution by the urban tree canopy of London, under current and future environments. *Landscape and Urban Planning*, *103*(2), 129–138.

Taylor, N. (1998). *Urban Planning Theory since 1945*. London, & Thousand Oaks, CA, United Kingdom & United States: SAGE Publications.

Taylor, Z. (2013). Rethinking planning culture: a new institutionalist approach. *Town Planning Review*, *84*(6), 683–702.

Tesch, R. (1990). *Qualitative Research: Analysis Types and Software Tools*. London & Philadelphia, PA, United Kingdom & United States: RoutledgeFalmer.

Tewdwr-Jones, M., & Allmendinger, P. (1998). Deconstructing Communicative Rationality: A Critique of Habermasian Collaborative Planning. *Environment and Planning A: Economy and Space*, *30*(11), 1975–1989.

The Natural Step Canada. (n.d.-a). Applying the ABCD Method. Retrieved 27 April 2020, from http://www.naturalstep.ca/abcd

The Natural Step Canada. (n.d.-b). Backcasting. Retrieved 27 April 2020, from http://www.naturalstep.ca/backcasting

Thomson, J. (1992). On Some Ways in Which A Thing Can be Good. *Social Philosophy and Policy, 9*(2), 96-117.

Thompson Coon, J., Boddy, K., Stein, K., Whear, R., Barton, J., & Depledge, M. H. (2011). Does Participating in Physical Activity in Outdoor Natural Environments Have a Greater Effect on Physical and Mental Wellbeing than Physical Activity Indoors? A Systematic Review. *Environmental Science & Technology*, *45*(5), 1761–1772.

Tweede Kamer der Staten-Generaal. (n.d.). House of representatives. Retrieved from https://www.houseofrepresentatives.nl/debate

Ulrich, R.S. (1983). Aesthetic and Affective Response to Natural Environment. In I. Altman & J. F. Wohlwill (Eds.), *Human Behavior and Environment* (pp. 85–125). New York, NY, United States: Plenum.

Ulrich, R. S., Simons, R. F., Losito, B. D., Fiorito, E., Miles, M. A., & Zelson, M. (1991). Stress recovery during exposure to natural and urban environments. *Journal of Environmental Psychology*, *11*(3), 201–230.

Universiteit van Amsterdam. (n.d.). Urban and Regional Planning: Programme. Retrieved from https://studiegids.uva.nl/xmlpages/page/2019-2020-en/search-programme/programme/5719/232086

Upmanis, H., Eliasson, I., & Lindqvist, S. (1998). The influence of green areas on nocturnal temperatures in a high latitude city (Göteborg, Sweden). *International Journal of Climatology*, *18*(6), 681–700.

Van Buuren, P., Nijmeijer, A., & Robbe, J. (2017). *Hoofdlijnen ruimtelijk bestuursrecht* (10th ed.). Deventer, the Netherlands: Wolters Kluwer.

Van Dale. (2015). *Van Dale Middelgroot woordenboek Nederlands-Engels* (2nd ed.). Utrecht, the Netherlands: Van Dale.

Van den Broek, J. H. G. (2012). *Bundeling van omgevingsrecht = Clustering of environmental law = Bündelung von Umweltrecht*. Maastricht, the Netherlands: Maastricht University.

Van den Broek, J. H. G. (2019a, February 26). Lexplicatie, commentaar op art. 3.2 Omgevingswet. Retrieved from https://www.navigator.nl/document/idpass097df5de8044481c87f1a137d3d067d4?ctx=WKNL_CSL_1981

Van den Broek, J. H. G. (2019b, July 16). Lexplicatie, commentaar op hoofdstuk 3 Omgevingswet,samengesteld op basis van consultatieteksten. Retrieved from https://www.navigator.nl/document/idpasse7cc1c31b66648f39b62296f5bc40167?ctx=WKNL_CSL_1981

Van den Broek, J. H. G. (2020). *De Omgevingswet: Een korte introductie*. The Hague, the Netherlands: Boom juridisch.

Van der Cammen, H., De Klerk, L. A., Dekker, G., & Witsen, P. P. (2012). *The Selfmade Land*. Spectrum.

Van der Schoot, T., Van Leijen, L., Gabry, G., Prins, P., & Brugman, E. (2017). *Werken in de geest van de Omgevingswet*. 's-Hertogenbosch, the Netherlands: Van Leijen Academie.

Van der Schoot, T., & Spel, D. (2020). *De gemeenteraad en de Omgevingswet* (5th publication). 's-Hertogenbosch, the Netherlands: Van Leijen Academie.

Van Melik, R. G. (2008). *Changing Public Space: The Recent Redevelopment of Dutch City Squares*. Utrecht, the Netherlands: Koninklijk Nederlands Aardrijkskundig Genootschap/Faculteit Geowetenschappen Universiteit Utrecht.

Van Nifterik, J. G.. (1866). Plan tot uitbreiding van Amsterdam [Online image]. Retrieved from https://archief.amsterdam/beeldbank/detail/0206bb8c-4dd9-5221-ae94-a530528d6f14

Van Thiel, S. (2014). *Research Methods in Public Administration and Public Management: An Introduction*. London & New York, United Kingdom & United States: Routledge.

Van Veldhoven, S. (2019, November 29). *Voortgang stelselherziening Omgevingsrecht* [Letter to Tweede Kamer der Staten-Generaal]. Retrieved from https://www.omgevingswetportaal.nl/binaries/omgevingswetportaal/documenten/kamerstukken/2019/12/2/kamerbrief-over-voortgang-stelselherziening-omgevingsrecht/Kamerbrief+over+voortgang+stelselherziening+omgevingsrecht.pdf

Van Veldhoven, S. (2020, April 1). *Inwerkingtreding Omgevingswet* [Letter to the speaker of the Tweede Kamer der Staten-Generaal]. Retrieved from https://www.vemw.nl/~/media/VEMW/Downloads/Public/Nieuwtjes/Bij%20nieuwtje%20020420%20InwerkingtredingOmgevingswet.ashx

Vereniging Nederlandse Gemeenten. (2016). *De Omgevingsvisie* [Fact sheet]. Retrieved from https://vng.nl/sites/default/files/publicaties/2016/de-omgevingsvisie_20160623.pdf

Vereniging Nederlandse Gemeenten. (2018). *Local Government in the Netherlands* [Booklet]. Retrieved from https://www.publieksdiensten.nl/wp-content/uploads/2018/04/DENMARK-4-Local-Government-in-the-Netherlands.pdf

Vereniging Nederlandse Gemeenten. (n.d.). About VNG. Retrieved April 8, 2020, from https://vng.nl/artikelen/about-vng

Vereniging Nederlandse Gemeenten, & Kwaliteitsinstituut Nederlandse Gemeenten. (2017). *Kerninstrument Omgevingsvisie en Informatievoorziening* [Memorandum steering committee omgevingsvisie]. Retrieved from https://www.vngrealisatie.nl/sites/default/files/2017-12/Notitie%20Omgevingsvisie.pdf

Verschuren, P. (2017). *Kernthema's in de methodologie*. Amsterdam, the Netherlands: Amsterdam University Press.

Verschuren, P., & Doorewaard, H. (2010). *Designing a Research Project: Second Edition* (2nd revised ed.). The Hague, the Netherlands: Eleven International Publishing.

Verschuren, P., & Doorewaard, H. (2015). *Het ontwerpen van een onderzoek* (5th ed.). Amsterdam, the Netherlands: Boom.

Villanueva, K., Badland, H., Hooper, P., Koohsari, M. J., Mavoa, S., Davern, M., Roberts, R., Goldfeld, S., & Giles-Corti, B. (2015). Developing indicators of public open space to promote health and wellbeing in communities. *Applied Geography*, *57*, 112–119.

Völker, S., & Kistemann, T. (2011). The impact of blue space on human health and well-being – Salutogenetic health effects of inland surface waters: A review. *International Journal of Hygiene and Environmental Health*, *214*(6), 449–460.

Vos, P. E. J., Maiheu, B., Vankerkom, J., & Janssen, S. (2013). Improving local air quality in cities: To tree or not to tree? *Environmental Pollution*, *183*, 113–122.

Washington, H., Taylor, B., Kopnina, H., Cryer, P., & Piccolo, J. J. (2017). Why ecocentrism is the key pathway to sustainability. *The Ecological Citizen*, *1*(1), 35–41.

Waterschap De Dommel. (n.d.). Werkgebied. Retrieved August 10, 2020, from https://www.dommel.nl/werkgebied

Watts, A. (1998). *Taoism: Way Beyond Seeking*. Boston, MA, United States: Charles E. Tuttle.

Weber, M. (1949). *The Methodology of the Social Sciences*. Glencoe, Il, United States: Free Press.

Weber, M. (2002). *Wirtschaft Und Gesellschaft: Grundriss Der Verstehenden Soziologie* (5th rev. ed.). Tübingen, Germany: Mohr Siebeck.

WHO Regional Office for Europe. (2016). *Urban green spaces and health*. Copenhagen, Denmark: WHO Regional Office for Europe.

Wilson, E. O. (1984). *Biophilia*. Cambridge, MA, & London, United States & United Kingdom: Harvard University Press.

Wilson, E. O. (1993). In S. R. Kellert & E. O. Wilson (Eds.), *The Biophilia Hypothesis* (pp. 31-41). Washington, D.C., & Covelo, CA, United States: Island Press/Shearwater Books.

Wilson, E. O. (2006). *Naturalist* (Rev. ed.). Washington, D.C., United States: Island Press.

Wing. (2019). *Strategische beleidsanalyse Omgevingsvisie Nijmegen* [Advisory report commissioned by the municipality of Nijmegen]. Retrieved from https://www.nijmegen.nl/fileadmin/bestanden/bestuur/bestuursdossiers/omgevin gsvisie/Bestaand-beleid-advies-rapporten-Wing-190412.pdf

Wolch, J. R., Byrne, J., & Newell, J. P. (2014). Urban green space, public health, and environmental justice: The challenge of making cities 'just green enough'. *Landscape and Urban Planning*, *125*, 234–244.

Wolf, K. L. (2003). Public response to the urban forest in inner-city business districts. *Journal of Arboriculture*. *29*(3), 117–126.

World Commission on Environment and Development. (1987). *Our Common Future*. Oxford, United Kingdom: Oxford University Press.

Wu, J., Wang, M., Li, W., Peng, J., & Huang, L. (2015). Impact of Urban Green Space on Residential Housing Prices: Case Study in Shenzhen. *Journal of Urban Planning and Development*, *141*(4), 05014023.

Yin, R. K. (2014). *Case Study Research* (5th ed.). Thousand Oaks, CA, United States: SAGE Publications.

Young, R. F. (2010). Managing municipal green space for ecosystem services. *Urban Forestry & Urban Greening*, *9*(4), 313–321.

Yücesoy, E. U. (2006). *Everyday urban public space: Turkish immigrant women's perspective*. Amsterdam, the Netherlands: Het Spinhuis.

Zhang, W., Ricketts, T. H., Kremen, C., Carney, K., & Swinton, S. M. (2007). Ecosystem services and dis-services to agriculture. *Ecological Economics*, *64*(2), 253–260.

Zimmerman, M. J. (2001). *The Nature of Intrinsic Value*. Lenham, MD, United States: Rowman & Littlefield.

Annex I: Acts and Provisions That Will Be Replaced by the Environmental Law System under the *Omgevingswet*

The following 26 acts which are part of the environmental law system will be <u>fully</u> replaced by the environmental law system under the upcoming *Omgevingswet*:

Act (Dutch)	Act (English Translation)
Belemmeringenwet Privaatrecht	Public Works (Removal of Impediments in Private Law) Act
Crisis- en herstelwet	Crisis and Recovery Act
Interimwet stad-en-milieubenadering	City and Environment Interim Act
Onteigeningswet	Expropriation Act
Ontgrondingenwet	Earth Removal Act
Planwet verkeer en vervoer	Traffic and Transport Planning Act
Spoedwet wegverbreding	Road Widening Emergency Act
Tracéwet	Infrastructure (Planning Procedures) Act
Waterstaatswet 1900	Public Works Act 1900
Waterwet	Water Act
Wegenwet	Roads Act
Wet algemene bepalingen omgevingsrecht	Act providing for uniform provisions for managing the physical environment
Wet ammoniak en veehouderij	Ammonia and Livestock Farming Act
Wet beheer rijkswaterstaatswerken	Public Works (Management of Engineering Structures) Act
Wet bodembescherming	Soil Protection Act
Wet geluidhinder	Noise Abatement Act
Wet geurhinder en veehouderij	Livestock Farms (Odour Nuisance) Act
Wet herverdeling wegenbeheer	Redistribution of Traffic Management Act
Wet hygiëne en veiligheid badinrichtingen en zwemgelegenheden	Hygiene and Safety (Bathing Facilities and Swimming Opportunities) Act
Wet inrichting landelijk gebied	Rural Areas (Planning) Act
Wet inzake de luchtverontreiniging	Air Pollution Act
Wet natuurbescherming	Nature Conservation Act
Wet milieubeheer	Environmental Management Act
Wet ruimtelijke ordening	Spatial Planning Act
Wet voorkeursrecht gemeenten	Municipalities (Preferential Rights) Act
Wrakkenwet	Wrecks Act

The following 2 acts which are part of the environmental law system will be <u>partly</u> replaced by the environmental law system under the upcoming *Omgevingswet*:

Act (Dutch)	Act (English Translation)
Monumentenwet 1988	Monuments and Historic Buildings Act 1988
Woningwet	Housing Act

Futhermore, legislative provisions that "*play a role in decisions on developing the physical environment*" (Ministry of Infrastructure and the Environment, 2017b, p. 5) concerning the following topics will also be replaced by this new system:

- Energy;
- mining;
- aviation;
- railways (Kamerstukken II, 2013/14, p. 8; Ministry of Infrastructure and the Environment, 2017b, p. 5).

Annex II: List of Municipalities with a Strong or Very Strong Degree of Urbanisation

Municipality	Degree of Urbanisation
Alblasserdam	Strong
Alkmaar	Strong
Almelo	Strong
Almere	Strong
Alphen aan den Rijn	Strong
Amersfoort	Strong
Amstelveen	Strong
Apeldoorn	Strong
Arnhem	Strong
Assen	Strong
Baarn	Strong
Barendrecht	Strong
Bergen op Zoom	Strong
Breda	Strong
Brunssum	Strong
Capelle aan den IJssel	Strong
Deventer	Strong
Ede	Strong
Enschede	Strong
Etten-Leur	Strong
Gooise Meren	Strong
Gorinchem	Strong
Haarlemmermeer	Strong
Harderwijk	Strong
Heemskerk	Strong
Heemstede	Strong
Heerhugowaard	Strong
Heerlen	Strong
Den Helder	Strong
Hellevoetsluis	Strong
Helmond	Strong
Hendrik-Ido-Ambacht	Strong
Hengelo	Strong
s-Hertogenbosch	Strong
Hillegom	Strong
Hoorn	Strong
Houten	Strong
Huizen	Strong

IJsselstein	Strong
Katwijk	Strong
Kerkrade	Strong
Krimpen aan den IJssel	Strong
Leeuwarden	Strong
Leiderdorp	Strong
Lisse	Strong
Maassluis	Strong
Maastricht	Strong
Middelburg	Strong
Nieuwegein	Strong
Nijmegen	Strong
Nissewaard	Strong
Oegstgeest	Strong
Oosterhout	Strong
Papendrecht	Strong
Purmerend	Strong
Ridderkerk	Strong
Roermond	Strong
Roosendaal	Strong
Sliedrecht	Strong
Veenendaal	Strong
Veldhoven	Strong
Velsen	Strong
Venlo	Strong
Vlissingen	Strong
Voorschoten	Strong
Waddinxveen	Strong
Wageningen	Strong
Weesp	Strong
Zaanstad	Strong
Zandvoort	Strong
Zeist	Strong
Zutphen	Strong
Zwijndrecht	Strong
Zwolle	Strong
Amsterdam	Very Strong
Beverwijk	Very Strong
Delft	Very Strong
Diemen	Very Strong
Dordrecht	Very Strong
Eindhoven	Very Strong
Gouda	Very Strong

s-Gravenhage	Very Strong
Groningen	Very Strong
Haarlem	Very Strong
Hilversum	Very Strong
Leiden	Very Strong
Leidschendam-Voorburg	Very Strong
Rijswijk	Very Strong
Rotterdam	Very Strong
Schiedam	Very Strong
Tilburg	Very Strong
Utrecht	Very Strong
Vlaardingen	Very Strong
Zoetermeer	Very Strong

Annex III: Complete Overview Interviews

№	Interviewee	Organisation	Date
1.	T. van Wanroij	Municipality of Maastricht	12 May 2020
2.	A. Swart	Municipality of Veenendaal	13 May 2020
3.	R. Klaassen, D. Groeneweg, J. van der Laan & G. Hummel	Municipality of Groningen	14 May 2020
4.	M. Spreen & E. Tutert	Municipality of Deventer	18 May 2020
5.	P. Ziel	Municipality of Emmen	18 May 2020
6.	W. van Oosten	Municipality of Papendrecht	18 May 2020
7.	A. Vedder & R. Baarslag	Municipality of Zwolle	20 May 2020
8.	M. Scheeve	HLTsamen (municipal civil servant apparatus, shared by the municipalities of Hillegom, Lisse & Teylingen)	22 May 2020
9.	M. Morlog-Criellaard & S.D. Fiaschi-van der Est	Municipality of Dordrecht	25 May 2020
10.	T. van der Schoot	Van der Schoot Advies: Bureau voor Ruimtelijk Ordening en Duurzaamheid	26 May 2020
11.	E. Cortooms	Municipality of Eindhoven	27 May 2020
12.	L. Rijnboutt & J. van der Veen	Municipality of Almere	28 May 2020
13.	T. Verhoeven	Municipality of Nijmegen	29 May 2020

Strongly and Very Strongly Urbanised Municipalities in the Netherlands

N

Degree of Urbanisation [355]

Non-Urban/Low/Intermediate [263]
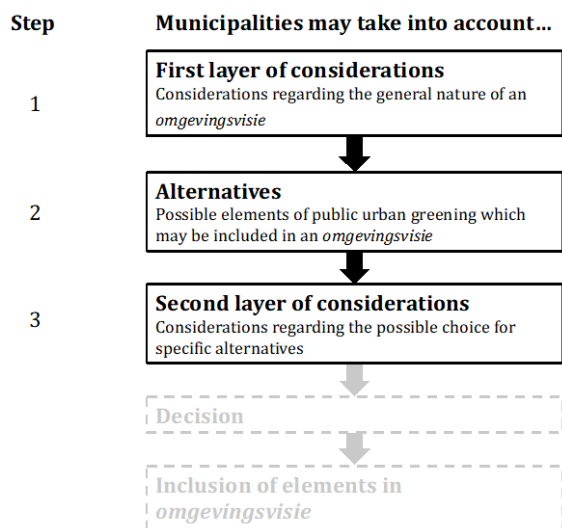Strong [73]
Very Strong [19]

1:2.500.000
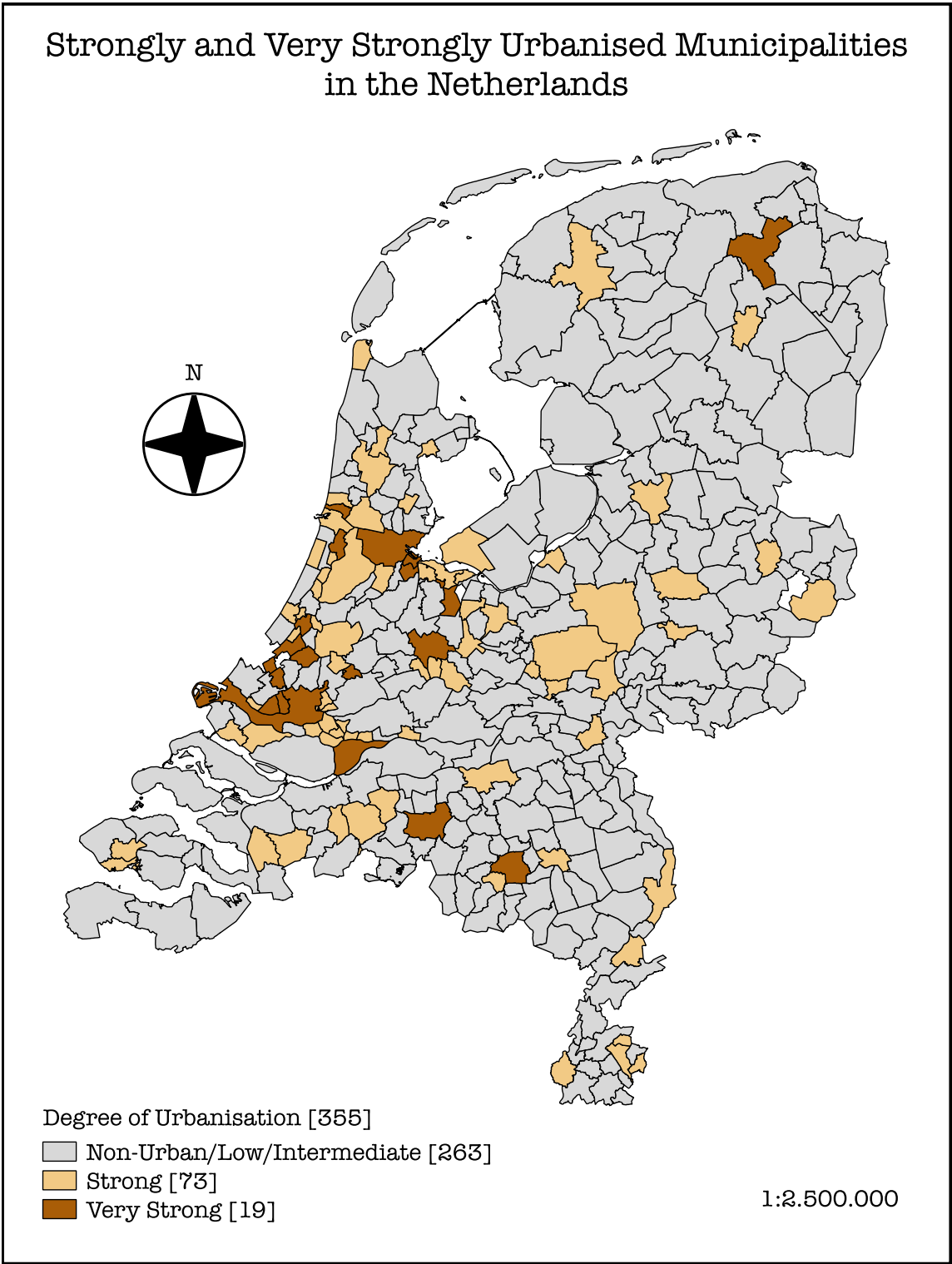
Annex VI: Interview Guide Municipalities

Inleiding

Allereerst wil ik u nogmaals bedanken voor het feit dat u uw medewerking wilt verlenen aan dit interview. Voordat we van start gaan zal ik nog even toelichten wie ik ben en waar mijn onderzoek over gaat.

Mijn naam is Jay Erdkamp en ik doe de master Spatial Planning met de specialisatie Planning, Land and Real Estate Development. In het kader van mijn masterscriptie, het laatste onderdeel van mijn master, doe ik onderzoek naar het opnemen van het thema groen in de gemeentelijke omgevingsvisie. Groen moet daarbij letterlijk worden opgevat en de focus ligt op groen in de publieke ruimte. Daarbij kan gedacht worden aan planning van kleine of grote parken, maar het kan niet zo goed gaan om kleinschaliger vormen van groen in de openbare ruimte, zoals losse bomen of bloemperken.

Het uiteindelijke doel van mijn onderzoek is het ontwikkelen van een model dat door gemeenten kan worden gebruikt in de besluitvorming over de 'groene inhoud' van de eigen omgevingsvisie. Daarbij ga ik er nu van uit dat het model gaat bestaan uit drie stappen die gemeenten achtereenvolgens kunnen doorlopen wanneer ze willen besluiten over welke groene elementen ze om welke redenen opnemen. Die hebben betrekking op de volgende zaken: (1) overwegingen met betrekking tot het algemene karakter van de omgevingsvisie, (2) inventarisatie van het totale arsenaal aan mogelijk op te nemen groene elementen en (3) overwegingen met betrekking tot specifieke groene elementen. Dat geheel ziet er als volgt uit:

Step	Municipalities may take into account…
1	**First layer of considerations** Considerations regarding the general nature of an *omgevingsvisie*
2	**Alternatives** Possible elements of public urban greening which may be included in an *omgevingsvisie*
3	**Second layer of considerations** Considerations regarding the possible choice for specific alternatives
	Decision
	Inclusion of elements in *omgevingsvisie*

Voordat we starten wil ik kort nog duidelijkheid scheppen over één kernbegrip in mijn onderzoek, namelijk het begrip overwegingen (Engels: considerations). Dat begrip gebruik ik ook in het model dat ik uiteindelijk ga maken. Ik doel hiermee op vragen die uiteindelijk kunnen worden beantwoord door gemeenten om een argumentatie te bouwen die aan de basis ligt van eventuele beslissingen over de inhoud van een omgevingsvisie.

Allereerst wil ik u graag een paar algemene vragen stellen die betrekking hebben op de functie die u binnen uw gemeente vervult.

Algemeen

1. Hoe zou u uw positie binnen uw gemeente omschrijven?

2. Welke rol(len) heeft u vervuld binnen uw gemeente met betrekking tot de gemeentelijke omgevingsvisie?

Zoals ik al verteld heb wil ik in mijn onderzoek de focus leggen op de integratie van het thema groen - en daarmee van groene elementen - in de gemeentelijke omgevingsvisie. Voordat we daarop ingaan zou ik u eerst graag een tweetal vragen willen stellen die betrekking hebben op het algemene karakter van uw (aankomende) omgevingsvisie.

Art. 3.2 Ow, waarin de inhoud van de omgevingsvisie wordt gedefinieerd, bevat het volgende:

Een omgevingsvisie bevat, mede voor de uitoefening van de taken en bevoegdheden, bedoeld in artikel 2.1, eerste lid:
- *a. een beschrijving van de hoofdlijnen van de kwaliteit van de fysieke leefomgeving,*
- *b. de hoofdlijnen van de voorgenomen ontwikkeling, het gebruik, het beheer, de bescherming en het behoud van het grondgebied,*
- *c. de hoofdzaken van het voor de fysieke leefomgeving te voeren integrale beleid* (art. 3.2 Ow)*.*

De omgevingsvisie

3. Als u een eigen, korte omschrijving van de gemeentelijke omgevingsvisie als instrument zou moeten geven, hoe zou die omschrijving dan luiden?

Met andere woorden: met wat voor instrument hebben we te maken bij de gemeentelijke omgevingsvisie?

Aandacht besteden aan de functie van de omgevingsvisie.

Het gaat hier om een algemene omschrijving die niet specifiek betrekking heeft op een specifieke gemeentelijke omgevingsvisie.

4. Hoe zou u het karakter van uw eigen gemeentelijke omgevingsvisie omschrijven?

Aandacht besteden aan de begrippen hoofdlijnen en hoofdzaken uit art. 3.2 Ow.

Hierbij eventueel vragen naar bijvoorbeeld:
- Mate van detaillering;
- tijdshorizon;
- integraliteit;
- speciale focus op specifieke thema's

- …

De (gemeentelijke) omgevingsvisie is een beleidsdocument, wat betekent dat het juridisch gezien alleen zelfbindend. Naar ik begrepen heb is afwijking van de omgevingsvisie mogelijk, mits die afwijking maar gemotiveerd wordt. Daarom zou ik nog even met u willen kijken naar wat het belang van het instrument is voor het te voeren/gevoerde gemeentelijke ruimtelijk beleid.

5. In hoeverre is de inhoud van de gemeentelijke omgevingsvisie van belang voor het ruimtelijke beleid dat uw gemeente uiteindelijk voert?

Het gaat hier om:
- Doorwerking van de visie in andere instrumenten;
- de uiteindelijke implementatie van beleid.

Nu we het in meer algemene termen hebben gehad over de gemeentelijke omgevingsvisie wil ik het graag met u hebben over het thema groen in de gemeentelijke omgevingsvisie.

Groen in de gemeentelijke omgevingsvisie

6. In hoeverre is er volgens u een plaats voor het thema groen in een gemeentelijke omgevingsvisie?

Het draait hier specifiek om groen in de publieke ruimte.

7. In hoeverre is de gemeentelijke omgevingsvisie het juiste instrument om gedetailleerd ruimtelijk beleid op te nemen, speciaal met betrekking tot groen in de publieke ruimte?

Gedetailleerd moet hier worden opgevat als het vermijden van ambiguïteit. Met andere woorden: is er plek voor beleidsbeschrijvingen als "in buurt A willen we park X ontwikkelen met die en die kenmerken" of "in straat B willen we zoveel bomen van soort Y hebben"?

8. Op welke manier is het thema groen in de publieke ruimte al dan niet opgenomen in uw gemeentelijke omgevingsvisie?

Hierbij kunnen onder andere de volgende zaken relevant zijn:
- Detaillering;
- ruimtelijk schaalniveau waarover een visie gepresenteerd wordt;
- …

9. Welke achterliggende motieven hebben een rol gespeeld bij het opnemen van de groene elementen in kwestie?

Bijvoorbeeld relevant zijn hier:
- Waarden en normen (bijvoorbeeld: menselijk welzijn, biodiversiteitsbescherming, omgevingskwaliteit, esthetische voorkeuren);
- andere beleidsdocumenten die al bepaald relevant beleid formuleren;

- maatschappelijke ontwikkelingen;
- ...

10. In hoeverre kunnen participatieprocessen rondom de gemeentelijke omgevingsvisie volgens u een belangrijke bijdrage leveren wanneer het gaat om het vormen van een visie op groen in de publieke ruimte?

Waar het hier eigenlijk om draait is om de vraag of en, zo ja, in welke mate maatschappelijke input een significante rol kan spelen bij het opnemen van groene elementen. Met andere woorden: in hoeverre denkt u dat het zinvol is om input over het thema groen in de publieke ruimte te verzamelen tijdens participatietrajecten rondom de gemeentelijke omgevingsvisie?

De gemeenteraad moet de omgevingsvisie uiteindelijk aannemen. Ik kan me daarom zo voorstellen dat de positie van de raad op het gebied van publiek groen van invloed is op de uiteindelijke inhoud van de omgevingsvisie. Daarbij kan ik me echter ook voorstellen dat een gemeenteraad een meer actieve rol speelt, door zelf input te willen leveren voor de visie, maar dat er daarentegen ook sprake kan zijn van een meer passieve rol, waarbij de gemeenteraad voornamelijk beoordeelt wat reeds door ambtenaren is opgeschreven. Wellicht zijn de actieve en de passieve rol zoals ik ze voorstel ook uitersten en zit er een heel spectrum van mogelijkheden tussen.

11. Als het gaat om de input aan groene elementen die vanuit de gemeente zelf is gekomen, welk van beide rollen, actief of passief, heeft de gemeenteraad van uw gemeente daarbij gespeeld?

12. In hoeverre klinkt de politieke kleur van de gemeenteraad door in de gemeentelijke omgevingsvisie, meer specifiek voor wat betreft het onderdeel groen in de publieke ruimte?

Een aantal soorten overwegingen zijn de revue al gepasseerd. Ik wil u ook graag in de gelegenheid stellen om zelf nog andere overwegingen aan te dragen die van belang zijn voor de vraag welke groene elementen in de omgevingsvisie worden opgenomen. Die overwegingen kunnen misschien gaan over hoe het algemene karakter van de omgevingsvisie, of ze hebben daarentegen betrekking op de motivaties achter het opnemen van specifieke groene elementen.
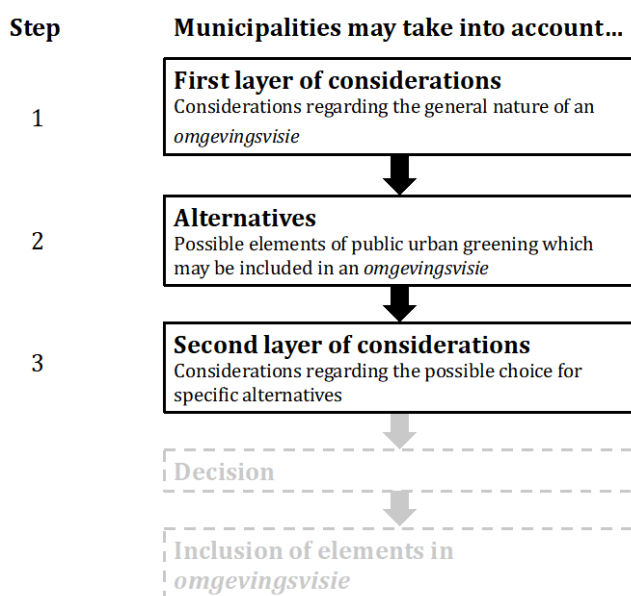
13. Welke overwegingen met betrekking tot het algemene karakter van de gemeentelijke omgevingsvisie zouden nog meer van belang kunnen zijn voor hoe de 'groene inhoud' van de omgevingsvisie wordt ingevuld?

14. Welke overwegingen met betrekking tot specifieke groene elementen zouden nog meer van belang kunnen zijn voor hoe de 'groene inhoud' van de omgevingsvisie wordt ingevuld?

We hebben het gehad over het opnemen van groen in de gemeentelijke omgevingsvisie. Zoals ik reeds heb verteld is het mijn bedoeling om aan de hand van wat u en medewerkers van andere gemeenten mij vertellen een model te maken dat kan worden gebruikt bij het vormgeven van de gemeentelijke omgevingsvisie voor wat betreft het thema groen in de publieke ruimte in steden. Ik zou met u nog graag even willen kijken naar de vorm van het model en naar uw mening daarover.

Het (te ontwikkelen) model

De basis voor het model dat ik wil gaan ontwikkelen ziet er als volgt uit:

Step	Municipalities may take into account...
1	**First layer of considerations** — Considerations regarding the general nature of an *omgevingsvisie*
2	**Alternatives** — Possible elements of public urban greening which may be included in an *omgevingsvisie*
3	**Second layer of considerations** — Considerations regarding the possible choice for specific alternatives
	Decision
	Inclusion of elements in *omgevingsvisie*

15. Welke elementen van het model zouden volgens u behouden moeten worden?

16. Welke elementen van het model zouden volgens u verplaatst of verwijderd moeten worden?

17. Welke toevoegingen aan het model zouden volgens u zinvol zijn?

We zijn nu bijna bij het einde van het interview aanbeland. Mogelijk zijn er zaken die nog niet aan bod zijn gekomen en die u nog wilt benoemen.

Slot

18. Heeft u nog toevoegingen, opmerkingen of aanmerkingen met betrekking tot wat we besproken hebben in dit interview?

We zijn nu aan het einde gekomen van dit interview. Ik wil u nogmaals bedanken voor uw medewerking.

Het vervolg ziet er ongeveer als volgt uit: ik ga het interview nu eerst tekstueel uitwerken en die uitwerking analyseren. Aan de hand van deze analyse beslis ik welke delen uit het interview ik zou willen opnemen in mijn scriptie. Vervolgens zal ga ik die delen integreren in mijn masterscriptie. Het onderzoek zal uiteindelijk ook openbaar toegankelijk worden. Mede om die reden wil ik u nog de mogelijkheid bieden om mijn uitwerking zoals ik hem wil opnemen in de scriptie in te zien en eventueel te becommentariëren alvorens hij openbaar toegankelijk wordt. Dat commentaar zal ik dan verwerken. Nadat ik mijn scriptie met succes heb afgerond zal ik, indien gewenst, de resultaten met u delen.

Annex VII: Ways of Integration per *Omgevingsvisie*

Nijmegen (Gemeente Nijmegen, 2020)

Preface
Summary
Mission: social and healthy city
Mission: attractive city
Mission: sustainable city
Spatial choices for the physical living environment, derived from missions
Omgevingsvisie map
Maps for individual spatial choices (excluding spatial choice green, healthy city)
Spatial choice: green, healthy city
Spatial choice: larger city centre area
Spatial choice: we embrace the canal
Summary results OER (*omgevingseffectrapportage*; environmental effects report)
Development principles: bundling missions for steering on spatial quality

Maastricht (Gemeente Maastricht, 2020a)

Preface
Summary
Introduction
Trends and developments
Schematic representation: 3D-approach for approaching everything under and above Earth's surface in a coherent way
Theme for future policy: healthy and liveable, sub-choice facilitating together- and self-reliance
Theme for future policy: healthy and liveable, sub-choice protecting against harmful developments and effects
Theme for future policy: healthy and liveable, sub-choice stimulating a healthy lifestyle
Theme Principles and measures healthy and liveable
Theme: experience and meeting
Image of spatial aspirations
Map image of spatial aspirations
Spatial framework, elaboration of image of spatial aspirations: framework of water, green, nature, and landscape
Map spatial framework, elaboration of image of spatial aspirations: framework of water, green, nature, and landscape
Spatial framework, elaboration of image of spatial aspirations: framework of main infrastructure, P&R, and train tracks
Map spatial framework, elaboration of image of spatial aspirations: framework of main infrastructure, P&R, and train tracks
Spatial framework, elaboration of image of spatial aspirations: framework of pedestrian and biking routes
Map spatial framework, elaboration of image of spatial aspirations: framework of pedestrian and biking routes

Map full spatial framework
Area profiles, general explanatory description
General principles area profiles
Map area profiles
Within area profile descriptions
Area profile: green and natural areas
Map area profile: green and natural areas
Locational choice ladder (*ladder voor locatiekeuze*)
Realisation strategy: guiding principles and working procedure
Realisation strategy: agenda for phasing missions and measures
Realisation strategy: investment agenda

Groningen (Gemeente Groningen, 2018)

Top choices for the city
Introduction
Map: development map municipality
Overarching theme (*samenbindend thema*): quality of life
Goal: sustainable and future-proof municipality
Strategy: realising mission facilitating growth of the city
Strategy: realising mission employment grows together with city and region
Strategy: realising mission the growing city stays liveable and attractive to all inhabitants
Map strategy: realising mission the growing city stays liveable and attractive to all inhabitants
Strategy: realising mission everyone participates and helps in a growing city
Omgevingswaarden (environmental values), general statements, not definitive

Deventer (Gemeente Deventer, 2019)

Characteristics municipality: summary
Developments: health care and health
Developments: energy transition, climate adaptation, and circular economy
Main ambition: redeeming the existing (*verzilveren van het bestaande*)
Main ambition: acting in a future-proof way
Development directions for sub-areas
Tables development directions for sub-areas: development directions functions
Maps development directions sub-areas
Route map: from initiative to realisation, finding a balance between steering and giving space
Annex existing policy: summary
Annex identity and positioning
Annex sub-areas

Eindhoven (Gemeente Eindhoven, 2020)

Summary
Chapter regional cooperation and development
Future image: sub-ambition healthy and future-proof city
Trends and development: work and economy

Current state: healthy and future-proof city

Map current state: healthy and future-proof city, landscape parks and natural network

Trends and developments: healthy and future-proof city

Current state: authentic city with strong sub-areas, environmental qualities in the city

Map current state: urban and green main structure

Urban mission: working on a healthy growth of the city

Urban mission: working on an attractive and highly urbanised city centre

Urban mission: working on liveable and social neighbourhoods with a strong identity

Working on urban missions: steering on quality

Working on urban missions: keeping missions affordable

Annex: historical development city

Annex: healthy city

Annex: green living environment

Annex: points of departure for new spatial initiatives

Zwolle (Gemeente Zwolle, 2017)

Map: infrastructure, tunnels and bridges, green and public space, and spatial developments

Images: future development directions, new expressions of urbanisation

Analysis, trends, and developments: health

Analysis, trends, and developments: office market

Analysis, trends, and developments: economic importance of green and water structure

Map: green structure

Strategical missions and ambitions: physical city as a fundament

History city and landscape

Vision development train station area

Sub-mission: strengthening (level of) urbanisation and a larger city centre area

Development city centre

Current policy: housing vision, main ambitions and missions

Sub-mission: growth of the city and building in the inner-city

Sub-mission: strengthening the economy of city and region

Core ambition vital, solidary, healthy, and sustainable areas of the city: building block health

Core ambition vital, solidary, healthy, and sustainable areas of the city: building block sustainability

Ambitions for future *omgevingsvisie* after revision

Map: heritage

Maps: layers of green structure

Map: public green space

Map: natural values