

Legislating sustainability? Yes, if...

An institutional analysis on what instruments can be used and how these instruments can be used to legislate a sustainability vision for an area development in the light of the Environmental planning Act.

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A case study of the World Food Center

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Abstract

With signing the Paris Agreement in 2016, the Netherlands agreed to achieve the global goal to keep the global temperature rise under 2 degrees Celsius to reduce the risks and effects of climate change. To achieve this goal, a decrease of the emission of carbon dioxide by at least 80 percent in comparison to 1990 is necessary. To accomplish this, the Netherlands has to take action. An important link to this sustainable transition is the new Environmental planning Act that will be implemented in 2021 in the Netherlands. This is a huge reformation of the spatial planning legislation in which all 26 current Acts and many regulations will be merged into one new Act. As a result many municipalities created an additional sustainability vision to a structural vision for an area development or for their whole municipality about their goals on sustainability. Legislation of sustainable measures is an important aspect to achieve these goals. However, legislating a sustainability measures is something new and therefore there is no jurisprudence on this subject. With this master's thesis, research is done on which new and existing instruments can be used to legislate a sustainability vision for a specific area development in the light of the Environmental planning Act.

In conclusion, there might be more possibilities for municipalities to legislate sustainability measures. The environmental plan seems to be the instrument with the most impact in the legislation of sustainability measures. A program could be helpful to find the right balance between the feasibility of ambitions, before the legislation of measures in the environmental plan. However, municipalities have to think carefully about what sustainability measures they legislate by public legislation and how they legislate this. It is important for municipalities to find the right balance between all their ambitions and the internal and external variables that influence the decision-making process in the legislation of the structural vision with additional sustainability vision, such as the political agenda or financial resources. Also a right balance between the technical possibilities and the financial impact is necessary to reach the end goal: a sustainable environment.

Key words

Environmental planning Act, sustainability vision, sustainable area development, legislation

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In front of you, you see my Master Thesis. This is the final product of my master Spatial Planning with the specialization of Planning, Land and Real Estate Development. With this thesis, my time at the Radboud University in Nijmegen has come to an end, where I have studied and lived for four years.

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I hope you enjoy reading my thesis.

Sanne Veldhuizen

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List of Abbreviations

This is the list with abbreviations used in this research. For the translations from Dutch into English of these abbreviations, see the next section with translations.

Awb	Algemene wet bestuursrecht
Bal	Besluit activiteiten leefomgeving
Bbl	Besluit bouwwerken leefomgeving
BCI	Building Circularity Index
BENG	Bijna Energieneutraal Gebouwd
Bkl	Besluit kwaliteit leefomgeving
BREEAM	Building Research Establishment Environmental Assessment Method
Bro	Besluit ruimtelijke ordening
Bu Chw	Besluit Crisis -en Herstelwet
Chw	Crisis -en Herstelwet
EPC	Energieprestatie Coefficient
EVRM	Europees Hof voor de Rechten van de Mens
GPR	Gemeentelijke Praktijk Richtlijn
MPG	Milieuprestatie gebouwen
Ow	Omgevingswet
RvS	Raad van State
Stb	Staadsblad
Wabo	Wet algemene bepalingen omgevingsrecht
Wet VET	Wet Voortgang Energietransitie
WFC	World Food Center
WFC-D	World Food Center Development
Wgh	Wet geluidshinder
Wnb	Wet natuurbescherming
Wro	Wet ruimtelijke ordening

List of Definitions

This thesis contains Dutch legislation and therefore there are words that do not have a literal translation. These words are showed in this table below and are roughly translated into English to improve the readability of this research.

Dutch definition	Roughly translated into English	Brief explanation in English
Algemene rijksregels voor activiteiten	General regulation for activities	General national rules to protect the environment.
Anterieure overeenkomst	Development agreement	Contract between a municipality and a developer or landlord in which the municipality can recover particular costs, such as costs for creating the zoning plan.
Algemene wet bestuursrecht (Awb)	General Act on administrative law	General Dutch Act that contains the general rules on the relationship between the government, businesses and the individual.
Besluit activiteiten leefomgeving (Bal)	Decision activities living environment	Contains general rules for citizens and businesses for when they want to execute certain activities in the physical environment and which activities need an environmental permit.
Besluit bouwwerken leefomgeving (Bbl)	Decision buildings living environment	Contains general rules for citizens and businesses for when they want to execute certain activities in the physical environment and describes which activities need an environmental permit when this activity contains building or a building.
Bijna Energieneutraal gebouwd (BENG)	Almost energy neutral built	All the newly built buildings need to conform to the BENG criteria to be able to apply for an environmental permit.
Besluit kwaliteit leefomgeving (Bkl)	Decision quality living environment	Sets substantive norms for municipalities, provinces, water boards and the national government focused on realizing the national goals and to meet international obligations.
Besluit uitvoering Crisis -en herstelwet (Bu Chw)	Decision for the implementation of the Crisis and Recovery Act	Rules for the implementation of the Chw.
Bestemmingsplan	Zoning plan	Zoning plan for a specific area in the existing legislation.

Bestemmingsplan met verbrede reikwijdte	Zoning plan with a broader scope	The zoning plan has a broadened scope as part of the Crisis and Recovery Act. Municipalities have the opportunity to experiment with the environmental plan of the Environmental planning Act with this type of zoning plan.
Besluit ruimtelijke ordening (Bro)	Decision on spatial planning	Detailed elaboration of the Wro.
Bouwbesluit 2012	Building decision Act 2012	Currently, all construction works need to be built conform the prescriptions of the Building decision Act 2012. Under the Environmental planning Act this Act will be replaced by the Bbl.
Crisis -en herstelwet (Chw)	Crisis and Recovery Act	Dutch Act that was implemented initially in 2010 after the economic crisis to accelerate developments to realize spatial and infrastructural projects. However, it became the transitional act to the Environment planning Act to already experiment with some instruments.
Decentrale regelgeving	Decentral rules	The decentral governments collect their rules on the physical environment in one arrangement for the complete area.
Duurzaamheidsvisie	Sustainability vision	Vision of a municipality on sustainability issues for the whole municipality or a specific area development supplementary to the environmental vision.
Dynamische verwijzing	Dynamic reference	To make a zoning or environmental plan more flexible, a reference from the plan to a policy line can be made.
Energieprestatie Coefficient (EPC)	Energy performance index	All construction works need to be conform the energy performance index prescribed in the Building decision Act 2012.
Exploitatieplan	Development contributions plan	This plan is obligated for a municipality to add to their zoning plan for an area development if there is no development agreement with the developer or landlord. In this plan, requirements for an area are set.
Gebodsbeperking (gebod)	Order	Under the Environmental planning Act it will be possible to include orders in the environmental plan which obligates a person or a business to do something.

Goede ruimtelijke ordening	Appropriate spatial planning	According to Article 3.1 of the Wro, the rules that are included in a zoning plan have to be on behalf of appropriate spatial planning. The meaning of appropriate spatial planning is created with jurisprudence.
Kavelpaspoort	Passport for a plot of land	A document which prescribes all the information and regulations for a specific area in an understandable way on what is allowed on a plot of land.
Milieuprestatie gebouwen (MPG)	Environmental performance of buildings	Article 5.9 in the Building decision Act 2012 prescribes the maximum burden that materials of buildings can have on the environment.
Nadeelcompensatie	Compensation for disadvantage	When measures that are legislated in a zoning plan or environmental plan are not urgent enough or not in the public interest, a municipality has to pay compensation for disadvantage.
Ontwikkelingsplanologie	Pro-active planning	A government should encourage land development that will achieve the desired changes.
Omgevingsbesluit	Environmental decision	Additional rules to the law, such as which administrative body is allowed to grant an environmental permit and which procedures are valid.
Omgevingsplan	Environmental plan	This is the new zoning plan in the Environmental planning Act. An environmental plan is valid in a complete municipality.
Omgevingsvergunning	Environmental permit	A permit that is granted by a municipality. An environmental permit is necessary when activities may affect the environment, such as construction work.
Omgevingsvisie	Environmental vision	Strategic vision on how the physical environment of a municipality should be developed on the long term.
Omgevingswaarde	Environmental value	A standard for the quality of the physical environment that a government wants to achieve.
Omgevingswet (Ow)	Environmental planning Act	New Dutch law in which all Dutch legislation on spatial development is merged.

Programma	Program	Policy document that involves a set of concrete measures for the development, protection, monitoring and usage of the physical environment.
Projectbesluit	Project decision	Contains a single procedure for complex projects to make them easier and faster.
Provinciaal inpassingsplan	Provincial embedding plan	Zoning plan of a province which overrules local zoning plans of municipalities.
Provincie	Province	A province is a regional administrative body of a subarea in the Netherlands. It is the layer of government between the national government and municipalities. In the Netherlands there are 12 provinces.
Raad van State (RvS)	Council of State	Independent advisor of the government and parliament on legislation. This is also the highest administrative law court in the Netherlands.
Rijk (het)	National government	The national government of the Netherlands.
Specialiteitsbeginsel	Principle of specification	An administrative body may only look after those interests for which the law or regulation concerned provides a foundation.
Structuurvisie	Structural vision	Strategic policy document on the spatial and functional developments in a municipality.
Toelatingsplanologie	Passive planning	Projects are only possible to realize if they are explicitly allowed.
Uitnodigingsplanologie	Facilitative planning	Type of governing that invites private developers, project developers and other societal institutions to develop a specific area by themselves
Verbodsbeperking	Prohibition	In zoning plans and future environmental plans can be made use of prohibitions. There can be prescribed that someone is not allowed to do something.
Verklaring van geen bedenkingen	Declaration of no concerns	When an initiator applies for an environmental permit he has to show that he will take care of protected species with measures. If the province thinks these measures are sufficient, then the declaration will be granted.

Voorwaardelijke verplichting	Conditional obligation	Municipalities can add a conditional obligation in their zoning plan or environmental plan so someone can only do something in return for a specific requirement.
Wet algemene bepalingen omgevingsrecht (Wabo)	Planning permission Act	The Planning permission Act arranges the environmental permit.
Warmtewet	Warmth Act	Legislation on the safe and sustainable supply of warmth in the warmth network.
Wet geluidshinder (Wgh)	Noise pollution Act	This Act protects noise-sensitive buildings (e.g.) with the use of zoning against noise pollution from industrial sector, roads and railways.
Wet natuurbescherming (Wnb)	Nature protection Act	Act with rules on the protection of the nature.
Wet ruimtelijke ordening (Wro)	Spatial planning Act	Most important Act in the spatial decision-making process under the current legislation.
Wet Voortgang Energie Transitie (Wet VET)	VET Act	Act to facilitate the sustainable energy supply by prescribing that newly built houses should not be connected to the gas network.
Woningwet	Housing Act	Act with regulations on construction and public housing.

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1. Introduction to the research

In this chapter is discussed why this research is done and which questions appeared from the research problem. The chapter is divided between the following subsections: the reason for this research, the research problem, the research aim, the research questions and the societal and scientific relevance of this research.

1.1 Research problem statement

1.1.1 Reason for this research

In 2015, a groundbreaking worldwide agreement was signed during the yearly United Nations Climate Change Conference in Paris: the Paris Agreement. This agreement will be implemented in 2020. The goal of this agreement is to keep the global temperature rise below two degrees Celsius with a strong aim to keep the rise even below 1.5 degrees Celsius. In 2030, the emission of carbon dioxide has to be decreased with 49 percent worldwide and in 2050, the emission of carbon dioxide needs to be 80-95 percent less than it was in 1990. The Netherlands is one of the parties that signed the Paris Agreement. In the Netherlands, the government tries to achieve this goal with the cooperation of local governments, the market and civil society organizations. Because if the government wants to achieve these goals, everyone involved should participate (Rijksoverheid, 2018a). On the 28th of June 2019, the final climate agreement of the Netherlands was published which contains a set of measures to decrease the emission of carbon dioxide (Het Nederlands Kabinet, 2019).

The Netherlands is already making transitions to become more sustainable. One major example in the Netherlands to reach the climate goals is the national energy transition. In this transition, the Netherlands will go from the use of fossil fuels, such as gas to more sustainable energy sources, such as wind or solar energy. The government has started with an experiment in specifically designated areas, taking existing houses off the gas and connecting them to a more sustainable energy source (Rijksoverheid, 2018b). However, this transition brings many challenges. Taking a house off the gas is initially a costly investment for a homeowner. For example, not only the gas has to be taken off, a house also needs better insulation and a heat pump needs to be installed, because a central heating boiler works on gas.

An important link to the sustainable transition in the Netherlands is the new Environmental planning Act (Ow). This act will have a huge impact on the environmental legislation and therefore on how sustainability-related issues can be legislated, such as measures that can help to reach the goals concerning the energy transition (Aan de slag met de Omgevingswet, n.d.-d).

The first signs of the new Environmental planning Act were visible in October 2010. The coalition agreement of the Cabinet of Rutte I was published and suggested serious changes in regard to the way environmental legislation was arranged (Rijksoverheid, 2010; Tonnaer, 2017). Two years later the Cabinet of Rutte II announced in their coalition agreement that they would come up with a proposal for a new system for environmental legislation in 2012 (Rijksoverheid, 2012). This proposal was eventually submitted in 2014 to the Upper Chamber and Lower Chamber of the Dutch parliament. The proposal was positively received and in 2016 the Environmental planning Act was published in the Staatsblad¹, in which official announcements of the government are published by the government. However, the Environmental planning Act has not taken effect yet (Tonnaer, 2017).

¹ Stb. 2016, 158.

As the Act will take effect on the 1st of January 2021 (Aan de slag met de Omgevingswet, n.d.-b; De Nijs & Tijssen, 2016; Schultz van Haegen, 2017), 26 different Acts on spatial planning will be merged to create a framework for the integration of different aspects of the physical living environment, such as spatial planning, nature and the (physical) environment and to make environmental legislation easier to understand. Furthermore, a lot of the current environmental legislation is outdated and interferes with innovation focused on sustainability. The Environmental planning Act will in particular support and stimulate the transition to a sustainable environment (Ministerie van IenM, 2014).

Currently, municipalities create a sustainability vision as an addition to a structural vision or create a municipal sustainability vision for their whole municipality to describe their goals on sustainability. Ahead of the implementation of the Environmental planning Act, municipalities are also able to take the first steps in creating a more integrated municipal environmental vision in which subjects such as spatial planning, sustainability and nature can be incorporated.

As explained before in the example on taking houses off the gas, some experiments already take place. This is possible, because of the implementation of the Crisis and Recovery Act. This act offers the possibility to experiment with some of the new possibilities that the Environmental planning Act will offer, ahead of the implementation. Therefore municipalities are able to legislate measures that support sustainable development (described in their sustainability vision for an area development or environmental vision) by public law in designated areas in a so called zoning plan with a broader scope.² It is essential for municipalities to think about the consequences of these zoning plans with a broader scope and the ability to legislate sustainability measures by public law, ahead of the actual implementation of the Environmental planning Act. It is furthermore important to gain an understanding on how to legislate a sustainability vision in the framework of the new Environmental planning Act in a way that is future proof and which variables affect this.

1.1.2 Research problem

The development and implementation of the Environmental planning Act is a long process: the implementation will be in approximately two more years if everything goes according to plan and the transition period after the implementation will be another eight more years till 2029 (Schultz van Haegen, 2017). The problem is that nobody knows what the best way is to legislate the ambitions on sustainability described in an environmental vision or a sustainability vision. The legislation should also be future proof and therefore flexible, because a zoning plan currently expires after ten years.³ Environmental plans under the Environmental Act will not have an expiry date, but they have options to create flexible policies. The research problem is in the first place that there is a lack of knowledge on what instruments could be used to legally bind a sustainability vision in a flexible way. Secondly, the research problem is that that is a lack of knowledge on how to legislate a sustainability vision in a way that stakeholders in an area want to execute it, to reach the local and national goals on sustainability.

² Art. 2.3 Clause 1 Chw.

³ Art. 3.1 Clause 2 Wro.

1.2 Research aim and research questions

1.2.1 Research aim

The aim of this research is to find out what new or existing instruments can be used and how these instruments can be implemented to legislate a sustainability vision for an area development in the light of the new Environmental planning Act. It is important to create a clear in-depth view on how a sustainability vision could be legislated in the framework of the Environmental planning Act, because this could be an example for other future area developments on how to legislate ambitions on sustainability under the future Environmental planning Act. It is essential to create and understand this view to reach the climate goals and to develop a sustainable physical environment. Many municipalities are now on the verge of creating an environmental vision with an integrated sustainability vision or already have created an additional sustainability vision for the whole municipality or for particular projects to achieve their sustainability goals. Therefore, it is essential to identify what instruments can be used to legislate these ambitions on sustainability.

1.2.2 Research questions

The main question that derives from the introduction to this research is:

'What instruments can be used and how can these instruments be used to legislate a sustainability vision for an area development in the light of the Environmental planning Act, such as the World Food Center in Ede?'

To answer the main question and to achieve the research aim, there are a few sub questions that need to be answered:

- What is the necessity and usefulness of the legislation of a sustainability vision?
- What existing instruments can be used to legislate a sustainability vision?
- How can these existing instruments be used to legislate a sustainability vision?
- What new instruments can be used to legislate a sustainability vision?
- How can these new instruments be used to legislate a sustainability vision?
- What are the impacts and challenges of legislating a sustainability vision?

1.3 Scientific and societal relevance

1.3.1 Scientific relevance

The Environmental planning Act represents a change of the complete system of spatial planning in the Netherlands. This is a huge transition, so there is a lack of knowledge on some issues. In the first place, there are no examples of successfully implemented environmental visions or plans. Secondly, there is no example of the implementation or legislation of sustainability measures and how this would work out and lastly, currently there is no jurisprudence, seeing as the Environmental planning Act is not implemented yet.

Stec Groep published a report in December 2018 on the status of municipalities already working with the Environmental planning Act. The moment this report was published, 50 percent of the municipalities in the Netherlands did not understand the part regarding spatial planning in the Environmental planning Act. Only 15 percent of the municipalities in the Netherlands created an environmental vision (with an integrated sustainability vision) in

accordance with the Environmental planning Act, 43 percent was still working on it and 39 percent had the plans to create one. Several municipalities had started experimenting with the Crisis and Recovery Act. However, there was not one municipality that translated their environmental vision into an environmental plan (Timmen, Geuten & Van den Bosch, 2018).

Nevertheless, municipalities have a transition period of eight years after the implementation of the Environmental planning Act in 2021, so they have a considerable timeframe to translate their zoning plans into one environmental plan. An increasing number of municipalities are working on a zoning plan with a broader scope for a specific area development to experiment in advance with some of the possibilities that the future environmental plan offers under the Environmental planning Act. For example on sustainability. An example of such an area is the Bavo area development (Hollemans & Oude Weernink, 2018).

The legislation of a sustainability vision will not be easy, because it is not yet clear how far governments can go with the legislation of sustainability goals. Besides that, there is no knowledge yet on what the possible best way would be to legislate ambitions on sustainability in the framework of the Environmental planning Act with existing and new instruments. At this point, not much research has been done on legislating a sustainability vision for an area development. This research will therefore contribute to the creation of new knowledge that will help to elaborate the options for legislating a sustainability vision and in the future the environmental vision.

1.3.2 Societal relevance

Considering the Environmental planning Act, the government wants to respond to the societal development of the changing relationship between governments, the market and civil society (De Nijs & Tijssen, 2016). There are two main societal goals which will be legislated in article 1 of the Environmental planning Act when it will come into effect. The first one is to reach and maintain a safe and healthy physical environment and a good environmental quality. The second one is to monitor, use and develop the physical environment to accomplish societal needs.⁴

To reach these societal goals and primarily the first goal, a sustainability vision for an area development or sustainability ambitions incorporated in the environmental vision are decent ways to include all the ambitions of the municipality on sustainability. The Environmental planning Act has an integral approach, which is of great importance to achieve a sustainable living environment, because in this way sustainability has an influence on all the other subjects that have an influence on the physical living environment. This research will contribute to the understanding of the legislation of sustainability measures through the Environmental planning Act. Therefore, this study will help municipalities to understand their abilities and the possible tools at their disposal prior to the actual implementation of the Act, that will help to achieve these societal goals and that is why this research is important.

⁴ Art. 1.3 Ow.

2. Theory

In this chapter, the most relevant and important theoretical concepts in relation to the legislation of the sustainability vision are elaborated. In the first section, the theoretical concepts are elaborated on, in the second section the concepts are shown in relation to each other in a theoretical framework and in the third paragraph the most important variables are shown in an operationalization scheme.

2.1 Existing and new legislation on sustainability

In this paragraph, the most important context on the existing and new legislation on sustainability is elaborated. In the first subsection, an explanation is given on how policies are created and what policy instruments there are in general. In the second subsection, the Environmental planning Act, its instruments and the possibilities for sustainability in the framework of the Environmental planning Act are elaborated on.

2.1.1 Sustainability related policies

Policies have the aim to reach certain goals, with certain means and certain time choices. A policy should be an answer to a problem and policies have the law as legal reflection. To create a successful policy it is important to understand the societal processes that have an interest in a certain problem (Hoogerwerf, 2014, p. 18).

Policy instruments to create sustainable developments

Stimulating and creating sustainable developments cannot only be achieved with legislation, but also has to do with the behavior of citizens, the market and governments (Sillevis Smitt, 2016). This means that goals cannot be reached with legal instruments only. Besides the legal instruments, there are policy instruments (Aan de slag met de Omgevingswet, n.d.-a; de Jong, 2014). Governments have to decide what instruments are necessary to reach their goals (Hoogerwerf, 2014, p. 18). These policy instruments can be used individually or in general. General means that the instrument has the same content for a complete group of persons or an organization. Individual means that the instrument can formulate specific conditions for a specific person or organization. Policy instruments can be used as restrictive or expansive instruments as well. Restrictive means that behavior possibilities of the target group are reduced. When an instrument is expansive, it increases the behavior possibilities of the target group (Fenger & Klok, 2014, p. 192). There are three policy instruments that are used frequently:

- Financial and economical instruments, also called financial incentives. A government rewards someone for good behavior with financial tools. An example of an expansive instrument is a subsidy for solar panels and an example of a restrictive instrument is tax.
- Communicative instruments by sending or developing information. These instruments are used to enlarge the knowledge of people or companies. An example of an expansive communicative instrument is instruction and an example of a restrictive instrument is propaganda.
- Legal instruments, such as rules and legislation. An example of an expansive instrument is an order and an example of a restrictive instrument is to institute a ban (Aan de slag met de Omgevingswet, n.d.-a; Fenger & Klok, 2014; Korsten, 2005). In some literature, the legal instruments are described as administrative instruments, a branch of public law (Lindén, Carlsson-Kanyama & Eriksson, 2006).

Sometimes a fourth instrument is mentioned: the physical instrument. These instruments do not change anything about the legislation behind the policy, economical consideration or the information of citizens. However, it does try to influence the behavior of people (Overmars, 2014). An example of an expansive physical instrument is the expansion of the network of roads. An example of a restrictive physical instrument is a gateway (Fenger & Klok, 2014).

Below in table 1, the four types of policy instruments are pictured in a table with their influence and the effect they have (Lindén, Carlsson-Kanyama & Eriksson, 2006). These instruments are created by authorities and based on national policy decisions. In practice a combination of different instruments is used to solve an issue (Fenger & Klok, 2014).

Instrument	Influence	Effect
Information	Voluntary	Slow
Economic instruments	Catalytic	Short-range
Administrative instruments	Immediate, forcing	Middle-range
Physical improvements	Reminding, repeating	Change habits

Table 1. Policy instruments, their influence and effect. Source: Lindén, Carlsson-Kanyama & Eriksson, 2006

Style of governing as additional instrument

In most literature, three forms of governing are mentioned: the first form is regulating which sets frameworks and often works with legal instruments. The second one is facilitating which supports and gives space to initiatives, and the third and final governing style is stimulating that participates and works together with initiatives (Aan de slag met de Omgevingswet, n.d.-a; VNG, 2015a). In some literature a fourth form of governing is mentioned which is the performing style of governing which focuses on effective results and is well aware of the risks (De Winter, 2017; Meun et al., 2018).

In the area of spatial planning the regulating governing style is seen as the traditional form, also called passive planning. This type of governing style was used in the 20th century after the second World War, because of desperate need for housing (De Haas, Fontein & Pleijte, 2017). This is the way of planning that is used in most countries (Needham, 2014). In the 21st century pro-active planning arose with the 'Nota Ruimte' (Kerpel, 2015). Pro-active planning implies that a government should encourage land development that will achieve the desired changes (Needham, 2014, p. 125). This was the first time that the term area development was used (Kerpel, 2015). With the rise of the Environmental planning Act, nowadays governments want to or start to marshal themselves with a more facilitative form of governing style: facilitative planning. This type of governing invites private developers, project developers and other societal institutions to develop a specific area by themselves (Muñoz Gielen, 2014).

2.1.2 The Environmental planning Act & its instruments

To understand how the sustainability vision should be legislated in the framework of the Environmental planning Act, it is important to understand the Environmental planning Act and its instruments to find out what instruments could be useful to do this. These subjects are explained in the following subsections.

The Environmental planning Act

After the first signs of the Environmental planning Act in 2010, the implementation of the Environmental planning Act will (if everything will go as planned) happen in January 2021 (Rijksoverheid, 2010). Within this new Act, 26 different Acts on spatial planning will be merged together in one Act, the Environmental planning Act (*Aan de slag met de Omgevingswet*, n.d.-f), see table 2. This grand all-encompassing Act came to existence, because the current Acts to build houses, to build roads or to start a company at a new place are too complicated and has too many procedures. For example, for the renovation of the Rijksmuseum 87 different permits were needed. This change in legislation will be the most significant change since the Constitution (De Nijs & Tijssen, 2016, p. 3). The current legislation on spatial planning consists of many different Acts. One of the most important ones is the Act for spatial planning, the Wro. This Act contains the legislation on zoning plans and structural visions for example. However, this Act has connections with many other Acts, such as the Act for the protection of the nature (Wnb) and the Act for the regulation of noise (Wgh). The foundation for all these Acts is the Awb, which is the Act that contains rules for the relationship between the government and individual citizens.

Current legislation	Environmental planning Act
26 Acts	1 Act
4700 Articles	349 Articles
120 general regulations (AMvB's)	4 general regulations
120 ministerial regulations	10 ministerial regulations
Several zoning plans	1 environmental plan

Table 2. Current legislation and Environmental planning Act. Source: Cohlst, 2017; translated by author.

The space in the Netherlands is limited and there are many different societal needs (Oldenziel & de Vos, 2018). The Environmental planning Act has two primary societal goals, as mentioned before in the paragraph of societal relevance. The first one is to reach and maintain a safe and healthy physical environment and a good environmental quality. The second one is to monitor, use and develop the physical environment to accomplish societal needs.⁵ It aims to better align the plans for spatial planning, the environment and nature and to create more space for local needs and initiatives with more participation. In case of an environmental vision, environmental plan, program or project decision, governments have to show how they created participation for every project (Ministerie van BZK, n.d.). However, the Environmental planning Act does not have specific rules or requirements about how governments have to create participation and the government will not elaborate on that in the development of the Environmental planning Act (*Aan de slag met de Omgevingswet*, n.d.-e).

With the arrival of the Environmental planning Act, the idea is that the environmental plan will describe developments in a municipality in a more global way and that should trigger new initiatives by initiators to develop a project in an area, because there is more space for assessment for a municipality (Harleman, 2017; VNG, 2015b). This is called the principle of subsidiarity, which means that everything has to be prescribed decentral, unless. So

⁵ Art. 1.3 Ow.

municipalities can set decentral rules, unless something is already prescribed or executed by a province or the national government⁶ (Ministerie van BZK, n.d.).

The first step in creating an environmental plan is to create an environmental vision. The environmental vision is one of the six instruments of the Environmental planning Act. An environmental vision will be translated into an environmental plan. The environmental vision and environmental plan will be further explained later.

Room for more flexibility in the Environmental planning Act

With the Environmental planning Act, it should be easier to understand the field of spatial and environmental legislation and it should be easier to start building projects, because an environmental plan will probably be more flexible than the current zoning plan. Municipalities can already experiment with this flexibility of the future environmental plan in a zoning plan under the legislation of the Crisis and Recovery Act, called a zoning plan with a broader scope (Reinders, 2018). This Act was designed in the first place as temporal legislation in 2010 to give the economy an impulse after the economic crisis, because many municipalities were governing in a passive way before the economic crisis (Van Moorsel, 2018). However, during and after the economic crisis it became clear that this way of governing was not always the right way. Municipalities were looking for a way of governing that made it easier for market parties to start initiatives and to develop in a more organic way and thus a more facilitative form of governing. This was possible under the legislation of the Crisis and Recovery Act (Ministerie van IenM, 2017b).

The Crisis and Recovery Act became a permanent law in 2014 under the current legislation and these flexible zoning plans will be part of the Environmental planning Act. Municipalities can apply an area in their municipality as experimental area. In a zoning plan with a broader scope the physical environment is the central topic, as it will be in the Environmental planning Act. Municipalities have to create an integrated approach for this area by creating rules about for example the environment, the protection of nature and sustainability (Van Moorsel, 2018). In this experiment there can be deviated from some current Acts, such as the Wro and Bro.⁷ It is very unique that municipalities can experiment with legislation that is not implemented yet (Ministerie van IenM, 2017b).

Flexibility in zoning plans brings some tension. This is a tension that is present in the current legislation as well. Legislators can be flexible in current Acts by granting permits to deviate from the zoning plan for example. Governments prefer flexibility in zoning plans by leaving some options open and that also have enough legal certainty. This is a hard task, because more flexibility means less legal certainty (Van Buuren, Nijmeijer & Robbe, 2017, p. 6). However, many people think that the current legislation does not have enough flexibility (De Graaf & Tolsma, 2014). One of the principles of the Environmental planning Act is to create more room for flexibility, which means more space for assessment for municipalities to develop the physical environment. The Environmental planning Act wants to create more space for local initiatives with the principle of 'yes, if' instead of 'no, unless'. This challenges municipalities to rethink the necessary frameworks and where there might be possibilities for creating general rules or even no rules. This flexibility is seen as necessary, because every context in which physical environmental development takes place is different and needs a customized plan. With this flexibility, variations in the physical environment can be taken into

⁶ Art. 2.3 Ow.

⁷ Art. 7 sub c Bu Chw.

account. Furthermore, the local quality of areas can be protected in a better way, but also measures can be taken in situation where the quality is poor (De Nijs & Thijssen, 2015, p. 105). The Environmental planning Act will have three types of flexibility: the first type will be more flexibility in the type of rules, because there will be more use of open norms for example. The second type is area-based customization in the municipal environmental plan and the third type is individual customization (Van den Broek, 2015). However, flexibility can be beneficial, but responsibilities have to stay clear conform the legislation (Van 't Foort & Kevelam, 2015).

It is important to keep in mind that a zoning plan in the current legislation describes what will happen for the upcoming ten years in an area (Art. 3.1 Wro; Harleman, 2017). So everything is already fixed for this period. However, the environmental plan and other instruments of the Environmental planning Act do not have an expiry date and therefore need to be more flexible.

Policy process & instruments Environmental planning Act

The Plan-Do-Check-Act principle underlies the Environmental planning Act (De Nijs & Thijssen, 2015, p. 26). A policy process consists of four main phases (see figure 2). The policy development phase and the policy ripple phase (plan), the policy implementation phase (do) and the policy evaluation phase (check and act) (Aan de slag met de Omgevingswet, n.d.-c). There are six core instruments in the Environmental planning Act. In figure 1, the instruments of the Environmental planning Act are placed in the policy cycle. These instruments are explained below the figure.

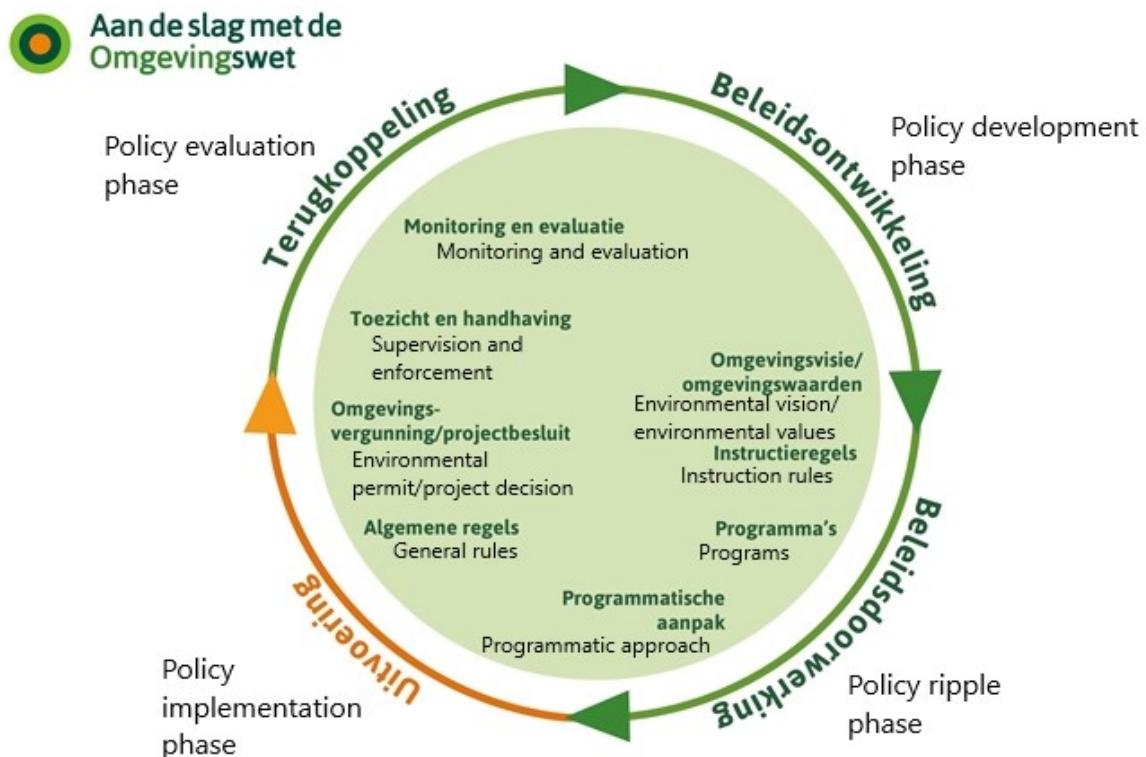


Figure 1. *The policy cycle.* Source: Aan de slag met de Omgevingswet, n.d.-c; edited with translations by author.

Omgevingsvisie (environmental vision)

The environmental vision is a policy document that involves a strategic plan for the physical environment as a whole (Ministerie van BZK, n.d.; VNG, n.d.). The content of an environmental vision is legislated in Article 3.2 Ow. The environmental vision is the first step in the policy cycle (Aan de slag met de Omgevingswet, n.d.-b; De Nijs & Tijssen, 2016; Ministerie van IenM, 2016a). The environmental vision will replace the current structural vision as described in the current legislation in chapter 2 of the Wro. According to the third chapter of the Environmental planning Act, the environmental vision is obligated to draw up for every layer of the government (VNG, n.d.).⁸ An additional sustainability vision will be integrated in an environmental vision, because sustainability is an integrated topic under the Environmental planning Act.

Programma (program)

A policy document describes how a municipality wants to realize the environmental vision or parts of the environmental vision. A program can involve a set of concrete measures for the development, protection, monitoring and usage of the physical environment. The content of the program is legislated (VNG, n.d.).⁹ It can be focused on an area or a (policy) theme. It is a flexible instrument that can be used in different stages of the policy cycle: the policy development phase, the policy ripple phase and the policy implementation phase (Ministerie van BZK, n.d.). There are four types of programs: obligated programs which are obligated by legislation, obligated programs because of the encroachment of an environmental value, not obligated programs and programs with a programmatic approach (Hoorn & Buitelaar, 2018).

Decentrale regelgeving (decentral rules)

The decentral governments collect their rules on the physical environment in one arrangement for the complete area to make the rules more coherent and comprehensible (chapter 4 Ow). For municipalities the instrument to legislate the decentral rules is the environmental plan. In an environmental plan, important values of an area that are described in the environmental vision get assurance (Ministerie van BZK, n.d.). In an environmental plan is written:

- The allocation of functions to locations and rules;
- Environmental values that municipalities think are necessary;
- Rules that are different from the general regulations, if allowed;
- An assessment framework for permits (Ministerie van IenM, 2016b).

In the environmental plan, all the rules for a physical environment will be merged together in one online document to make all the rules for an environment clear and always up to date so an initiator can see very easily what rules there are for a certain area (De Nijs & Tijssen, 2016).

Algemene rijksregels voor activiteiten (general regulation for activities)

For some areas a national regulation is necessary to protect the environment (chapter 4 Ow). Therefore the national government uses general rules. The national government needs this, because most activities in the environment come from initiatives of citizens and businesses and with these rules they do not have to ask permission from the national government (Ministerie van BZK, n.d.). There are four of these rules for the implementation of the Environmental planning Act:

- Environmental decision: includes general and procedural rules for citizens, the market and governments which are necessary to implement the Environmental planning Act.

⁸ Art. 3.1 & 3.2 Ow.

⁹ Art. 3.5 Ow.

- Decision quality living environment (*Bkl*): includes rules for governments on how to execute their tasks.
- Decision activities living environment (*Bal*): includes rules about activities in the physical environment for everyone who wants to execute these activities.
- Decision buildings living environment (*Bbl*): includes rules about construction, remodeling and demolishing of buildings and structures for everyone who want to execute these activities (Ministerie van BZK, n.d.; VNG, n.d.).

Omgevingsvergunning (environmental permit)

The environmental permit is already in use under the current legislation (chapter 2 Wabo) and is included in the Environmental planning Act in chapter 5. It tests if a certain development can happen according to the rules, because this certain development affects the environment. If the spatial development meets all the conditions it has according to the environmental plan, the permit will be granted (Ministerie van BZK, n.d.).

Projectbesluit (project decision)

This instrument has to do with decision-making about projects on the level of the national government or provinces (chapter 5 Ow). It contains a single procedure for complex projects. The goal of this instrument is to make procedures around these complex projects faster, better and easier (Ministerie van BZK, n.d.; VNG, n.d.).

2.1.3 Sustainability in the Environmental planning Act

The Environmental planning Act is seen as an important link in the transition to a sustainable society (Van 't Foort & Kevelam, 2015). The Environmental planning Act uses the definition of sustainable development from the Brundtland Commission: "*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, 1987, p. 43). This means that sustainable development is only possible if one takes into account the consequences of human actions on the physical environment. To achieve this and to create an integral approach instead of a sectoral approach, a balance between the people, planet and profit is necessary (Van 't Foort & Kevelam, 2015). Sustainable development is ensured in the societal goals in Article 1.3 in the Environmental planning Act, as explained in the paragraph of the Environmental planning Act. In Article 2.1 of the Environmental planning Act is ensured that all the levels of government handle their tasks as described in Article 1.3 Ow.¹⁰

The proposal for the Environmental planning Act does not have explicit sustainability goals, but governments do have the opportunity to create certain sustainability goals with the Environmental planning Act (Van 't Foort & Kevelam, 2015). One of the important aspects that is prescribed to create sustainable developments is to establish environmental values. Environmental values create a standard for the quality that a government wants to achieve for the physical environment. An environmental value can be about one of three aspects: the desired state or quality, the acceptable pressure by activities and the acceptable concentration of precipitation of substances. Most of the times this is a measurable unit. The *Bal*, *Bkl*, the environmental permit, environmental plan, program and instruction rules by a province and the national government can involve environmental values (Aan de slag met de Omgevingswet,

¹⁰ Art. 2.1 Ow.

n.d.-g). The instruction rules of the national government do involve certain standards for environmental aspects in the *Bkl* for the regulation of air quality for example, but local governments have the opportunity to customize these norms if this is necessary to achieve a certain societal goal.

Another way to fulfil these obligations of the law is that municipalities can describe sustainability ambitions in their sustainability vision which will be integrated in the environmental vision under the Environmental planning Act. For a municipality it is important to consider their long-term decisions on sustainability and how they can achieve the wished quality of the physical environment. How a sustainability vision and area development are related are explained in the next subsection.

2.1.4 A sustainability vision and area development

Sustainable area development is, roughly translated into English, according to Woestenburg (2017): "*the (re)development of urban areas with great attention for a future proof energy supply, the use of intelligent mobility concepts, climate proof facilities and the transition to efficient circular value chains.*". If one mentions sustainability in an area development, finances are an important aspect. Area developments and finances have a relationship through legal instruments, such as a development agreement. This is a contract between a municipality and a landlord or developer in which the municipality can recover particular costs¹¹, such as public infrastructure. Another instrument is a development contributions plan which is obligated for a municipality to attach to a zoning plan if there is not decided on a development agreement (Muñoz Gielen, 2019; Van Timmeren & Fikken, 2016).¹²

Sustainability and area development have a growing relation with each other which is becoming increasingly important to achieve sustainability goals. There are many privately developed tools, such as BREEAM to measure the sustainability of buildings (DGBC, n.d.). However, it gets very complicated when the aspects of finances, sustainability and area development come together in a larger area development, because many actors are involved and the business case needs to be achievable on societal and on financial level. It is therefore important to create a sufficient stakeholder analysis of the involved actors and their interests to create a good overview of all the goals and preconditions on sustainability (Van Timmeren & Fikken, 2016).

To set sustainability goals for an area development, municipalities can create an integrated paragraph on sustainability in their environmental vision under the Environmental planning Act or at this point in time additional to their structural vision for a specific area. In this vision municipalities can describe their long-term goals on sustainability and which challenges there are on this subject. The goals that are formulated in this vision can be operationalized in for example the zoning plan with a broader scope or in the future in one or more programs or in the environmental plan. In these programs, governments can work out their policy on sustainability (Van 't Foort & Kevelam, 2015). It is important to think about how global they want this vision to be, because a municipality has to decide between a global vision in which the council has much freedom in creating programs to legislate the vision in the final plan or does the municipality want to give specific details on subjects. These subjects or themes are in many cases energy (transition), climate adaptation, circularity and social or mobility related. These zoning plans with a broader scope, which some municipalities already call an

¹¹ Art. 6.24 Wro.

¹² Art. 6.12 till 6.25 Wro.

environmental plan (Hollemans & Oude Weernink, 2018), can be included in the integrated environmental plan of the whole municipality that can be implemented from 2021 with a transitional period until 2029 (Schultz van Haegen, 2017).

2.2 The IAD framework

In this research the IAD framework (figure 2) was used to investigate the preconditions for the legislation of a sustainability vision, because it forced the researcher to think about the different aspects that are part of an institutional situation. Particularly this framework was used, because it helped to give an advice on what factors have to be taken into account when legislating a sustainability vision.

The Institutional Analysis Development framework (IAD) was published for the first time by Ostrom and Kiser in 1982. It was the result of multiple cooperations between researchers from different countries and was designed to make it easier to combine the work of researchers from different social disciplines, such as scientists and sociologists. The IAD framework can help to identify the key variables in collective action problems which concern social structures, positions and rules (Ostrom, 2005). It focuses on the relations between institutions in a complex social situation. The definition of institutions that is used in this research is the definition of Ostrom (2005, p. 3):

“...institutions are the prescriptions that humans use to organize all forms of repetitive and structured interactions including those with families, neighborhoods, markets, firms, sports leagues, churches, private associations, and governments at all scales.”

These institutions can be formal and informal prescriptions, such as legal documents issued by central governments or specific norms governing policy implementation (Clement, 2010). The IAD framework can be implemented in different policy questions and can also be used to analyze formal laws and norms to find out what went wrong and how to do better in the future (Ostrom, 2011).

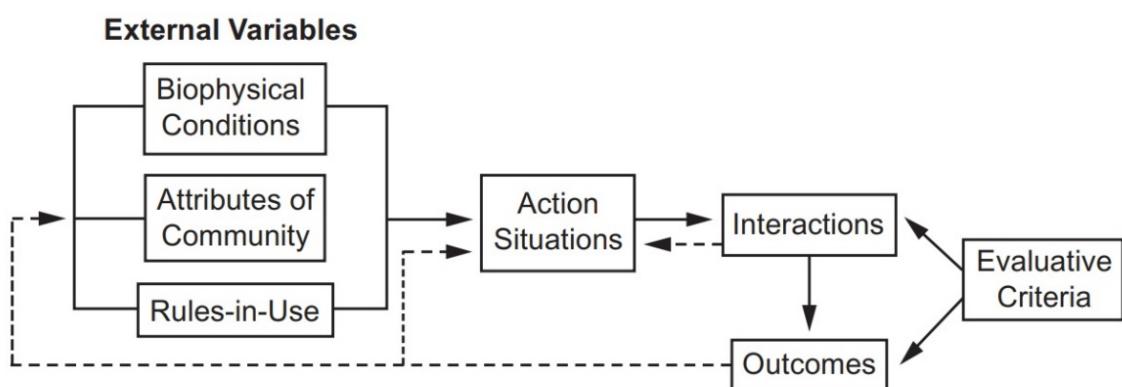


Figure 2. The IAD Framework. Source: Ostrom, 2011, p. 10.

What is important in this framework is the first step of identification of the action situation in which the actors and actions interact as they are affected by external variables. Ostrom (2011, p. 11) identifies four clusters of variables that an individual or a firm (the actor within the action arena) brings to the action situation that can contribute to a policy problem:

- The resources that an actor brings in;
- The value actors attach to states of the world and to actions;
- The way actors acquire, process, retain, and use knowledge contingencies and information; and
- The procedures that actors use in selecting specific courses of action

According to Ostrom (2005, p. 32), a typical action situation includes legislators making legislative decisions about future laws. So, in the action situation policy choices are made. In this research the action situation would be the legislation of a sustainability vision in the framework of the Environmental planning Act. It is a social space where the actors interact, solve problems or discuss possible solutions (Ostrom, 2011). In this situation an interdependency between actors exists, because one action of an actor can lead to consequences for another actor (Bisaro & Hinkel, 2016). If the action situation is identified, the next step can be to investigate the factors that influence the structure of the situation and to try to understand how the action arena changes over time.

There is an internal structure within the action situation (figure 4). It consists of a set of variables that are interlinked. These variables are: the set of actors, the specific positions filled by participants, the set of allowable actions and their linkage to outcomes, the potential outcomes that are linked to individual sequences of actions, the level of control each participant has over choice, the information available to participants about the structure of the action situation and the costs and benefits assigned to actions and outcomes (Ostrom, 2011, p. 11). In the case when the action situation is about a decision on legislation, multiple actors decide which action will be taken (Ostrom, 2005, p. 202).

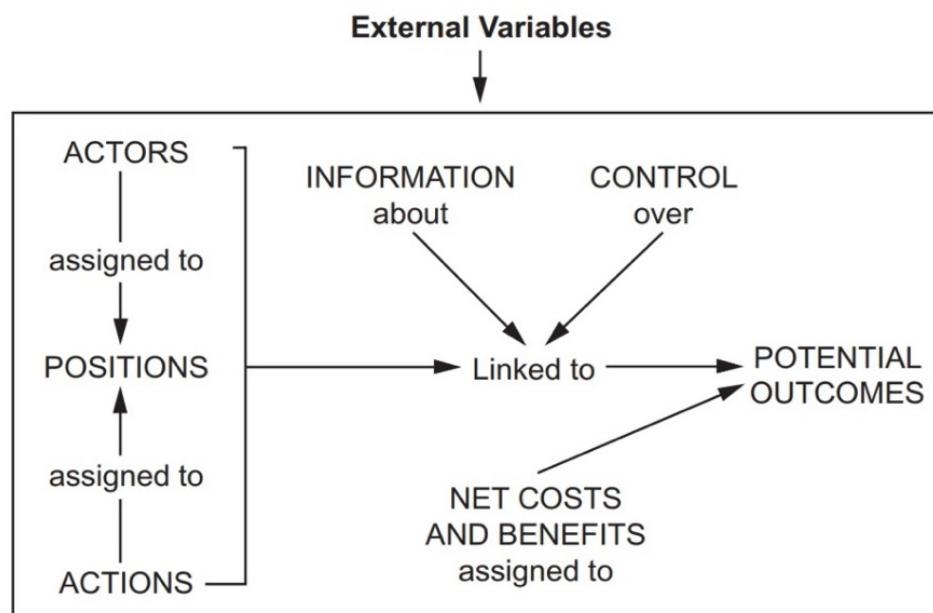


Figure 3. Internal structure IAD Framework. Source: Ostrom, 2011, p. 10.

The action situation and its elements can be influenced by external variables. These external variables can be rules, elements from the biophysical and material world and the nature of the community. It is important to understand these external variables and how they affect the action situation to understand how certain outcomes appear and how they can be improved in the future (Ostrom, 2005). Therefore, these three external variables will be further explained.

Rules

The first set of external variables that will be discussed are the rules. Rules are very important in the analysis of institutions. Ostrom (2005, p. 16) refers to Max Black (1962) who identifies four types of rules: rules can be used as regulation laid down by an authority. Secondly, rules can be used to denote an instruction to solve a problem. Furthermore, rules can be used as an aphorism for moral behavior. The last way in which a rule is used is to describe an act or principle. When individuals use rules in their decision-making they use working rules. These rules are in many cases unwritten agreements between the involved actors. Ostrom (2005, p. 19) refers to these rules as: '*working rules are the rules to which participants would make reference if asked to explain and justify their actions to fellow participants.*' These rules are important in the analysis of policies (Ostrom, 2011). According to Ostrom (2011, p. 20), there are seven working-rules (figure 5) that can have an influence on the variables within the action situation. These rules are necessary to explain certain actions and outcomes.

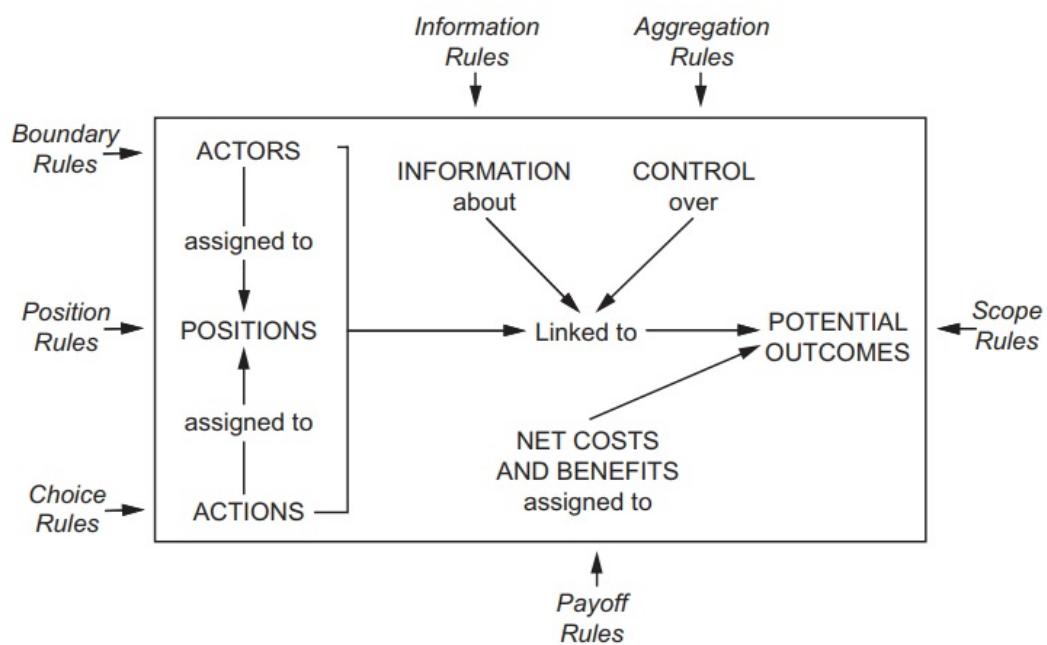


Figure 4. Seven rules that influence the action situation. Source: Ostrom, 2011, p. 20.

Choice rules specify what an actor that has a certain position should or should not do on a certain point in the decision-making process (Ostrom, 2005) or what actions an actor can take (Polski & Ostrom, 1999). Position rules locate the positions of the actors in the action situation. These rules specify the number of positions, what kind of positions there are and the role that the positions have or want to take in the action situation (Polski & Ostrom, 1999). It assigns the relative authority to each position (Ostrom, 2005, p. 193). Boundary rules decide if an actor can enter or exit the decision-making process. This has an influence on the number of actors in the action situation (Ostrom, 2011). Aggregation rules decide if a decision of one or more actors is necessary before the start of the decision-making process. In a situation with several actors, the aggregation rules decide who will participate in the choice and who will have more to say than others in the final decision (Ostrom, 2005, p. 202). These actions, control and information of actors can achieve a certain potential outcome (Ostrom, 2010). Information rules have an effect on the amount of information that actors in the action situation have and the

information that is available (Ostrom, 2005; Polski & Ostrom, 1999). It locates the channels of communication among the different actors (Ostrom, 2010, p. 13). Scope rules create boundaries for possible outcomes that could be reached and the actions that are connected to it (Ostrom, 2005). These rules define the jurisdiction of outcomes (Polski & Ostrom, 1999). So the scope rules locate the outcomes that can be affected (Ostrom, 2010). Payoff rules have an influence on the costs and benefits that are indicated to certain combinations of actions and results (Ostrom, 2005). So these rules assign costs and benefits to potential outcomes. This can be with using penalties for those who violate the rules or who is responsible for the decisions that are taken (Ostrom, 2011). Ostrom (2005) relies a lot on formal rules when she explains these working-rules above (Cole, 2014, p. 9). In this research, four of the working-rules that are relevant for this situation were distinguished position rules, scope rules, choice rules and pay off rules.

Biophysical & material world

Some variables within the action situation can be influenced by aspects from the biophysical and material world. These aspects can influence the drives and perspectives of actors within the action situation. Biophysical aspects can be about what actions are physically possible and what outcomes can be produced (Ostrom, 2005). Material aspects are goods and services which are provided, produced and consumed (Ostrom, 2005; Polski & Ostrom, 1999). The way how rules combine with rules and the aspects from the biophysical and material world create negative and positive incentives for actors which can influence the action situation. It is important in policy problems to create a combination that fits a particular situation (Ostrom, 2005, p. 26). It is important to identify these aspects, because they can have a major influence on the outcome of a policy process. These aspects can be capital, labor, technology or finances for example (Polski & Ostrom, 1999).

The attributes of the community

The attributes of the community is the third variable that could influence the action situation. Ostrom (2005, p. 26) describes a few aspects that can influence the action situation: the level of shared understanding, shared preferences, level of consensus, the size and division of actors and the level of equality. These aspects all have to do with the culture of a community. The culture of a community has a large influence in the decision-making process of a community, because it involves shared values. In a community with shared values, where individuals can interact with each other and trust each other the costs of creating and implementing rules are way lower than in communities with different cultures (Ostrom, 2005, p. 27). Furthermore, the knowledge and information the actors bring into the action situation are attributes of the community (Polski & Ostrom, 1999).

2.2.1 Design principles

There are eight underlying design principles to create a robust and sustainable system of institutions (Ostrom, 2005, p. 259). These design principles will be used in the analysis of the interviews and documents to find out if these design principles are present or how they can be made present in the situation of the case. It is important to have these design principles present in the legislation of a sustainability vision to generate a stable set of measures to create a sustainable living environment.

The eight design principles are:

1. Clearly defined boundaries: the boundaries of the case and the stakeholders with their rights and what they can do need to be defined. It is important to have a common end goal together.
2. Proportional equivalence between benefits and costs: the benefits and costs need to be in balance, this can be input from stakeholders with money for example.
3. Collective-choice arrangements: decisions are taken collectively
4. Monitoring: monitors who audit the biophysical conditions and user behavior. Free rider behavior is an important aspect to overcome this way. Transparency of processes and rewards are essential here.
5. Graduated sanctions: stakeholders who violate the rules will be sanctioned. Formal sanctions are not always appropriate, sometimes it is enough to address behavior.
6. Conflict-resolution mechanisms: a system that has payable and accessible problem resolutions is necessary. Conflicts need to be solved in a fast way.
7. Minimal recognition of rights to organize: the stakeholders have the right to create their own institutions within a specific framework.
8. Build responsibility for governing the common resource in nested tiers from the lowest level up to the entire interconnected system (Kennisbank Openbaar Bestuur, n.d., p. 10; Ostrom, 2005, p. 259).

However, the eight principle is only valid in case of larger system and therefore won't be used in this research.

2.3 Conceptual model

In the previous paragraphs, the most important theoretical aspects in this in relation to this subject were described. In figure 5, the conceptual model that was created based on the theory that is important for this research is presented. In this model, the most important theoretical concepts are shown with their relation to each other.

The IAD framework was chosen as framework for the conceptual model but was adapted to this research. The action situation of the IAD framework by Elinor Ostrom (2005) was used as the central point in the conceptual model of this research. It is the place where the decision-making process took place with experts and stakeholders. The variable of outcome was the legislation of the sustainability vision. The action situation was influenced by three external variables in Ostrom's IAD framework: the rules, attributes of stakeholders and experts and the biophysical and material aspects. In this research a fourth external variable was added to enrich the framework: the instruments. Instruments was added as an external factor, because the IAD framework of Elinor Ostrom lacks this factor, but it would probably have the most important influence on the action situation of this research. The rules that were applied to this situation were the position rules, scope rules, choice rules and pay off rules. The biophysical aspects were the physical aspects of the area, so what is physically and economically possible in the area. The other external variables were used to map the circumstances of the case and if these other variables have an influence on the outcome. The instruments were policy instruments or legal instruments. These instruments were explained in chapter 2. In the next paragraph the indicators of these concepts and dimensions are worked out. In figure 5 the enriched and adapted IAD framework is pictured.

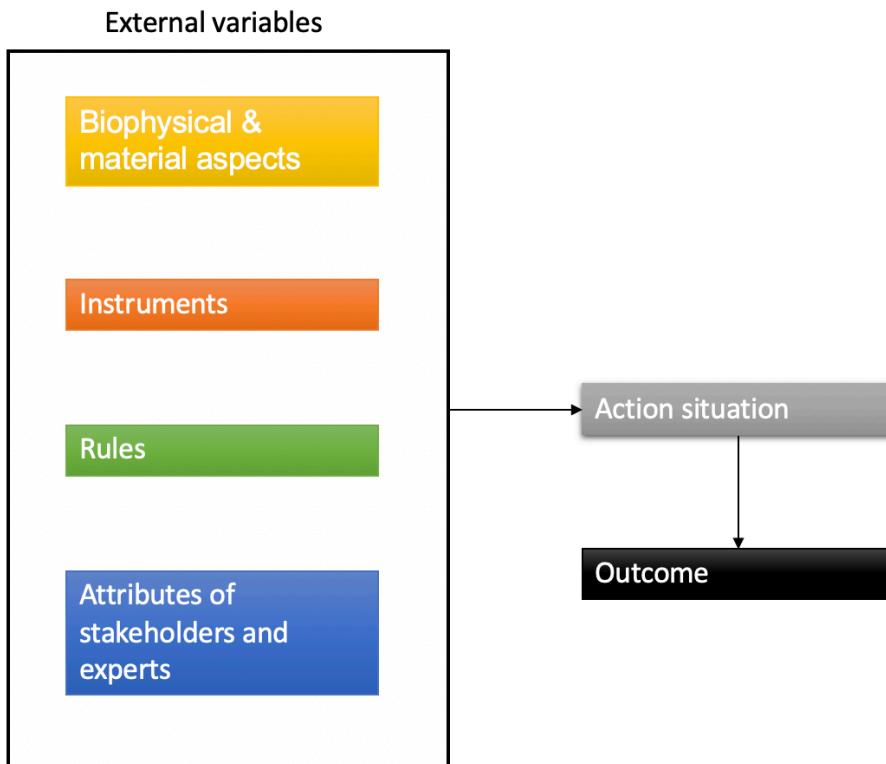


Figure 5. Conceptual model; based on the IAD framework of Ostrom (2005, p. 10).

2.4 Operationalization scheme

In this paragraph, the variables that came forward from the literature and which were visualized in the previous paragraph are operationalized to clear variables that can be used for the empirical research. The concepts of the external variables are operationalized which have an effect on the action situation which is the decision-making process for the legislation of the sustainability vision.

Attributes of the stakeholders and experts

Concept	Dimension	Indicator
Attributes of the stakeholders and experts	Culture	<ul style="list-style-type: none"> • Preferences and values of the experts and stakeholders • Level of consensus and understanding regarding the outcome
	Knowledge	<ul style="list-style-type: none"> • The amount and kind of knowledge stakeholders and experts have • What information they have

The attributes of the stakeholders and experts are what they bring to the action situation. They can bring their culture and their knowledge to the decision-making process. The culture consists of the level of (shared) understanding and their level of consensus that the actors have about the action situation and the outcome. Furthermore, their preferences and values affect the outcome. The second dimension that affects the outcome is the knowledge the actors and stakeholders have and what information they have.

Biophysical and material aspects

Concept	Dimension	Indicator
Biophysical and material aspects	Physical aspects of project	<ul style="list-style-type: none"> • Spatial components, e.g. housing or businesses, ownership situation • Characteristics of the area, e.g. geographical setting • Perspectives on development of the area, e.g. type of development, existing building regulations • Available (financial) resources
	Economic characteristics of the project	

The biophysical and material aspects are a second external variable to the action situation. The physical aspects of the area are an important aspect of this. One of the indicators is the spatial components that will be developed in the area, such as housing. Another physical aspect is the characteristics of the area. A physical aspect could be the geographical setting of the area, for example if there are any protected nature areas or important roads close to the area. Also the perspectives on development of the area are important. Another important

dimension are the economical characteristics of the development of the area. One indicator is the available resources, for example financial resources, to realize the development.

Instruments

Concept	Dimension	Indicator
Instruments	<p>Policy instruments:</p> <ul style="list-style-type: none"> • Financial and economical instruments • Communicative instruments • Physical instruments • Style of governing • New policy instruments <p>Legal instruments:</p> <ul style="list-style-type: none"> • Existing legal instruments • New legal instruments 	<ul style="list-style-type: none"> • Financial incentives, e.g. taxes or subsidies • Sending/developing information to enlarge knowledge of people, e.g. instructions or communication platforms • Influence on behavior of people, e.g. roadblocks • The style of governing to create the best possible outcome: e.g. regulating, facilitating, stimulating or performing • New instrument <ul style="list-style-type: none"> • Instruments of the Wro and connected Bro, e.g. structural vision, zoning plan, development contributions plan • Instruments of the Wabo, e.g. environmental permits • Other legal instruments <ul style="list-style-type: none"> • Environmental vision • Program • Decentral rules • General regulation for activities • Environmental permit • Project decision • New instrument

The added concept of instruments consist of policy instruments and legal instruments. The policy instruments can be categorized into financial or economical instruments, communicative instruments, physical instruments, style of governing as extra instrument and perhaps a new type of instrument. The indicators for the financial and economical instruments are financial incentives and for the communicative instruments it is sending/developing information to enlarge the knowledge of people. Physical instruments have as an indicator that they try to influence the behavior of people. The style of governing has as different types of indicators: regulating, facilitating, stimulating and performing.

The other dimension is legal instruments. The legal instruments can be divided between the existing instruments of the current legislation and new instruments of the Environmental planning Act. Indicators of instruments for the existing legislation are possibilities in permits, a structural vision and a zoning plan. With the new Environmental planning Act coming up there are six new important core instruments with new possibilities as indicators: environmental vision, program, decentral rules, general regulation for activities, environmental permit, projects decision and a possible new instrument that has not been found yet.

Rules

Concept	Dimension	Indicator
Rules	Position rules Scope rules Choice rules Payoff rules	<ul style="list-style-type: none"> • Position of stakeholders and experts have • Number of positions • Position actors want to or can take • (Potential) outcomes that can be achieved (ambitions) • Linked actions with certain outcomes • Agreements on actions • Choices of actions • Financial costs and benefits • Social costs and benefits

The concept of rules is based on the working rules of Ostrom (2005) which are external variables that influence the action situation. The relevant rules in this research are the position rules, scope rules, choice rules and payoff rules. The position rules indicate the position of the stakeholders and experts. The choice rules indicate the agreements on certain actions and the choices they make for actions. The payoff rules indicate the financial costs and benefits and the social costs and benefits of the legislation of the sustainability vision. The scope rules indicate the potential outcomes and the linked actions that come with it.

3. Methodology

In this chapter, the methodology that was used in this research is described. In the first paragraph, the research strategy is described. In the second paragraph the research methods, the way that data was collected and how this data was analyzed is described. In the final paragraph, the validity and reliability in this research is justified.

3.1 Research strategy

The focus in this research was to find out what instruments could help to legislate a sustainability vision and how these instruments could be used in the light of the new Environmental planning Act. To achieve this research aim, one of the first steps was to choose a particular research philosophy, because this is how a researcher views the world and has an influence on which methods are chosen as part of the research strategy (Saunders, Lewis & Thornhill, 2009). The research philosophy that was chosen for this research is an interpretivist approach, because this research relies on the respondent's view of the situation that is being studied: how a sustainability vision for an area development can be legislated in the light of the Environmental planning Act and how to deal with conflicting interests on this subject. There is focused on the clarification of the interpretation of the different experts and stakeholders on how they experience the different possible ways of legislating the sustainability vision and the variables that influence this. By conversations with these different actors new ideas for action can be developed (Yanow, 2000).

This research is a practically oriented research, because it focuses on a practical issue: how to legislate a sustainability vision and what are the best existing and new instruments that can help to achieve this goal. Qualitative research is done to achieve the research aim. This research is deductive, because general legislation was used on a specific case to find out which instruments can be used to legislate a sustainability vision for an area development. This was done with multiple methods: the use of brainstorm sessions, interviews, a focus group and the analysis of policy and legal documents (Saunders, Lewis & Thornhill, 2009).

3.1.1 Case study

In this research, there was made use of a singular or a within-site case study (Creswell, 2013). According to Yin (2014, p. 16): "*a case study investigates a contemporary phenomenon (the "case") in its real-world context, especially when the boundaries between the phenomenon and context may not be clearly evident.*" This type of research was chosen out of the five types of research, because this case is as Creswell (2013) argues, "*a real-life, contemporary bounded system whereby in-depth data will be collected in the form of multiple sources of information.*" (Creswell, 2013, p. 97). In this case these sources were brainstorm sessions, interviews, a focus group and the analysis of documents. With the use of one case study, an in-depth and integral view was created with multiple sources of information (Verschuren & Doorewaard, 2007; Creswell, 2013). The case that is chosen is a single instrumental case, because there was tried to understand a specific issue and this particular chosen case gave a very good understanding of the issue (Stake, 1995). This case was used to create an empirical view on the theoretical aspects (Yin, 2014).

The case study that was selected is the World Food Center in Ede in the Netherlands. The area where the World Food Center will be developed is an experimental area under the legislation of the Crisis and Recovery Act. This means that the municipality of Ede is already

in a position to experiment with the Environmental planning Act and some of its future possibilities in this area, as explained in the introduction. Furthermore, the municipality of Ede created a structural vision with an additional sustainability vision for this specific area development. The themes of the sustainability vision, which are circularity, climate adaptation, mobility and energy, could be seen as representative themes that play an important role in other area developments. So this is a case that can illustrate the future issue very well, which is to find out what the possibilities are to legislate a sustainability vision for an area development (Van Moorsel, 2018). Therefore a holistic single-case design was used. The lessons that were learned from this case might be applied in a variety of other situations where this issue is going on (Yin, 2014). The case is further explained in chapter 4. In the figure below, a research model is represented in which is visible how the case study of this research is positioned in relation to the external variables of the theoretical framework and design principles.

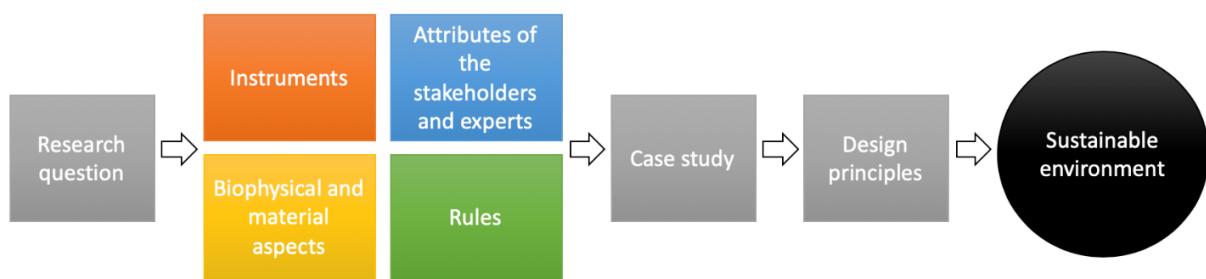


Figure 6. Research model.

3.2 Data collection

In this research, multiple forms of data collection were used. There was made use of qualitative research methods. Firstly, a few brainstorm sessions were held to get a good insight of the case and the sustainability measures of the sustainability vision. For a list with the specific experts see Appendix 2. These brainstorm sessions were held with the particular experts who worked on the sustainability vision to find out what the most urgent measures were to legislate from the sustainability vision in their opinion, what measures might have the most impact in their opinion, what ideas they had about legislating specific measures, if they were having difficulties concerning the legislation of particular topics on sustainability in their work field and if they knew any projects where municipalities already legislated sustainability goals or measures. After these brainstorm sessions with experts, a final brainstorm session was held with a small group with experts with different expertise from the municipality of Ede to find out what in their opinion were the most urgent and most impactful measures to legislate from the sustainability vision for this area from their point of view and have a discussion about the arguments they came up with. After these brainstorm sessions, the most urgent and impactful topics were defined from the sustainability vision for the next phase of this research.

During this research the researcher was also a participant in work sessions with the project developers and project groups with different experts within the municipality to experience the process towards the further development of the WFC area.

Document analysis

After the brainstorm sessions to find out what measures were most urgent to find legislation for, the actual data collection started with desk research. The first step in the collection of data was the analysis of the content of a variety of documents. Two types of documents were

analyzed: legal documents of the Dutch national legislation and policy documents, such as visions and plans of the municipality of the case. Furthermore, some legal documents and policy documents of other municipalities were analyzed as an example for possible instruments that could be used to legislate sustainability measures. With this method, the content of existing documents was analyzed to generate information for this research. There is made use of qualitative content analysis, because the goal was to understand the content of documents (Verschuren & Doorewaard, 2007). The analysis of these documents was necessary for the outcome of this research, because it is important to understand how different legislations and policies are in relation to each other and what policy strategies there have been in the past to understand why new policies come and came into existence. Further it is important to see what instruments already have been used to see what instruments could be used in terms of the case study, but also to find out if these instruments have worked out in the past or might work in the future.

Interviews

After the analysis of various documents, the next phase of collecting primary data in the field took place. Interviews were held to collect primary data in this research. This was a labor-intensive form of research, because the interviews were face-to-face with open questions (Verschuren & Doorewaard, 2007). The interviews were held with three legal experts in the area of environmental legislation, three project developers and three other municipalities which have legislated sustainability measures in a zoning plan with a broader scope under the Crisis and Recovery Act. The respondents of the interviews are listed in Appendix 3. The type of interviewing was semi-structured interviewing. A list with a set of topics and some questions was covered in the interview guide beforehand, but there was also enough room for input from the interviewee. In this way the interviews were more flexible with the goal to generate more rich and detailed answers, because the interviewee had more flexibility on how to reply and interesting questions could be asked by the researcher in line with the replies of the interviewee (Bryman, 2016). In this way the interviews were more of an open-ended conversation. The interviews were held in Dutch, because this is the native language of both the researcher and respondents which made it easier for the respondents to express exactly what they wanted to say (Van Nes et al., 2010). Translation to English was acquired in the phase when the results were written down in the thesis document. All the interviews were held one time and were recorded during the interviews.

Focus group

After the collection of primary and secondary data, a focus group was held with a homogeneous group of experts of Over Morgen on the Environmental planning Act to validate the information that was collected in the field. First an explanation of the research design and the results was given. This raised some questions which were discussed. After this explanation, three standpoints that came forward from the results were discussed with the participants. So, the focus group was used to find out what this group of experts thought of the results and to encourage a discussion on the results. This led to interaction between the participants and provided new information and insights. This technique was also helpful to understand the thoughts and experiences of the respondents (Saunders, Lewis & Thornhill, 2009, p. 347). The participants of the focus group are listed in Appendix 3.

Feedback

In the purview of the Environmental planning Act and after the collection of the data and the validation of the data with the focus group, feedback sessions were done to find out what the stakeholders of the case thought of the data. These sessions were held with a group of experts on sustainability, legal experts, a group of experts on the Environmental planning Act from the municipality of Ede and with some direct involved people of the municipality of Ede who are part of the working group on the WFC. Furthermore, an interview was held with an expert on sustainability of one of the project developers to find out what their perspective was from their role as project developer on the results in relation to the specific case.

3.3 Data analysis

After the collection of the necessary data, the analysis of the data could take place. The interviews were transcribed and analyzed with Atlas ti. Some policies and legislation are analyzed with Atlas ti too. The interview transcripts and recordings of the interviews are merged in Atlas.ti with the policy documents and legal documents in one Atlas ti. file. By merging these documents all together, an integrated document was created. The indicators of the operationalization were used as codebook for the analysis of the results to analyze all the documents in the merged file with (Bryman, 2016). The codes were in English, because this is the language where the research is written in. In this way the relations between the interviews and the policies and legislation can be understood in order to create a concept for the successful legislation of the sustainability vision.

3.4 Validity and reliability of the research

The quality of a research depends on the validity and the reliability of the research. To minimize the faults in this research, it is important to give an insight in these aspects to detect the characteristics of the methods that are used. Verschuren and Doorewaard (2007) make a distinction between internal validity, external validity and reliability. Internal validity determines on if there is measured what a researcher wants to measure. External validity is the extent of generalization. Reliability is the accuracy of the procedure for measuring and so if the research would be done again, if the same results would appear.

3.4.1 Reliability of the research

To sustain the reliability of this research, it was important to create the opportunity to repeat this research and get the same results by creating transparency (Noble & Smith, 2015). Approaches that were used to improve the reliability of this research were the use of an interview guide for the interviews and the interviews were recorded and then transcribed. The documents, the recordings of the interviews and the transcription of the interviews were merged together in one Atlas ti. file. The indicators described in the operationalization were used to analyze all the documents in the merged Atlas ti. file. So, there is transparency on how sense was made from the raw data that was collected to improve the reliability of the research (Saunders, Lewis & Thornhill, 2009, p. 156). However, the firsthand data can only be obtained by request, because the data recordings and transcripts are confidential.

3.4.2 Validity of the research

There are two types of validity which are explained in this paragraph: internal validity and external validity. The internal validity in qualitative research has to do with if the results are credible. Data from different sources contributes to the credibility of this research (Patton,

1999). To improve the internal validity of this research, triangulation was used: the use of more than three different data collection techniques to confirm the research findings (Saunders, Lewis & Thornhill, 2009, p. 154). The data collection techniques used in this research were the analysis of policy and legal documents, semi-structured interviews with three different types of respondents, a focus group and feedback sessions. Especially the focus group contributes to the validity in the conclusion of this research, because the focus group took place after the analysis of the results (Saunders, Lewis & Thornhill, p. 157).

The external validity of a research has to do with the generalizability of the results (Saunders, Lewis & Thornhill, 2009, p. 158). In terms of external validity in this research, Yin (2014, p. 40) refers to two types of generalization: analytic generalization and statistical generalization. This research is qualitative and one case was studied. Therefore, there is no need to refer to statistical generalization, because there is worked with a very small sample. Analytic generalization is to what extent the results can be applied in other situations. In this research the application of the results in other situations might be done, because in the results there is a deviation between the general results and the results related to the case. The general results might be applicable and useful in other cases.

4. The case: the sustainability vision of the World Food Center

In this chapter there a short description of the context of the case is described, which is the action situation in this research. This chapter is divided in the four indicators of the biophysical and material world, so the physical aspects of the area and the economic resources that are available. For this area an additional sustainability vision to the structural vision was made to create an overview of the sustainable measures that could be implemented in the area to come to a sustainable and healthy living environment. A few of the measures of the sustainability vision are pictured in Appendix 1. The measures that are pictured in this appendix were selected as most urgent to legislate during the brainstorm sessions with experts of Over Morgen and the municipality of Ede (Appendix 2), because they could have the most impact on creating a sustainable environment if you would legislate them. These measures and ambitions of the sustainability vision of the municipality of Ede are created for this specific area. However, many of these measures and themes are a good reflection of ambitions and issues in other municipalities in the Netherlands.

Characteristics of the area

The area of the World Food Center (WFC) is part of the larger Foodvalley region of Ede and Wageningen which has the ambition to become the largest food cluster of Europe. The WFC and the Wageningen University will be the central points in this cluster.

The area of the World Food Center will be developed on the place of the former defense area Maurits-Zuid. It is an area of 28 hectares between the train station of Ede-Wageningen, Parklaan, Enka and the Veluwe. This area is part of complex of former defense areas in Ede.



Figure 7. Area of the WFC. Source: Bu Chw bijlage 112

Perspectives on development of the area

The development of the World Food Center is an initiative by the municipality of Ede and WFC Development B.V. (WFC-D). This is the organization that will develop the WFC area and

consists of the developers Green Real Estate B.V., Van Wijnen Groep B.V. and BPD. The municipality of Ede created a development plan for this complex in 2011 called the 'Ontwikkelingsplan Kazerneterreinen' and in 2013 the municipality created a zoning plan and an image quality plan 'beeldkwaliteitsplan Kazerneterreinen' (Gemeente Ede, 2012). However, the initiative of the World Food Center created a new development perspective for this area and therefore two visions were created (Gemeente Ede, 2018). The first one was a vision for the city, called 'Stadsvisie Ede' in 2017. The other document is the development perspective for the area of the World Food Center 'Ontwikkelperspectief Gebiedsontwikkeling World Food Center' (Gemeente Ede, 2017). On the basis of this development perspective the municipality of Ede created a structural vision with an additional sustainability vision for the area of the WFC under the current legislation of chapter 2 of the Wro. However, the area of the WFC is one of the experimental areas with a broader scope under the legislation of the 15th tranche of the Chw, which gives the municipality of Ede the opportunity to experiment with a few of the new regulations of the Environmental planning Act in this area (Ministerie van IenM, 2017a).¹³ There will be made partial revisions of the existing zoning plan under the Crisis and Recovery Act, so for every partial revision will be the possibility to reconsider certain measures and to implement the possibilities that the Chw offers to deviate from the current legislation.

Sustainability is a very important aspect in the area of the WFC, but for the municipality of Ede and for the Province of Gelderland as well. Therefore, the municipality created the additional sustainability vision next to the structural vision for the WFC area development to describe all their ambitions on the aspect of sustainability. The sustainability vision consists of four themes: mobility, energy, climate adaptation and circularity (Appendix 1). This vision needs to be implemented in plans, programs or contracts to make these sustainable developments happen. Because of the experimental status of the area under the Crisis and Recovery Act, the municipality might be able to incorporate some of these sustainability measures in the zoning plan with a broader scope.

Spatial components

The area will consist of a core with the WFC Experience, a hotel and conference center, housing and businesses. Around this core there will be the Food Innovation District (business area), a housing area and a flexible area where housing or mixed functions could be developed. The municipality has all the property rights of the area and has to come to an agreement with the project developers of WFC-D. There are already existing regulations in the area. For example, during the creation of the structural vision research has been done on which environmental aspects are important in the area, because the area has a unique location next to the Veluwe which is a Natura 2000 area and thus a protected area by national legislation.

Available resources

The realization of the World Food Center Experience will be mainly funded by the national government, the Province of Gelderland, the municipality of Ede and funds and loans. The development of the rest of the World Food Center area has to be paid in advance by the project developers by buying the property rights. They will develop the business areas, housing area and the flexible area and will earn their investment back with selling and renting their real estate.

¹³ Art. 7 sub c Bu Chw & Art. 2.4 Chw.

5. Results

In this chapter the results are elaborated, based on the operationalization written down in paragraph 2.4. The results are structured according to the four variables: the biophysical and material aspects, the attributes of the stakeholders and experts, the instruments and the rules. In each paragraph a variable is elaborated and in the end of each paragraph the results are connected to the case study and analyzed with the design principles, as described in subparagraph 2.2.2, in a grey text box. What happens in the action situation depends on all these external and internal variables that have an influence. In the previous paragraphs all these variables were described and when they all come together in the action situation, the right balance between all these variables has to be found to make the right decision on how a sustainability vision for an area development could be legislated to achieve a sustainable environment.

Nine interviews have been done in the field to answer the main research question. Interviews have been done with three other municipalities in the Netherlands who already have used sustainable measures in a zoning plan with a broader scope as part of the Crisis and Recovery Act, three project developers and three legal experts who work in the field of environmental legislation. Furthermore, a focus group with experts on the Environmental planning Act has been done to validate the results and an interview with one of the project developers within the case study has been done to reflect on the results. The respondents that were interviewed and the respondents represent in the focus group are displayed in Appendix 2 and 3. To ensure the anonymity of the respondents on what they exactly answered during the interviews, in the results referred to the interviews as a random number. The typed-out interviews with numbers and the summary of the focus group are preserved in a separate document and are only available by special request.

5.1 Biophysical and material aspects

5.1.1 Biophysical aspects

Spatial components

During the interviews, it became clear that the spatial components are an important internal influence on the legislation of a sustainability vision in the interviews with municipalities and project developers. This mainly has to do with the aspect of ownership in an area. The land in an area can be possessed by a municipality or a private party. When a municipality does not have the property rights of the land in an area a municipality has less control, because the only way to have impact is with the public legislation of the zoning plan (Interview 1, p. 24, line 1351-1353; Interview 9, p. 92, line 5191-5192). When a municipality does own the land, the municipality can come to a private development agreement with a project developer in which they can agree on complementary requirements that they have to accomplish. Another option is that a municipality attaches a passport to a plot of land with specific information and regulations for that area. It is also possible for a municipality to publish a tender for the development of an area and to choose the project developer that meets the sustainability criteria in the best way and for the best price (Interview 2, p. 37, line 2065-2067 & 2242-2246).

With the implementation of the Environmental planning Act there will probably be more opportunities to legislate sustainability measures by public legislation, because the Environmental planning Act will lead to an integration of acts on spatial planning and therefore

the principle of specification is less served under the Environmental Act (Interview 9, p. 103, line 5790-5795). The principle of specification implies that an administrative body may only look after those interests for which the law or regulation concerned provides a foundation.¹⁴ However, even if there would be new possibilities, municipalities still seem to be more inclined to legislate sustainability measures in a private contract if they own the property rights of a piece of land, according to most of the project developers and municipalities that have been interviewed. A few reasons came forward: municipalities are familiar with this instrument and in many cases it is easier to come to a private contract with the developer, because there is a lot of flexibility in the way they can include agreements between the municipality and the developer in a contract (Interview 1, p. 24, line 1331-1343; Interview 2, p. 39, line 2239-2259; Interview 3, p. 52, line 2962-2975). Nevertheless, two out of three municipalities that have been interviewed think that in case they do not have the property rights, they might include more measures on sustainability in their environmental plan to reach a sustainable living environment (Interview 2, p. 43, line 2470-2487; Interview 3, p. 52, line 2938-2970).

Perspectives on development of the area & existing regulations

The perspective on what a municipality or developer wants to develop in area appears to have an internal influence on the legislation of a sustainability vision. One of the legal experts emphasized that it is easier for a municipality to legislate sustainability measures with public legislation for new area developments with vacant land. In this case a municipality does less have to deal with local existing regulations for a specific type of development, such as housing or an office area. So existing internal regulations make it harder to implement sustainability measures when a municipality wants to transform an area from for example industry to housing. This is also harder for a municipality in an area where people already live and own a house (Interview 1, p. 19, line 1031-1036; Interview 8, p. 93, line 5236-5244).

Besides, there are existing external (building) regulations in an area which will have an influence on how to legislate sustainability measures. There are always national minimum scores on some topics which have to be taken into account in a zoning plan. For example the scores in the current Building decision Act 2012¹⁵ which will be the new the Bbl under the general regulation of activities in the Environmental planning Act (Interview 2, p. 34, line 1901-1903; Interview 7, p. 81, line 4554-4556).

Characteristics of the area

The geographical setting and physical circumstances of an area appears to have some internal influence on what kind of sustainability measures are important to legislate. During the interviews was described that the local physical circumstances might play a role, but they were not discussed a lot. Although there were a few remarks on this aspect. According to one of the legal experts, it would be strange if urgent themes such as climate adaptation would have distinct legislation between (new) areas within a municipality (Interview 8, p. 96, line 5440-5448). According to another legal expert, some areas might need stricter legislation. For example on water storage to prevent flooding in an area that has to deal with soil subsidence, because one area is not the other (Interview 9, p. 108, line 6131-6137). Another theme that might depend on the local circumstances is the type of sustainable energy that can be generated in an area, such as geothermal energy, solar energy or wind energy (Interview 3, p.

¹⁴ Art. 3:4 Clause 1 Awb.

¹⁵ Bouwbesluit 2012.

51, line 2910-2919). A very plain example here is that solar panels will not be a very valuable choice in a shaded area.

5.1.2 Material aspects

During this research, it became clear that the available financial resources of a municipality do not have a large impact on the public legislation of a sustainability vision, because a municipality does not have to invest in new sustainable housing or offices, except for the public spaces. One of the project developers explained that therefore in theory municipalities could set very strict rules, because initially they do not have to deal with the financial consequences (Interview 4, p. 57, line 3207-3210).

During the interviews with the project developers was described that the financial resources of project developers and the future end user will have an effect. Houses will become more expensive as a consequence of the extra investments that project developers have to do to realize sustainability measures if certain measures become obligated by public law. The future house owners will have to pay for these extra costs in the end (Interview 4, p. 57, line 3205-3210; Interview 5, p. 63, line 3622-3625). This appears to already be a consequence just by the obligated current national legislation only. In 2018, the VET Act was implemented and since then alternatives for gas need to be realized in new area developments. In addition, new houses need to have better insulation, double glass and need to be almost energy neutral. Project developers have to do this initial payment on the construction of these houses that meet the nationally obligated criteria (Interview 4, p. 58, line 3299-3302). However, the market price of a house is not unlimited. At a certain point in time project developers might not be able to recover all their costs from the end user anymore. This means that there is no business case left for a project developer (Interview 4, p. 57, line 3204-3219, Interview 6, p. 79, line 4464-4473). One of the legal experts described this above-mentioned field of tension in which project developers have to deal with increasing ambitions of municipalities which are in most cases more expensive to realize. This legal expert mentioned that if a municipality wants to keep a business case for a project developer, the price of land might should be kept low. So in case of sustainability, the social value of a plot of land should be more important than making a (large) profit (Interview 8, p. 96, line 5452-5455). This legal expert described that the integral approach of the Environmental planning Act also should have to do with how to get areas developed in a sustainable way as a municipality. Not only with achieving the best price for their land (Interview 8, p. 96, line 5456-5461). One of the project developers described that in practice they notice that municipalities have high ambitions and want to receive the best possible price for their land and that this has an influence on if they win a tender (Interview 5, p. 62, line 3536-3541). However, if there is no business case, the consequence might be that areas will not be developed when municipalities set irrational demands to reach their goals on sustainability. Two out of the three project developers that have been interviewed would not be surprised if areas would not be developed, because of this accumulation of ambitions of municipalities. They already have seen the first appearances of this outcome in practice and are a little anxious for this to happen more often in the future. So when municipalities keep the ambitions on sustainability high and the land price high, there might be negative consequences (Interview 4, p. 57, line 3204-3233 & p. 59, line 3320-3325; Interview 5, p. 65, line 3725-3731).

For the WFC the following aspects might have an influence on the legislation of a sustainability vision. In the first place, the municipality owns the land where the World Food Center will be developed. Therefore the municipality initially might be more inclined to include their ambitions in a private contract. However, project developers might have an influence on the conditions in a private contract, because the project developers buy the property rights from the municipality. So to reach ambitions on sustainability, public legislation of some of the measures of the sustainability vision might be necessary. With legislating measures by public law the boundaries on sustainability are already defined, because public legislation is not negotiable and therefore stakeholders know beforehand what they at least have to accomplish when they want to develop an area (design principle 1). In terms of the perspectives on development the area of the WFC is almost vacant. This might make it easier for the municipality to create new rules for the area. However, there are always existing general local and national legislation and policies. These existing regulations are important now, but also in the future under the new Environmental planning Act to keep in mind, because they help to define the boundaries on what is possible in the area for the stakeholders (design principle 1). Furthermore, the geographical circumstances might be important to take into account to define the physical boundaries of the area to legislate the sustainability vision (design principle 1). However, the geographical circumstances of the WFC area are very well defined in the detailed structural vision. In terms of material aspects, the municipality helps financing the World Food Center Experience, but the project developer organization (WFC-D) has to buy the property rights and do the initial investments on the housing and businesses and the end users have to pay the price. With legislating the ambitions of the sustainability vision it seems important to keep in mind that there has to be a certain balance between the accumulation of ambitions of the municipality and the financial consequences to keep a business case for project developers. So design principle 2, a proportional equivalence between the benefits and costs is important for the legislation of a sustainability vision.

5.2 Attributes of the stakeholders and experts

5.2.1 Culture

The internal preferences and values of the stakeholders and experts seem to be of large influence on how municipalities legislate or want to legislate a sustainability vision. In the first place, this has to do with the ambitions of a municipality on sustainability and how they want to profile themselves. According to one of the legal experts, the preferences and values of a municipality have to do with which political parties predominate within the municipal council. Municipalities with high ambitions on sustainability might sooner legislate sustainability measures via public legislation rather than wait if they might come to a private development agreement with the project developer or wait if the right project developer subscribes for the tender (Interview 6, p. 72, line 4062-4065, Interview 7, p. 89, line 5038-5046). Furthermore, in municipalities where certain important spatial issues play a sufficient role, such as soil subsidence or endangered species, certain sustainability issues will be higher on the political agenda and therefore the legislation might be done sooner by public legislation (Interview, 2, p. 42, line 2408-2420). One of the project developers described that the political field of tension concerning sustainability will stay after the implementation of the Environmental planning Act. This project developer gave a clear example on parking places. It is a political risk if less regular parking places will be created as a consequence of upcoming shared mobility concepts.

Because if parking issues appear, everyone will blame the local government for it (Interview 6, p. 75, line 4227-4232).

Furthermore, the dimension of culture has to do with the level of consensus and understanding regarding the outcome: the legislation of a sustainability vision to come to a sustainable living environment. So what are the ambitions on sustainability and how can they be reached. The interviewed municipalities described that they struggle sometimes in finding and assessing a right balance between their ambitions and to focus on the most urgent goals. Next to their sustainability ambitions municipalities have other ambitions and goals, such as enough social housing. They described that they also notice that project developers find it hard sometimes to meet the criteria on all their ambitions for an area development (Interview 2, p. 36, line 2038-2051; Interview 3, p. 53, line 2993-2999).

5.2.2 Knowledge

The internal indicator of the amount and kind of knowledge that municipalities and legal experts have about the Environmental planning Act plays an important role now. The legal experts and municipalities that have been interviewed all understand the new core instruments and how they could be applied, but what makes it hard is that there is no jurisprudence. This makes it difficult to say what exactly will be possible under the new Environmental planning Act on the subject of legislating new sustainability measures. In the existing legislation there is a lot of jurisprudence that legal experts can use to substantiate why something can be legislated in a zoning plan (Interview 9, p. 101, line 5702-5758).

The first zoning plans with a broader scope are rejected by the RvS (Interview 7, p. 80, line 4525-4532). This gives a reflection on the subject that legislation can be interpreted in different ways and that is why jurisprudence is important, because it gives justification to the legislation and indicates what can be legislated and how something can be legislated. Therefore the legal experts thought that some of the sustainability measures might be possible to legislate by public law, but they could not say for sure what exactly can be legislated (Interview 7, p. 85, line 4826-4830; Interview 8, p. 91, line 5108-5113). This latter issue is further elaborated in the subsection of decentral rules in the next paragraph.

During the interviews was described that project developers have more technical knowledge than municipalities in general about what actually is physically possible today. This is important to take into account when sustainability would be legislated under the new Environmental planning Act. If a municipality has high ambitions and legislates these ambitions by public law, but their ambitions clash with the possibilities of the techniques of project developers, areas might not be developed. When sustainability would be legislated by public law, it appears that therefore it would not be a bad idea to discuss the technical possibilities with project developers during the legislation process or during the implementation. Besides, it is important to create flexibility in the legislation to do discuss this, because the best solution for a sustainability issue today might not be the best possible solution in five years or more (Interview 1, p. 27, line 1538-1546; Interview 6, p. 74, line 4160-4192; Interview 7, p. 88, line 4976-4987). An example of discussing the technical implementation within the framework of the environmental plan is the (not obligated) environmental table of the municipality of The Hague. At this table, people from many disciplines are present who can advise an initiator on amongst other things sustainability and to discuss the ideas of the developer. In the next paragraph on the instruments, this flexibility in the environmental plan will be elaborated further.

In case of the WFC, the ambitions on sustainable development are high and the municipality would like to see the ambitions in the structural vision and the additional sustainability vision to be achieved, but the municipality also described many other ambitions in the structural vision. It seems that they struggle, just as other municipalities, to focus on the most urgent aspects in this accumulation of ambitions and to find the right balance between them.

In terms of technical knowledge, the municipality is already discussing the possibilities of the implementation of the sustainability vision with the project developers to see what the technical options are and what the financial feasibility of these options is, because there is a gap in technical knowledge between the project developers and the municipality, as it is the case in many other municipalities (design principle 3). In this way the project developers can check what is actually possible in terms of technique within the ambitions of the municipality (design principle 7). This allows the municipality to think of a reasonable balance on the public legislation of the sustainability measures to set the legal boundaries for the development of the WFC (design principle 1 & 2).

5.3 Instruments

5.3.1 Policy instruments

The different types of policy instruments were explained in subparagraph 2.1.1.

Style of governing

The style of governing seems to be an important internal factor on in what way a municipality would legislate a sustainability vision for an area development. The municipalities that were interviewed had different styles of governing. This depends among other things on how a municipality wants to represent itself and which parties predominate, as explained in the subsection of culture. If a municipality has high ambitions to become more sustainable, it could stimulate project developers and end users to take sustainable measures (Interview 1, p. 24, line 1331-1339; Interview 8, p. 93, line 5253-5255) or in the future they probably can legislate some sustainability measures by public law. An example here is the zoning plan with a broader scope of Almere Centrum Floriade-Weerwater. In the draft version of their environmental plan they included a dynamic reference for the kind of sustainable materials that could be used in buildings.¹⁶ However, the municipal council decided that they wanted to be a stimulating government instead of prescribing exactly the kind of materials that project developers were able to use, so in the final version they decided upon themes on sustainability.¹⁷

A facilitative governing style is also possible, for example by facilitating project developers or house owners when they want to take sustainability measures (Interview 1, p. 19, line 1619-1625 & p. 22, line 1235-1239). Municipalities that do not have these high ambitions concerning sustainability might probably only include what is legally obligated by national law (Interview 2, p. 43, line 2435-2440; Interview 5, p. 63, line 3577-3584).

Communicative instruments

The communicative policy instrument was not mentioned as a very significant instrument in relation to the legislation of a sustainability vision. This type of policy instrument was mentioned

¹⁶ Chw bestemmingsplan Almere Centrum Weerwater – Floriade (draft): NL.IMRO.0034.OP1HS2NW01-n01

¹⁷ Chw bestemmingsplan Almere Centrum Weerwater – Floriade: NL.IMRO.0034.OP1HS2NW01-vg03.

as an instrument for existing areas during one of the interviews with a municipality. In this municipality they try to make house owners aware of how important it is to have green areas in their garden to absorb rainwater to prevent flooding. To achieve this they started with the campaign ‘operatie steenbreek’ to stimulate homeowners to remove paved areas (Interview 2, p. 34, line 1927-1935).

Financial incentives

A financial incentive, such as a tax, a subsidy or a loan was not described as an important influence. One of the project developers mentioned that a subsidy or a loan for sustainable measures could help to make the existing housing stock more sustainable (Interview 5, p. 67, line 3807-3813). However, another important internal financial incentive, reward planning, was mentioned. As part of the Crisis and Recovery Act some municipalities experimented with this type of incentive in their zoning plan with a broader scope. The municipality of The Hague created a compensation system in their zoning plan with a broader scope for the Binckhorst. In this plan is included that if a project developer takes measures that contribute to a more sustainable area, he will get extra building permissions. So this measure is not obligated, but it might stimulate initiators to take sustainable measures.¹⁸ During this research, the zoning plan with a broader scope of the municipality of Dalfsen was analyzed as well, in which they use a similar regulation. This zoning plan offers house owners the opportunity to create an extension to their house if they improve the energy efficiency (EPC) of their house.¹⁹²⁰ According to one of the legal experts, this kind of reward planning will certainly be possible under the new Environmental planning Act, because it does not obligate anyone to take certain measures and it only might stimulate (Interview 9, p. 94, line 5287-5291).

This kind of legislation might be implemented by a government with a stimulating style of governing. However, this reward system will only be applicable in an area with several different owners and would be particularly useful in existing areas where people already live.

Physical instrument

The physical policy instrument was not mentioned in the interviews as a measure that is or might be used to legislate sustainability measures.

5.3.2 Legal instruments

The different existing and new legal instruments were explained in subparagraph 2.1.2.

Existing legal instruments

The existing legal instruments are the instruments that are in use under the current legislation of the Wro and the Wabo, but also private legislation.

Instruments of the Wro & the Wabo

The current national legislation appears to have opportunities for legislating sustainability measures from a sustainability vision. Important existing legislation is the Wro in which the standards for the current structural vision and zoning plan are legislated. The structural vision ensures in the first place that measures will be included in policies and the following zoning

¹⁸ Chw omgevingsplan de Binckhorst: NL.IMRO.0518.OP0274FOmgevBinck-50VA.

¹⁹ Chw bestemmingsplan Kernen gemeente Dalfsen: NL.IMRO.0148.Kernen2016-vs01.

²⁰ In the Building decision Act 2012 (Bouwbesluit 2012) the obligated minimum score for houses is 0.4. Possibilities for an extention are possible at an EPC of 0.2 or 0, according to the zoning plan with a broader scope of the municipality of Dalfsen.

plan obligates measures by legislation. This legislation in combination with jurisprudence has an external effect on what is possible under 'appropriate spatial planning' for sustainability measures in an area development (Interview 9, p. 101, line 5716-5724).

The most common way to legislate measures in a zoning plan is with an explanation on how an initiator can use their grounds and constructions. Further, there could be made use of prohibitions on the use of grounds or constructions in the zoning plan, for example '*It is not allowed use grounds in contravention of the zoning plan.*' Another possibility that the current zoning plan offers to legislate sustainability measures is a conditional obligation. One of the legal experts described that a conditional obligation means that someone can only get an environmental permit if he or she does something else in advance. An example that has been used by municipalities in zoning plans for the storage of water is: '*If you solidify this percentage of surface, then you need this percentage of water storage.*' (Interview 7, p. 85, line 4806-4813). This condition needs to be met otherwise an initiator will not receive an environmental permit. The second option that was described to legislate sustainability measures in a zoning plan is with the use of a dynamic reference. A dynamic reference means that a reference can be made in the zoning plan to a connected policy document. In the current legislation this is already happening with parking policies. Since 2018 municipalities are obligated to include their parking policies in zoning plans instead of a building regulation. Nonetheless, parking regulations change constantly and a zoning plan on its own lacks flexibility in terms of changing the plan. Policy rules are easier to change, so the dynamic reference from the zoning plan to a policy line on parking is a good solution to keep the necessary flexibility (Interview 7, p. 83, line 4678-4690).

However, the public interest and the necessity have to be verifiably high enough and measures have to comply with 'appropriate spatial planning' to be able to legislate sustainability measures by public legislation under the existing legislation. The verification can be done with the use of the results of a research or with jurisprudence for example (Interview 9, p. 106, line 6017-6025). With the implementation of the Environmental planning Act, the existing jurisprudence on sustainability measures will stay valid, because what is possible on behalf of appropriate spatial planning will be possible on behalf of the physical environment (Interview 9, p. 102, line 5764-5770).

Other legislation – private legislation

During this research, it became clear that private legislation will probably continue to be used as a significant instrument in the legislation of sustainability measures by all interviewed municipalities. Even though there might be more possibilities for the legislation of sustainability measures under the new legislation of the Environmental planning Act. As described in the subparagraph on spatial components, the ownership situation of the municipality has a large influence here. During this research, it became clear that when a municipality owns the property rights, a municipality will probably continue with the use of private legislation of sustainability measures. A few reasons came forward: a municipality is familiar with this type of legislation and it offers certain flexibility. It also has to do with how a municipality wants to represent itself. However, some measures have to be legislated by private legislation, because they cannot be legislated by public legislation or to overcome an accumulation of ambitions by public legislation (Interview 2, p. 39, line 2242-2251). One of the municipalities described that a tender is a good way to select the project developer that meets the sustainability criteria in the best way in case the municipality owns the property rights. The more you legislate by public legislation; how harder the puzzle becomes with other local ambitions. If ambitions turn out to be too high when legislated by public law and there is no project developer interested, a

municipality might get in trouble and might send wrong signals. With a tender a municipality can gauge if the ambitions on a specific topic are too high (Interview 2, p. 39, line 2242-2251). Another municipality agreed to this. In this municipality they use a lot of so called 'passports' for plots of land in which the conditions for a plot of land are incorporated. These conditions consist of regulations described in the zoning plan with some extra conditions (Interview 1, p. 29, line 1636-1651).

All the project developers agreed that tenders will probably continue to be the best way to legislate most sustainability measures when a municipality owns the land. One of the project developers described that it might be better to set the bar higher on sustainability measures in a tender. In this way project developers can compete to realize the best score on the sustainability measures for the best price and the municipality can select the project developer that fits best in the ambitions (Interview 5, p. 68, line 3855-3876). Another project developer complemented this opinion, but also described that municipalities can go one step further by using very strict criteria on sustainability in a tender to find out what is physically and financially possible in terms of realizing sustainability measures at this point in time (Interview 6, p. 71, line 4021-4024).

New legal instruments

The new legal instruments are the instruments of the Environmental planning Act. Four of the six core instruments of the Environmental planning Act could be helpful in the legislation of a sustainability vision on municipal level: the environmental vision, the decentral rules, the environmental permit and programs. One of the municipalities mentioned that it was important to set the ambitions and then look to the instruments of the Environmental planning Act and use the instruments that are necessary and can be used to legislate these ambitions (Interview 2, p. 41, line 2363-2371).

Environmental vision

The environmental vision was described as the first document in the process of legislating sustainability measures. The environmental vision is an integrated document where a municipality can set all their ambitions in on different topics, such as sustainability, nature and spatial planning. So in the future a sustainability vision will be an integrated document in the environmental vision. One of the legal experts described that municipalities have to consider the main societal goals²¹ of the Environmental planning Act and decide what their perspective is on the right balance in ambitions for their municipality in the environmental vision on the long term (Interview 8, p. 96, line 5463-5465). In an environmental vision a municipality can describe these ambitions. One of the municipalities that was interviewed described that it is important to set the ambitions in the environmental vision for the whole municipality, but area specific as well. It is essential to look at the state of each area in a municipality and decide what the ambitions are in an area on specific sustainability topics (Interview 2, p. 39, line 2227-2232; Interview 8, p. 96, line 5939-5445). However, the environmental vision is a policy-oriented document and therefore initially only legally binding for the municipality itself. The next step might be to look to the instruments of the Environmental planning Act and use the instruments that are necessary and can be used to legislate these ambitions (Interview 2, p. 41, line 2363-2371).

²¹ Art. 1.3 Ow.

Decentral rules

The decentral rules were described by a legal expert as instrument that will play the most important role in the public legislation of a sustainability vision under the Environmental planning Act (Interview 7, p. 89, line 5028-5035). The environmental plan will be the document where municipalities will legislate their local rules in and this document is legally binding for both the municipality itself, the market and citizens. However, even though there might be new possibilities, every measure that is legislated in the environmental plan has to be in the public interest and the necessity of a measure has to be verifiable high, as it is the case in the current zoning plan (Interview 9, p. 102, line 5738-5758). During the interviews the most urgent measures in Appendix 1 that came forward in the brainstorm sessions were used as guidance.

The view of municipalities

Three municipalities have been interviewed on the legislation of sustainability measures in a zoning plan with a broader scope. These municipalities were able to experiment with the new possibilities of the future environmental plan under the Crisis and Recovery Act. It became clear that a lot of the measures on sustainability were legislated in a more stimulating way rather than obligated. However, they used very different ways of legislating. In Almere they used several themes and all activities in the area have to contribute to these themes to reach their sustainability goals.²² In the zoning plan with a broader scope of the Binckhorst in the Hague they used dynamic references to policy rules on specific topics such as sustainable mobility, the option to compensate (reward planning) and they used a stricter EPC than is regulated in the Building decision Act 2012.²³ At the municipality of Leidschendam-Voorburg they used specific legislation on sustainability measures, such as the integration on solar panels and they described that some specific sustainability measures were going to be legislated by private contracts, such as the use of sustainable materials.²⁴ So these interviewed municipalities have three different ways of legislating sustainability measures in the zoning plans with a broader scope. This reflects the possible variety of options of legislating sustainability measures in the future environmental plan, but it also emphasizes the local differences that may appear in the future.

View of the legal experts

During the interviews with different legal experts, it became clear that sometimes it is even hard to say for them as experts on environmental legislation if a measure on sustainability can be legislated in the environmental plan. It came forward that there are a lot of drawbacks when legislating sustainability measures. The most important thing, as it is in the current legislation, is the urgent need of a measure to legislate it by public legislation and the general public interest. This means that a measure cannot be legislated in another way and have the same impact, as the environmental plan is legally binding for everyone who wants to carry out activities on grounds within the municipality (Interview 9, p. 104, line 5873-5879 & p. 106, line 6009-6012). This has to be proven by for example research to make a municipality able to legislate a measure or ambition by public law. For certain themes this is easier to prove than other themes. For example climate adaptation is seen as urgent theme already, so to prove the importance of legislating it by public law is way easier than for a theme such as the integration of car sharing (Interview 9, p. 110, line 6198-6205; Appendix 1), because legislation always lags behind. When legislation turns out to be not urgent enough or not in the public

²² Chw bestemmingsplan Almere Centrum Weerwater – Floriade: NL.IMRO.0034.OP1HS2NW01-vg03.

²³ Chw omgevingsplan de Binckhorst: NL.IMRO.0518.OP0274FOmgevBinck-50VA.

²⁴ Chw bestemmingsplan Klein Plaspoelpolder (withdrawn & will be redesigned): NL.IMRO.1916.KPP-ON01.

interest, the municipality has to pay compensation for disadvantage (Interview 9, p. 102, line 5745-5752). However, the environmental plan is going to be more integral than the zoning plan and therefore some themes, such as building nature inclusive will probably be easier to legislate, because nature related themes are for example more integrated in the physical environment under the Environmental planning Act (Interview 9, p. 110, line 6198-6205). Nonetheless, one of the legal experts was really doubting whether there actually will be a substantive difference in the balance of public interests and necessity in relation to the physical environment of the Environmental planning Act instead of appropriate spatial planning in the current legislation (Interview 9, p. 102, line 5753-5758). This doubt was also noticeable during the interviews, because the legal experts that were interviewed had different opinions on what might be possible to legislate by public law under the Environmental planning Act. An example is the measure from the sustainability vision on building detachable parking garages (Appendix 1). One legal expert described that it would be possible to facilitate parking garages, but you cannot obligate that a garage has to be detachable. It might be possible work with temporal zones in a zoning plan, but it would be too complicated to work with an end date. According to this expert, the use of a private contract would be better (Interview 9, p. 103, line 5820-5830). Another legal expert described that it might be possible to make a comparison with the jurisprudence on solar panels. Solar panels have the prescription to remove them after 15 years. So a temporal permit for a detachable parking garage for at least 15 years might be possible, because a project developer needs a business case and a municipality could describe that they have to be detachable. The challenge would be a strong argumentation why the use of cars will be less in 15 years and that therefore the garage needs to be detachable (Interview 7, p. 84, line 4730-4770).

Another example is the collection and reuse of rainwater (Appendix 1). One of the legal experts thought it might be possible in a few years to legislate this in the environmental plan, because then the water shortage will be urgent enough to be in the public interest (Interview 9, p. 108, line 6108-6137). Another legal expert described that this would not be possible to prescribe this in the environmental plan and that this would only be possible to prescribe with the use of private legislation (Interview 8, p. 98, line 5547-5564).

View of the project developers

In the interviews with the different project developers was described that most of them do not hope that municipalities will include specific measures in their environmental plans, such as 'use green roofs' or 'use solar panels' or even more detailed. The rules should be open in a way that they are flexible and can move with the development of new technologies and so do not slow down innovation. In fifteen years or more solar panels or other specific measures might not be the most beneficial option. What is also important is that project developers have different techniques on how to deal with sustainability issues in different circumstances (Interview 5, p. 64, line 3670-3673; Interview 6, p. 73, line 4137-4144). One of the project developers described this as that it is not necessarily the problem that the ambitions are too high, but the translation to the environmental plan might be too specific (Interview 6, p. 73, line 4137-4138). According to the project developers, a possibility to keep this flexibility might be the use of measurable units instead of specifically defined rules. One of the project developers preferred the use of the existing measurable units. For example, in the national Building decision Act 2012 a minimum EPC and MPG-score are obligated as measurement methods. In the environmental plan it will become possible that municipalities can set stricter customized

scores on national scores that are prescribed in the Bbl on the MPG²⁵ and probably also the EPC, which will be BENG from 2020.²⁶ According to this project developer this is an effective way, because only the general measurement methods where every project developer already has to work with become stricter (Interview 4, p. 3287-3292). Furthermore, there was described that there are many other different and not mandatory measurement methods for sustainability, besides the nationally obligated MPG-score, such as BCI, GPR or BREEAM methods.²⁷ However, despite if it would actually be possible under the new legislation in the future, it became clear that it would probably not work if one municipality uses BREEAM, another uses BCI and another legislates another method. The first plan that actually included an obligated minimum BREEAM-score is already implemented at Logistiek Park Moerdijk by the Province of Noord-Brabant (Provincie Noord-Brabant, 2016). Comments and questions were raised during the interviews on these measurement methods, such as who decides what is right or wrong in all these measurement methods, which method is better to use and what if a better method will be developed (Interview 6, p. 67, line 3840-3844) and also one of the legal experts described that it would be confusing if every municipality used different obligated measurement methods (Interview 8, p. 94, line 5332-5333). According to one project developer, it might be a better idea to include these measurement methods in a tender when a municipality owns the property rights, as it happens occasionally nowadays. In this way project developers can compete who gets the best score for the best price (Interview 5, p. 68, line 3855-3860).

One of the project developers was discussing the opportunity of the use of a more flexible way of legislation by a point system. This technique is already designed for climate adaptation and building in a nature inclusive way²⁸, but might be designed in the future for measures on for example mobility. This method contains a number of points for specific measures and a project developer needs to earn a certain amount of points to be allowed to develop an area, so as a condition to receive an environmental permit. This project developer mentioned that it might be an option in the future to keep some space open to offer flexibility for new innovations from project developers, because then they can discuss their own innovative ideas with a municipality (Interview 6, p. 76, line 4278-4283 & p. 76, line 4332-4348 & p. 78, line 4426-4431). One of the legal experts described this principle which is used in a zoning plan with a broader scope where the municipality makes use of the 'cafeteria model'. This model was used as an assessment framework to receive an environmental permit, in which an initiator can choose between different measures to score points with. A minimum score is necessary to receive the environmental permit. At the time of the interview this principle was not yet approved by the RvS (Interview 7, p. 87, line 4944-4957).

Measurement methods might create a whole new field of tension when they would be legislated in an environmental plan, because a municipality does not know what it gets when it uses scores. An example is that a municipality sets an open norm in the environmental plan with something such as 'create sustainable warmth' with a diverse set of options with a different number of points for every measure in a connected policy line as an assessment framework for an environmental permit. Measurement methods might be easier for the project developer

²⁵ Based on the possibility of a stricter MPG-score of 0.9 under the 19th tranche of the BuChw instead of the 1.0 that is obligated under the existing legislation of the Bouwbesluit 2012.

²⁶ Based on the possibility of a stricter EPC-score under the 17th tranche of the BuChw. However, BENG will be implemented in 2020, so the exact possibilities to set a stricter BENG-score are not known yet.

²⁷ BCI, GPR and BREEAM are measurement methods for the level of sustainability and/or circularity of buildings, which are developed by research institutions and market parties and are not obligated to use by law.

²⁸ This method for building nature inclusive was recently developed by Arcadis in April 2019. One of the pilot areas is the Binckhorst in Den Haag.

to adapt to and it would give project developers the opportunity to choose a sustainable technique in which they are specialized in. However, a municipality does not know what measures a project developer will choose to collect enough points to be able to develop the project (Interview 6, p. 73, line 4124-4129). One of the legal experts made the comment that this level of uncertainty fits in the ideas of the Environmental planning Act: to have mutual trust (Interview 8, p. 95, line 5360-5361). So municipalities might should focus more on the end goal than the exact way on how to get there with rules.

New possibilities of the environmental plan

The above-mentioned type of legislation with scores would for example be possible with a dynamic reference from the environmental plan to policy rules. The dynamic reference has already been used in the current legislation of parking policies. In experiments under the Crisis and Recovery Act a dynamic reference also has been used in the zoning plan with a broader scope of de Binckhorst to create more flexibility. The municipality included all the policy rules in an additional document.²⁹ Another example is the zoning plan with a broader scope of Rijnhaven-Oost in the municipality of Alphen aan den Rijn, where they make use of an open norm with a dynamic reference to policy rules in which a GPR-score is included.³⁰ However, it is very important to monitor and, if necessary, update these policy rules regularly. It is important to connect an obligation for an environmental permit to these policy rules to create legal certainty.

A new option in the environmental plan will be that measures can be obligated by an order in the plan rules (Interview 9, p. 109, line 6194-6205). In the current legislation this was only possible with a conditional obligation as explained in the subsection of existing legislation (Interview 7, p. 88, line 4962-4965). Two of the legal experts described that there are some conditions that need to be taken into account when a municipality wants to include an order to legislate a measure on sustainability with. In the first place there must be a right balance between the public interest and property rights. Secondly, a measure must be proportional and commensurate.³¹ This means that these measures must be valid to reach the goal and there are no other ways to reach their ambitions that are less radical (Interview 7, p. 82, line 4623-4636). In an environmental plan, a local government can make use of orders to obligate people to do things on their own property if the measure fits all the above-mentioned conditions to reach a sustainable environment. An example is the percentage of stone in the gardens of houses in a downhill area where it is important that the soil can absorb rainwater to prevent (extreme) flooding with the foresight that rain showers get worse in the (near) future, because of climate change and a municipality has no other ways to process the rainwater. In this case the public interest becomes more urgent than ownership (Interview 7, p. 82, line 4610-4619; Interview 8, p. 93, line 5256-5282 & Interview 9, p. 102, line 5738-5758). An example would be '*you can only pave 50 percent of your garden.*' (Interview 7, p. 82, line 4610-4619).

But this way of legislation is at an early stage and legislating something as an order will need a lot of evidence and therefore cannot be implemented without very good reasons (Interview 7, p. 82, line 4623-4636). If this is not the case, municipalities have to pay compensation for disadvantage if the public interest is not important enough to obligate such things (Interview 9, p. 102, line 5742-5748). Furthermore, this type of legislation is very

²⁹ Policy rules in addition to the Chw omgevingsplan de Binckhorst: NL.IMRO.0518.OP0274FOmgevBinck-50VA.

³⁰ Gebiedsbeleid (policy rules) in addition to the Chw omgevingsplan Rijnhaven-Oost:

NL.IMRO.0484.OPrijnhavenoost-VA04.

³¹ Art. 3:4 Clause 2 Awb & Art. 1 Eerste Protocol of the EVRM

extreme, so a municipality has to think what kind of municipality it wants to be and if it wants to force people to do something.

Program

According to the legal experts that were interviewed, a program is a possible useful instrument to legislate some measures of a sustainability vision with. During the focus group, the real importance of programs came to the table and how little exposed the program actually is in practice nowadays. It is an instrument from which a lot is unknown. A constant interaction between programs and a plan is necessary to make an environmental plan succeed. Programs are a new sort of instrument in comparison to the existing legislation. In practice turns out that many municipalities go from environmental vision to an environmental plan in the current experimental phase, without the use or support of programs whilst the program would be a good link between the environmental vision and environmental plan on many subjects (Focus group, 2019).

There are four types of programs. One of them is the voluntary program. According to one of the legal experts, almost everything can be included in a voluntary program. However, the question is what the impact would be. A program is initially not legally binding for citizens, so nothing happens right away and a municipality has to take substantial measures (Interview 8, p. 98, line 5541-5545). However, there are ways to make a program legally binding. The most obvious way to make a program legally binding for initiators is to translate certain policy from a program into rules of an environmental plan. There might be another possible option in which a program would be used as assessment framework to receive an environmental permit linked to an open norm in an environmental plan.³² This latter method is still in very early stages, because the instrument of program is a little neglected in this experimental phase of the Crisis and Recovery Act. Anyway, the system would be familiar to the way of legislating parking norms in a policy line with a dynamic reference under the current legislation.

A municipality could make use of a voluntary program with specific measures on sustainability as general theme or on a specific theme such as the energy transition, circularity or climate adaptation (Interview 8, p. 97, line 5471-5477). Furthermore, it is possible to create a program for a specific area. According to one of the legal experts, an obligated reason to create a program is that municipalities do not reach the national environmental values. The national government can set environmental values in the *Bkl*. In the *Bkl*, instruction rules are prescribed on how to implement these values in an environmental plan of a municipality. Municipalities are allowed to set stricter values on these topics locally. An example is a stricter value for the concentration of carbon monoxide in the air.³³ Apart from these obligated topics, a municipality is allowed to create environmental values themselves on topics where the national government and province where the municipality is located did not create environmental values for (Interview 7, p. 89, line 5028-5035). This could be useful to reach a sustainable environment, because certain measures to reach a sustainable environment can be expressed in measurable units (Interview 7, p. 89, line 5028-5030). However, all environmental values need to be monitored³⁴ and are initially only legally binding for the municipality who include them (Interview 9, p. 106, line 5978-5982). Environmental values can affect initiators when an administrative body decides to take measures to comply with a value in the environmental plan. When a municipality does not reach these environmental values in

³² Van Tilburg, 2019.

³³ Art. 2.6 Clause 3 Bkl.

³⁴ Art. 20.1 Ow.

a specific amount of time they have the responsibility to create an obligated program with measures on how they can achieve the environmental values they have set³⁵ (Interview 7, p. 86, line 4846-4852).

Something else that came forward in an interview with a legal expert is that it might be important for a municipality to keep in mind to only include environmental values in their environmental plan where it can have an influence on. Otherwise a municipality has to create a program to improve these values, but it will be hard for municipality take measures on something they cannot influence. This would be useless. As an example this legal expert mentioned '*in 2040 this percentage of car movements has to be of shared cars.*' (Interview 9, p. 106, line 5961-5973). A few of the legal experts described that municipalities might not be very enthusiastic to use (voluntary) programs and not to monitor them, because they only stipulate themselves to take all these measures. Furthermore, it takes a lot of time and therefore money to create these programs (Interview 8, p. 97, line 5518-5521; Interview 9, p. 105, p. 5941-5944).

Environmental permit

The environmental permit is an instrument that is already in use under the current legislation. An environmental permit will stay an important instrument with the implementation of the new Environmental planning Act, connected to an environmental plan. If someone does not fulfil the conditions of the environmental plan, an environmental permit cannot be granted. As mentioned in the previous subparagraph, an environmental permit can also be linked to an order in the environmental plan (Interview 8, p. 93, line 5256-5259). Furthermore, an environmental permit can be used as condition to maintain an environmental value with a link from the *Bkl* to the environmental permit. So if a certain activity that needs an environmental permit and has a negative influence on the environment, the environmental value is taken into account as condition for an environmental permit.

The municipality of Ede seems to have a stimulating style of governing when it concerns existing areas to create a sustainable living environment. They make use of a communicative policy instrument with 'operatie steenbreek' and provide a loan for inhabitants who want to make their house more sustainable, a stimulating financial incentive (Brainstorm 1, p. 11, line 592-609). When it concerns new area developments, the style of governing of the municipality seems more regulating. Before the implementation of the VET Act, the municipal council prescribed that new area developments had to be built without a connection to the gas network and recently obligated the use of sustainable energy for business premises, incorporated in the conditions for a new plot of land.³⁶

For the project of the WFC it is important to note that there is already a private cooperation agreement between the municipality of Ede and WFC-D in which is agreed that the sustainability vision is the base for further elaboration on sustainability (design principle 1). WFC-D is now discussing the technical and financial feasibility of the measures that are included in the sustainability vision with the municipality (design principle 2 & 3). During this process, the municipality needs to decide if it wants to include specific measures of the sustainability vision that are seen as urgent and where is consensus on in the partial revisions of the zoning plan. An example of where is consensus on in this point of the process is the

³⁵ Art. 3.10 Ow.

³⁶ Gemeente Ede (2019). Case no. 108894.

maximum parking norm and the type of sustainable energy that will be used. An important reason to use public legislation appears to be that it is legally binding for the project developer, but the end user as well. For very urgent cases on climate adaption for example, because the area of the WFC is downhill, the municipality could choose to use an order that prescribes that end users cannot have more than a certain percentage of stone in their gardens. Besides, public legislation could be useful as an additional big stick for urgent measures, because private legislation between the municipality and WFC-D might not be included in the lease or the bill of sale.

There are already some possibilities to legislate sustainability measures with instruments under the existing legislation. The municipality could legislate the above-mentioned parking norm as a maximum, but also a minimum percentage of charging stations for cars is possible to legislate (Appendix 1) with a dynamic reference from the zoning plan to the policy line on parking. When the municipality wants to include a measure by public legislation it has to be in the public interest and it must be urgent, otherwise they have to pay compensation for disadvantage (design principle 5 & 6). For some measures and themes in Appendix 1 this is easy to prove under the current legislation, such as for water storage measures, but the above-mentioned parking norm and charging stations have been proven to be urgent enough as well to be legislated by public legislation. Under the Environmental planning Act, the environmental vision does not have added value at this point in the process, because the structural vision plus the additional sustainability vision could be seen as environmental vision. A program might be helpful in the future to work out all their goals on the theme of sustainability within the whole municipality, but probably not only for this specific area at this point. The environmental plan with a connected environmental permit came forward as the most useful instrument if the municipality wants to legislate sustainability measures of the sustainability vision for this area development by public law. However, the municipality has to consider how to legislate measures. There might be some more options for the legislation of sustainability measures, because of the integration of topics under the new legislation. Some mandatory environmental values that affect sustainability could be set stricter in the environmental plan with the use of instruction rules described in the *Bkl*. The municipality could also create new values, although the risk is that the municipality has to create a program if it does not reach these measures or values. Furthermore, stricter and therefore customized values of the national values prescribed in the *Bbl* can be included in the environmental plan to reach a sustainable environment. Another option is to prescribe measurement methods or point systems. The project developer of the WFC-D described that he thought it is most important to create flexibility in public legislation to not slow down innovation, but a certain homogeneity between municipalities in measurement methods prescribed in the environmental plan would be encouraged.

5.4 Rules

The rules are the working rules of Elinor Ostrom which were explained in paragraph 2.2.

5.4.1 Position rules

The position rules locate the positions of the actors in the action situation (Polski & Ostrom, 1999). In the process of the legislation of a sustainability vision for an area development there are two main positions: the position of the municipality and the position of the project developer or initiator who wants to develop an area. The outcome of the action situation has an (financial)

influence on the end user: the buyer of the house. During the interviews, it became clear that the position that an actor has in the process, has a large internal influence on the decisions that will be taken in the action situation by the municipality on how to legislate a sustainability vision. Ownership of the land gives a certain position to a project developer or a municipality. When a municipality owns the land it has two options to legislate a sustainability vision: via public legislation and private legislation. When a municipality does not own the land the only possibility is public legislation (Interview 1, p. 24, line 1351-1353; Interview 9, p. 92, line 5191-5192). The new Environmental planning Act will give the opportunity to set (stricter) measures on sustainability in the new environmental plan and a municipality has to take responsibility for a sustainable living environment, according to the main societal goals of the Environmental planning Act. This might create a new kind of position for a municipality in the near future, because they will be able and have to set (stricter) rules on sustainability by public legislation.

5.4.2 Scope rules

The scope rules are rules that determine the boundaries of the intended outcomes and the actions that contribute to the outcome: a sustainable environment (Ostrom, 2005). To reach a sustainable environment, the legislation of sustainability measures could be very helpful to set a framework. So there is some overlap between this subsection and the previous paragraph on instruments. Under the Environmental planning Act, municipalities can create an environmental vision with their main goals on how to sustain a healthy and sustainable environment and a translation to an environmental plan with specific legislation connected to environmental permits. The current best practices with the new legislation are unknown, because there is no jurisprudence. However, existing practices under the current legislation or private legislation on sustainability could also be used to help to create the rules of the game. Nonetheless, it is always important to map the consequences of possible ways of legislation for the outcome. For example, if a municipality obligates a measure in the environmental plan, what (financial) consequences does it have in the field for project developers and how much room is there for initiators to come up with their own ideas.

5.4.3 Choice rules

The choice rules determine what actions an actor can or have to take at a certain point in the process (Ostrom, 2005). The choice rules are mainly determined by the scope set by formal legislation. In the end the Municipal Council makes the final choice on what instruments of public legislation will be used and how the instruments of the Environmental planning Act will be used for the legislation of a sustainability vision. Municipalities are not obligated to legislate sustainability measures by public law, except from mandatory national and European legislation. However, this decision depends on how a municipality wants to represent itself and so which position it chooses to take. A municipality could choose to use more specific or strict legislation or more global legislation (Interview 1, p. 24, line 1331-1339; Interview 8, p. 93, line 5253-5255). In this way the municipality can influence what kind of techniques a project developer could choose to use. Nonetheless, there is also the possibility to choose for the legislation of sustainability measures via private legislation when the municipality owns the land. In this way the project developer has an influence on the decisions made.

5.4.4 Pay off rules

The pay off rules define the relation between the social benefits and the financial costs (Ostrom, 2005). There has to be a right balance between the social benefits of sustainable measures and the costs that come with the realization of these measures to create a feasible

outcome in the public legislation of a sustainability vision. Municipalities have many other ambitions and goals next to sustainability, but project developers need a certain business case to develop an area and the future house owners have to pay for a more expensive house (Interview 4, p. 57, line 3204-3219). However, there is a maximum market price of a house. So an accumulation of ambitions which are forced by public legislation must be avoided to keep a business case for the project developers and the feasibility of the project. In case of private legislation, a municipality and a project developer can come to an agreement on who pays for what.

In case of the WFC, there are two main positions. The position of the municipality of Ede and the position of the project developers. The municipality owns the land, so it is in the position to legislate the sustainability vision both by public legislation or private legislation. There is a third position, the end user, but they do not affect the action situation and they are only influenced by the outcome. At this point in time, the scope rules are determined by what is written down in the structural vision and the additional sustainability vision which are already created. Furthermore, there is a private cooperation agreement between the municipality and WFC-D. The consequence is that a tender is not an option, unless the WFC-D does not meet the conditions set in the agreement. In this case there will be a more public sale of plots of land with the possibility for tenders (design principle 5 & 6). Because the land of the WFC area will be sold per construction site, new (public) regulations can be made for every site. Furthermore, there will be made partial revisions of the zoning plan (design principle 1). The choice for actions that actors can take are mainly decided by what will be possible to legislate under the Chw, but also what position the municipality wants to take. Because of the cooperation agreement between the municipality and WFC-D ahead of the spatial regulations and development of partial revisions of the zoning plan, the municipality is already discussing the technical and financial aspects of the development with WFC-D. This gives the project developer the opportunity to think of how they choose to implement the sustainability vision until the first partial revision is determined (design principle 7). When their ideas turn out to be not specific enough or when the municipality does not agree on these ideas, the municipality is in the position to include additional regulations without discussing them in the partial revisions (design principle 5 & 6). So there are clear locally understood boundaries between the municipality and the project developer (design principle 1). The pay off rules have to be in balance to create feasible legislation from the sustainability vision of the WFC, so there has to be a proportional equivalence of benefits and costs to keep the feasibility of the project and a business case for the project developer (design principle 2). However, in the cooperation agreement is prescribed that disproportionate demands on sustainability by the municipality might influence the price of land and this would affect the final financial result of the municipality.

6. Conclusion

In the previous chapter the results were elaborated. In this chapter, the conclusion of this research is written based on these results. The aim of this research was to find out what new or existing instruments can be used and how these instruments can be used to legislate a sustainability vision for an area development in the light of the new Environmental planning Act. The following main research question derived from the research aim:

'What instruments can be used and how can these instruments be used to legislate a sustainability vision for an area development in the light of the Environmental planning Act, such as the World Food Center in Ede?'

To answer this main question, five subquestions were created:

- What is the necessity and usefulness of the legislation of a sustainability vision?
- What existing instruments can be used to legislate a sustainability vision?
- How can these existing instruments be used to legislate a sustainability vision?
- What new instruments can be used to legislate a sustainability vision?
- How can these new instruments be used to legislate a sustainability vision?
- What are the impacts and challenges of legislating a sustainability vision?

The conclusion is structured based on the order of the subquestions. In the final subsection of this chapter the main research question is answered.

What is the usefulness and necessity of the legislation of a sustainability vision?

The usefulness and necessity of the public legislation of a sustainability vision has to do with the fact that this type of legislation has an influence on both the project developer and the end user. Some measures are so urgent that it is important that they continue to have an impact on all the future end users. Private legislation between the project developer and the end user might not include all the necessary conditions on sustainability. With the legislation of measures on sustainability by public law, this does not happen. Furthermore, the possibilities to legislate sustainability measures with the Environmental planning Act offers a municipality the opportunity to use public legislation as a big stick for project developers to implement measures on sustainability.

What existing instruments can be used to legislate a sustainability vision?

During the interviews and literature research came forward that there are some possibilities in the existing legislation that can be used to legislate a sustainability vision for an area development by public law. The structural vision came forward as the instrument that positions the first boundaries on the ambitions of a municipality, possibly with an additional sustainability vision to set specific boundaries on sustainability in an area. Currently, the zoning plan is an instrument that already offers some possibilities to legislate a structural vision and an additional sustainability vision. However, some drawbacks have to be taken into account when legislating sustainability measures in a zoning plan under the current legislation of the Wro, because if a municipality wants to legislate sustainability measures in the zoning plan, certain requirements have to be met. In the first place, every measure that will be legislated in a zoning plan has to be in the public interest and has to be urgent enough to legislate by public law. Furthermore, a measure has to be on behalf of appropriate spatial planning. For some measures this is harder to prove than for other measures. Water storage is a topic that is already included in

the current zoning plans, because it fits the above-mentioned criteria. For other measures public legislation is not possible, because it does not fit these criteria. A municipality can make use of (stimulating) policy instruments or private legislation to legislate a sustainability vision.

How can these existing instruments be used to legislate a sustainability vision?

An option that has been used in the current legislation to legislate sustainability measures is the use of policy instruments. Examples that came forward during this research were stimulating financial incentives, such as a subsidy, a loan or communicative instruments, such as 'operatie steenbreek'. However, these examples are policies and therefore only stimulating and not obligated to implement by project developers or the end user. So to reach a sustainable environment, policy instruments might not have enough impact.

In terms of more obligated instruments, the structural vision appears to be the instrument that positions the first boundaries for an area development nowadays, in combination with an additional sustainability vision. Currently, the zoning plan appears to be the instrument that offers most possibilities to legislate some measures of a sustainability vision by public law, if the drawbacks mentioned in the previous subsection are taken into account. There appear to be a few ways of legislating sustainability measures in a zoning plan. The most common way to include measures in a zoning plan is through prescribing rules which explain how grounds in a specific area can be used. To make this way of legislating more flexible, a dynamic reference (p. 50) from the zoning plan to a policy line can be used, because policy lines are easier to change than the zoning plan. The dynamic reference has become a common way in the past few years under the existing legislation to legislate parking norms, because parking norms can fluctuate over the years and therefore need to be easy to change. Therefore, the dynamic reference can certainly be used for the maximum parking norm, but the policy line on parking regulations appears to be usable as well to prescribe a minimum percentage of charging stations of the number of parking places under the existing legislation (Appendix 1). Another way of legislating measures of a sustainability vision is through the use of a conditional obligation in the zoning plan. A conditional obligation sets a requirement to be able to do something and has been used in zoning plans for the legislation of measures on water storage. An example is: '*if you solidify this percentage of surface, then you need this percentage of water storage.*'. If an initiator does not meet the conditions of the rules in the zoning plan, an environmental permit will not be granted. These ways of legislation could be included in the future environmental plan.

The current legislation is based on the principle of specification. This means that many topics have specific legislation and therefore when weighing interests, the public administrative body must remain within the framework of the applicable law (p. 44).

During the interviews appeared that the spatial component of ownership plays an important role on how to legislate a sustainability vision. When a municipality owns the property rights, it prefers to use private legislation to legislate sustainability measures. Types of private legislation that appears to be common to use today are a tender, a development agreement or via a passport for plots of land. In a tender, measures are described and the project developer which meets the criteria in the best way for the best price will develop the land. In the part of a tender where points can be scored, it is allowed to set stricter measures than the Building decision Act 2012. Under the current legislation it is not allowed to obligate stricter scores than prescribed in the Building decision Act 2012, but this way project developers can compete to realize the best score for the best price, so this is allowed. Furthermore, in a development agreement a project developer and a municipality can agree on specific

conditions and in a passport conditions to develop a plot of land are incorporated. These types of private legislation will stay possible under the new Environmental planning Act.

What new instruments can be used to legislate a sustainability vision?

In 2021 the new Environmental planning Act will be implemented. Currently, municipalities already have the opportunity to experiment with the possibilities that this new legislation will offer under the Crisis and Recovery Act. It has become clear that a municipality will be able to use four core instruments in the future: the environmental vision, the environmental plan, the environmental permit and the program. What used to be the structural vision for an area will become the municipal environmental vision and the zoning plan for an area will become the municipal environmental plan. The environmental plan will offer new opportunities for the legislation of sustainability measures. Still, every measure that will be legislated in an environmental plan has to be in the public interest and has to be urgent enough to legislate it by public law. Nonetheless, because of the integration of the Acts on spatial planning in the new Environmental planning Act, it will become possible to include more subjects in the environmental plan that have to do with the whole physical environment. An example is the subject of climate adaptation. A municipality will also be able to create programs to legislate sustainability measures with.

How can these new instruments be used to legislate a sustainability vision?

During the interviews, it became clear that the successor of the structural vision, the environmental vision, will be an important instrument to set the ambitions of a municipality for the whole municipality and for specific areas on sustainability, but also on all other topics that have to do with the physical living environment. Because of the integration of subjects that are related to the physical environment, sustainability will more likely to be an integrated subject and therefore a sustainability vision will be incorporated as well in an environmental vision under the Environmental planning Act. Because of this integration, all the acts of the existing legislation that are in relation to the physical environment will be incorporated in the Environmental planning Act, such as the Wabo and Wro and will be withdrawn as separate act. This will lead to a reduction of rules and acts.

After the environmental vision is created, the next step for a municipality appears to be to find the best way to achieve these ambitions: with an environmental plan or also with one or more programs. Every municipality will have one environmental plan for the whole municipality. They can also create programs to work out specific themes or use a program to work out policy for a specific area. It can be used as a step between the environmental vision and environmental plan to figure out what needs to be legislated in the environmental plan or as a self-binding document. An environmental plan (connected to an environmental permit) will be the instrument that could cause the most substantial impact on the legislation of sustainability measures by public legislation, because an environmental plan is legally binding for all parties that are involved in an area development. Still measures need to be in the public interest and need to be urgent enough to legislate by public law.

A voluntary program will probably be a good instrument to elaborate on sustainability as a topic. A program can elaborate on what measures need to be taken and check the feasibility of actions, and if necessary translate these actions into legally binding rules in the environmental plan. Nonetheless, it appears that municipalities might not be very enthusiastic about programs, because initially they only obligate themselves to take measures they described. When policy described in programs gets translated into rules in the environmental plan it will also be legally binding for businesses and civil society. It might also be possible to

use a dynamic reference from the environmental plan to certain policy and measures in a program as assessment framework for an environmental permit.

There are also obligated programs. Municipalities will be able to set stricter environmental values with an explanation on how to achieve these values in their environmental plan. Besides, municipalities have the opportunity to set their own environmental values if the national government did not create values on a topic yet. But municipalities have to monitor environmental values and if they do not reach them within a specific amount of time, they are obligated to create a program on how they will reach these values. This appeared to be an important reason why municipalities do not seem very enthusiastic yet about the use of programs: it is a lot of work and therefore expensive.

Under the current legislation it was not possible to legislate measures that are stricter than prescribed in the Building decision Act 2012. Under the *Bbl*, municipalities might have the opportunity to set stricter and therefore customized values on the MPG in their environmental plan for example. The lower the MPG score, the more sustainable building materials are. Especially project developers prefer the use of stricter and existing scores, such as the MPG. Another type of including a measure in the environmental plan, but which is not obligated, is reward planning in the shape of a plan rule to stimulate house owners or area developments with multiple project developers to make their house or area development more sustainable. This can be done for example by the reward of allowing more building possibilities when a house owner or project developer realizes a stricter EPC on their building or when they create certain sustainable area developments. Because this is only stimulating, there is no doubt this will be possible under the new legislation. This has already been done in the municipality of Dalfsen and at the Binckhorst.

In the environmental plan it will also possible to legislate orders, which is not possible in the current legislation. This offers the municipality the possibility to tell an initiator he has to do something on his own property when the public interest becomes more important than the property rights. An example is a downhill area where it is important that the soil can absorb rainwater to prevent (extreme) flooding. When a municipality wants to legislate an obligation or order in the environmental plan, there must be a right balance between the public interest and property rights. Besides, the measure must be proportional and commensurate: the measures must be valid to reach the goal and there are no other ways to reach the ambitions that are less radical. This way of legislating might become important in cases as the above-mentioned example.

The idea of the Environmental planning Act is to offer more flexibility with more room for initiatives. This flexibility could be done through the use of open norms with a dynamic reference to a policy line. Under the Crisis and Recovery Act this has been done for Rijnhaven-Oost and the Binckhorst. In this way the policy rules can be adapted more easily and therefore it would be easier to connect a measurement method, such as BREEAM or a point system. However, it would be important to connect an obligation for an environmental permit to this policy line to create legal certainty.

There is a lot of uncertainty on what will actually be possible to legislate, because there is no jurisprudence yet. This jurisprudence in which new measures on sustainability are legislated, will be created over the next years by the rejection and approval of the legislation of sustainability measures by the RvS. Besides, the public need has to be verifiable high enough to be able to legislate sustainability measures by public legislation, as it is the case under the current legislation. There might be more options for the legislation of sustainability measures,

but there are many other variables that influence how a sustainability vision will be legislated. These factors are elaborated in the next subsection.

What are the impacts and challenges of legislating a sustainability vision?

The legislation of a sustainability vision will probably proceed in fits and starts and in small steps. More legislation of sustainability measures by public legislation will create a new field of tension between project developers and municipalities. One of the impacts might be that municipalities have different types of legislating sustainability measures by public legislation, because municipalities have more freedom to set specific local legislation on sustainability. Some municipalities might set very specific legislation on sustainability, some municipalities will set more general legislation and some municipalities will not set stricter measures than the national minimum norms. These differences between municipalities will lead to higher expenses for project developers, because they cannot use a standard house anymore that fits the national general legislation. However, it should be considered whether this disadvantage for project developers outweighs high ambitions on sustainability of some municipalities.

In terms of the impact of the specificity of legislation, the project developers that have been interviewed all expressed that they would prefer measurements instead of specific rules in the environmental plan. If a municipality legislates something with specific prescriptions, such as '*use of solar panels on the roofs*', the consequence might be that these measures are technically not the best innovations in fifteen years or more. Municipalities often lack knowledge on what is physically possible and with the use of measurement methods project developers can come up with techniques to reach the values set with the measurement methods. While this might make the legislation more flexible for project developers to use, municipalities will have less insight in what kind of techniques a project developer will use. Anyway, trust in each other fits in the thoughts of the Environmental planning Act.

A measurement method in an environmental plan can be legislated stricter, such as customized values on values on the MPG for example or it might be possible to legislate other measurement methods with a dynamic reference to policy rules, such as BREEAM, but also point systems could be a possibility as condition to receive an environmental permit. This latter mentioned system is already developed for climate adaptation and building nature inclusive, but in the future other topics on sustainability might also be developed in this way. This could be done with a dynamic reference to a policy line for example. These measurement methods or point systems could also be a solution for the problem that it is uncertain what is technically possible in several years from now and might prevent that projects are not technically feasible. However, it is important to monitor these measures to keep the scores adapted to the most recent developments in the policy rules which would be used as an assessment framework for an environmental permit. Municipalities have to think carefully about how they legislate sustainability measures.

The major challenge appears to be to find a balance between the social benefits and the costs. In case a municipality owns the land, a municipality prefers to achieve the best price for its land and it wants areas to be developed in a sustainable way. Sustainable area development might be more difficult when municipalities have more ambitions they wish to live up to. Municipalities might have ambitions on the percentage of social housing in an area. However, as social housing raises less money, the costs to realize their ambitions on sustainability may not be fully covered. Municipalities must therefore find the right balance between all their municipal aims and find their most important focus points to prevent an accumulation of ambitions in the environmental plan to avoid that the development of areas becomes

prohibitively expensive for project developers who need a business case to develop an area. However, a program could be an opportunity before the creation of the environment plan to work out how a municipality wants to realize its ambitions, but also to find out what is possible. Important policy that comes forward in a program could be translated to rules in the environmental plan. The second challenge is that municipalities have to (re)consider their style of governing. A municipality has to make the decision to handle a more stimulating style of governing or a more regulating style of governing concerning the legislation of sustainability measures. Another option could be that a municipality does not want to take extra sustainability measures. Besides, what municipalities choose to legislate by public law is legally binding for both the project developer who develops the area as well as the end user. A municipality has to determine what sustainability measures are high on their political agenda and need to be implemented in an area development, but also which measures are so urgent that they also need to be implemented in the future by the end user and not only by the project developer who develops the house. In case of very urgent matters, even an order could be used to set things into motion. If a municipality owns the land, a municipality has to find the right balance on what measures are most important to legislate by public legislation and what measures can be legislated by private legislation. A municipality might choose to do a market consultation or agree upon a cooperation agreement with a project developer to discuss the technical and financial possibilities that there are on sustainability before the further private legislation or public legislation is set.

Another challenge is that it is not exactly clear what will be possible under the environmental planning Act. There is no jurisprudence yet and besides that, legislation always lags behind, because what is not urgent to legislate now, might be urgent to legislate in five years or more.

What instruments can be used and how can these instruments be used to legislate a sustainability vision for an area development in the light of the Environmental planning Act, such as the World Food Center in Ede?

During this research, it came forward that there are possibilities to legislate a sustainability vision for an area development under the current legislation. The sustainability vision is in the current legislation a good addition to the structural vision to set the boundaries for the legislation of sustainability measures in a municipality. The zoning plan appears to be the instrument that offers the most possibilities to legislate some measures of a sustainability vision by public legislation. However, everything that is or will be included in the zoning plan has to be urgent, has to be in the public interest and has to be on behalf of appropriate spatial planning. For some issues this is easier to prove than other issues. Current ways of including rules in the zoning plan are in the first place explanations on what activities are (not) allowed to execute on grounds. Secondly, a dynamic reference or a conditional obligation can be used. Another instrument that is used is a (stimulating) policy to persuade people to do something and also private legislation appears to be an important way of legislating sustainability measures nowadays.

Under the Environmental planning Act there might be more possibilities for the legislation of a sustainability vision, because of the integration of the Acts on spatial planning. However, measures still have to be urgent and have to be in the public interest under the Environmental planning Act, but also have to contribute to the main societal goals of this act to create and maintain a sustainable living environment. This might make it hard to legislate some sustainability measures by public law, because they are not urgent enough at this point in time.

In an environmental vision the ambitions can be set for a whole municipality or for specific areas and the sustainability vision would probably be integrated in this document in the future. From this point, municipalities can decide what instruments they would like to use and how strict they want to set the rules. Municipalities can choose to use the environmental plan with the connected environmental permit or programs. Programs are only legally binding for themselves initially, but a program could municipalities help to make choices before they decide to legislate measures by public legislation or private legislation, because with a program the goals to achieve and measures need to be taken can be described. Project developers and end users will face the greatest impact through the use of an environmental plan. Some sustainability measures might be municipal, but specific measures on sustainability could also be set for a specific area. Municipalities have to set minimum prescribed values, described in amongst other the *Bbl* or they can set stricter, customized legislation on these topics. They can also use (stricter) environmental values with rules in the environmental plan on how to reach these values or create new environmental values. However, if they do not reach the environmental values within a specific amount of time they have to create a program on how to reach them. Other new options are the use of orders or the use of reward planning in the rules of the environmental plan.

However, there are many (new) fields of tension and internal and external influences when legislating a sustainability vision by public law which have to be taken into account by a municipality when they want to legislate a sustainability vision. Amongst other things they have to (re)consider their style of governing in legislating sustainability measures to reach their sustainability goals. Another important variable that influences how a sustainability vision can be legislated is the ownership situation. This has a large influence on the possibilities to legislate sustainability measures, because when a municipality does not own the land, the only instrument is to influence a project developer through the use of an environmental plan. When a municipality does own the land, it is important to find the right balance on what is so urgent that is has to be legislated by public legislation and what by private legislation, because the environmental plan is legally binding for the project developer and the future house owner. However, some sustainability measures might not be possible to legislate with public legislation.

In the legislation of the sustainability vision for an area development, a municipality furthermore has to prevent an accumulation of ambitions, because sustainability is not the only goal a municipality has. An accumulation in ambitions could lead to projects that are unaffordable to develop by a project developer, because there is no business case left. It is therefore important that municipalities find the right focus and balance on the most important and urgent topics in their municipality and for a specific area. According to the project developers, municipalities should not include specific legislation in the environmental plan, but should make use stricter values, measurable units or a point system. Municipalities lack knowledge on what innovations are possible at this point in time, but also in the future. Project developers can fill this gap with their knowledge if they have the opportunity to use their own techniques. Mutual trust is important in this matter, which fits in the thoughts of the Environmental planning Act. To decide on all these issues beforehand, municipalities could consider discussing the technical and financial feasibility of sustainability measures before or during the process of creating programs or the environmental plan with project developers by a market consultation or with the use of a cooperation agreement for example.

In conclusion, there might be more possibilities for municipalities to legislate sustainability measures, because of the integration of acts. However, the actual difference between the public interest and necessity in the framework of 'appropriate spatial planning' or 'the physical environment' might not be very large. It is therefore imperative for municipalities to find the right balance between all their ambitions and all the internal and external variables that influence the decision-making process in the legislation of an environmental vision (or now the structural vision with additional sustainability vision), such as the political agenda or financial resources. Furthermore, they have to decide what is so urgent that it needs to be legislated by public legislation to have a large impact on both the project developer and the end user. The environmental plan seems to be the instrument with the most impact on both. Programs could be helpful to find the right balance between the feasibility of ambitions, before the legislation of measures in the environmental plan. A right balance between the technical possibilities and the financial impact is necessary to reach the end goal: a sustainable environment. Municipalities still have to think carefully about what they legislate by public legislation and how they legislate this. The use of (stricter) values or measurement methods could help to create more flexibility for project developers to use their own (new) techniques that will help guide governments to a more adequate way to legislate sustainability measures for an area development.

In theory there are possibilities to legislate a sustainability vision. During this research, it became clear that in practice many variables play a role and therefore there is not one perfect way. Together we can figure out what might be possible right ways under certain circumstances by trial and error.

For the WFC area, a structural vision with an additional sustainability vision is created to set the boundaries on sustainability for the area development. The WFC area is an experimental area under the Crisis and Recovery Act, which means the municipality can already work with some of the possibilities that the Environmental planning Act offers. The municipality of Ede is the owner of the land of the WFC and therefore has to consider the relations between the municipality, the WFC-D and the end user. Because the municipality owns the land, they can legislate sustainability measures with private or public legislation. They agreed upon a cooperation agreement with the WFC-D to amongst other things elaborate the ambitions that are written down in the sustainability vision before the first partial revision of the zoning plan under the Chw is legislated. So the first step is to find the right focus on what are the most important values for the municipality, also in relation to other topics that have to be included in the environmental plan. The next step is to decide on which sustainability measures of the sustainability vision in Appendix 1 are urgent enough to legislate by public legislation, so that they are also valid for the end user. The municipality of Ede is now discussing the feasibility of the financial and technical possibilities of their sustainability ambitions with the project developer. In theory there might be more possibilities to legislate sustainability measures by public legislation than what is actually achievable for the project developers, because there is a field of tension between the benefits and the financial costs and technical possibilities of the implementation of sustainable measures and the price of land. At this point in the process there is consensus on the type of sustainable energy and parking norms. The municipality could decide to legislate these two measures by public legislation. Furthermore, the municipality could consider legislating climate adaption and building nature inclusive by public law. In this way it is valid for the end user to implement as well. Lastly, the municipality has to think about how to legislate sustainability measures, for example with the use of norms. These norms

could be customized values of the *Bbl*, such as a lower MPG-score in the environmental plan or this could be the use of point systems or measurement methods, such as BREEAM (Appendix 1) in a policy line connected to the environmental plan to keep these norms flexible and also so that the project developers can continue with using their own innovative techniques to reach these values and norms. The project developer agrees to this. Keep public legislation flexible as much as possible in terms of techniques, but also keep a certain homogeneity in measurement methods among municipalities.

7. Recommendations and critical reflection

In this chapter recommendations for municipalities on the legislation of a sustainability vision and recommendations for further research are done on account of the conclusions of this research. Further, a critical reflection on this research is done.

7.1 Recommendations

7.1.1 Recommendations for in practice

A few recommendations can be done that municipalities, and especially the municipality of Ede, could take into account in the legislation of a sustainability vision for an area development. These recommendations are elaborated in a step-by-step plan for the legislation of a sustainability vision.

Step 1: Decide on most important ambitions and right balance between them

The first recommendation is that municipalities have to create clear and feasible ambitions in their environmental vision to set the first boundaries on sustainability. In the translation from the environmental vision (or now the structural vision with additional sustainability vision) to other legislation, municipalities have to find the right focus and balance in their ambitions on sustainability. However, municipalities also have to find the right balance between sustainability and other aspects in the environmental plan. It is important to map all the variables that have an influence on the legislation of sustainability measures, such as the political agenda, style of governing and the financial resources. It is important to prevent an accumulation of ambitions that are not financially and technically feasible and which might have an influence on the price of their land. So it is important to keep a business case for the project developer, because project developers can only pass on the costs to the end user until a certain limit. It is important to take this into account to prevent negative consequences, such as that areas might not be developed. So, municipalities really have to consider the consequences of every measure when they start legislating sustainability. However, the program could be very helpful to work out the ambitions described in the environmental vision to find out what is feasible.

In this initial phase of the process, ahead of the legislation of measures, is recommended to invite project developers to discuss the above-mentioned dilemmas, because they have more technical knowledge in general. This could be done with the use of market consultation or with a cooperation agreement between the developer and the municipality as it is the case at the municipality of Ede.

Step 2: decide on type of legislation in case a municipality owns the land

Probably there will be more possibilities to legislate sustainability measures by public legislation in the Environmental planning Act, which might give municipalities a stronger position in terms of setting standards on sustainability measures by public legislation. The environmental plan seems the instrument with the most impact in the legislation of sustainability measures, because this instrument is legally binding for everyone. Programs could be used for measures on (sustainability) themes that have to be taken on behalf of the whole municipality, possibly with prescriptions for some specific areas. Programs on specific areas are also a possibility. Programs are initially not legally binding for initiators, because they

are policy oriented, but they can be made legally binding by translating policy to rules in the environmental plan.

Municipalities do also have the opportunity to legislate sustainability measures by private legislation when they have ownership of the land. Private legislation that appeared to be most common to use today are a tender, a development agreement or via a passport for plots of land. In a tender, measures are described and the project developer which meets the criteria in the best way for the best price will develop the land. In the part of a tender where points can be scored, it is allowed to set stricter measures than the Building decision Act 2012. Under the current legislation it is not allowed to obligate stricter scores than prescribed in the Building decision Act 2012. In a development agreement a project developer and a municipality can agree on specific conditions and in a passport conditions to develop a lot of land are incorporated. These types of private legislation will stay possible under the new Environmental planning Act.

In this case of ownership of land, a municipality has to decide what to legislate by private legislation and what to legislate by public legislation, because of the increasing number of opportunities that a municipality has for the legislation of sustainability measures by public law and the fact that more sustainability issues become very urgent and in the public interest to legislate by public law over time. What municipalities legislate by public law influences both the project developer and the end user. So a municipality has to decide what is so urgent in terms of sustainability measures their area that it has to be legislated by public legislation.

Step 3: decide on how to set measures by public legislation

When municipalities have decided what is so urgent and in the public interest that it needs to be legislated to have an impact on the end user, they have to decide how they want to include these measures by public legislation. The program, as described in step 1 and 2, would be a helpful tool to work out the ambitions to find out what is feasible to realize on sustainability for an area development. So the program would be valuable as instrument in the translation from an environmental vision to an environmental plan. Policy described in a program that needs to be legally binding can be translated in rules of the environmental plan.

The environmental plan will be the instrument that will have the most impact, because it is legally binding for both the project developer and end user. A new possibility in the environmental plan will be the use of orders. When a municipality wants to include an order in an environmental plan, there must be a right balance between the public interest and property rights. Also the measure must be proportional and commensurate: these measures must be valid to reach the goal and there are no other ways to reach the ambitions that are less radical. With an order, a government can prohibit people to do things on their own property in very urgent cases when the public interest becomes more urgent than property rights. A theme where this probably will be used is climate adaptation in areas where they have to deal with extreme flooding. However, a municipality has to decide what kind of municipality it wants to be, more stimulating with the use of stimulating policies or restrictive with orders.

One of the things municipalities should (re)consider is how precise they want to legislate sustainability measures with the implementation of the Environmental planning Act to prevent a clash between what is technically and financially possible. The use of precise legislation in the environmental plan might limit project developers in the use of their own innovative technologies. Besides, what is the most innovative solution now might not be the most innovative solution in five or ten years. A solution that project developers seem to prefer

is to legislate stricter values on familiar methods that exist in the current legislation, such as the MPG or measurement methods, such as BREEAM or a point system. In this way project developers can continue with the use of their own techniques. Furthermore, the idea of the Environmental planning Act is to offer more flexibility with more room for initiatives. This flexibility could be created through the use of open norms with a dynamic reference to a policy line for example. Besides, a policy line is easier to change for a municipality.

7.1.2 Recommendations for further research

A few recommendations for further scientific research can be done as a result of the topics that have been explored in this research.

As mentioned at the start of this research, not a lot of research has been done on this topic, so the first recommendation for further research is to do this research more or less again a few years after the implementation of the Environmental planning Act. At this point in the process, there is no actual jurisprudence, because the Environmental planning Act is not implemented yet. Now there were some contradictions between the legal experts about what will actually be possible under the new legislation during the interviews. It might also be interesting to see what is possible in the future when legislating sustainability measures by public legislation and why municipalities choose for certain types of legislation. In expansion to this, it would be very interesting to explore if the legislation of measurement methods or point systems in the environmental plan will lead to more innovations in sustainable area development, because the project developers are able to use their own innovative techniques more. Furthermore, it would be interesting to do research on how the instrument of a program could be used and how municipalities could be triggered to use it, because this instrument seems very useful to elaborate the environmental vision before the environmental plan is created to find out what is feasible and necessary to include in the environmental plan. A program seems to be a neglected instrument.

7.2 Critical reflection

With this research there is tried to answer the question on which instruments can be used and how these instruments can be used to legislate a sustainability vision in the light of the Environmental planning Act. This research gives an insight in the variables that might influence the legislation of a sustainability vision and it also gives an insight on the possibilities that the Environmental planning Act might offer on the legislation of sustainability measures. This research was an exploratory qualitative single case study to provide an in-depth view on how the sustainability vision of the World Food Center in Ede could be legislated. However, many of the measures in this sustainability vision are probably also urgent in other municipalities, so the results of this research could also be relevant for other municipalities who want to legislate sustainability measures.

The IAD framework of Elinor Ostrom was a very useful framework to find out which factors have an influence on the possible ways to legislate a sustainability vision. However, it appeared to be useful to adapt the framework with the variable of instruments in this research, because in this research this aspect needed more elaboration.

It appeared that the legislation of sustainability measures is influenced by a lot of different variables and that because of this, during the legislation of the new Environmental planning Act fields of tension will appear. One of the most important variables was the spatial component of ownership. When a municipality owns the land, it can make a new balance on what to legislate by private legislation and what to legislate by public legislation. It is important

to decide what is so urgent that it needs to be legislated by public legislation, so it also affects the end user. Another important factor is culture, for example what is high on the political agenda of a municipality. Municipalities have to find the right focus and balance between all their ambitions to decide what has to be legislated and how it has to be legislated. Involvement of project developers early in the process is important to find the right balance. Project developers have the technical knowledge, so they can help municipalities to figure out what is possible for which price.

An interesting finding is that project developers came up with the idea of the usage of norms and values. A method that gives the municipality the opportunity to set stricter scores to reach a more sustainable outcome and for the project developers it is easier to adapt to than specific measures and also to keep up with technical developments. Because what the best solution is now, is probably not the best solution in five years or more. So, municipalities have to consider if and how they want to legislate techniques. A challenge on this topic was the balance between what is financially and what is technically possible and the influence that this might have on the price of land, because an option for municipalities might be to lower the price of their land to encourage the development of sustainable initiatives. Municipalities often lack knowledge on the technical possibilities and with the use of measurement methods, the project developers can use the techniques that fits best and that is also financially feasible for them. Municipalities can choose to give some direction on the way they want areas to be developed, but an important value of the Environmental planning Act is mutual trust between the project developer and the municipality.

What made this research difficult at some points is that there is no jurisprudence yet on the legislation of sustainability measures under the Environmental planning Act. Because of this, for measures of the sustainability vision (Appendix 1) that are not used in practice yet, it was not certain whether it would be possible under the new legislation or not. Also some of the measures are becoming more urgent since the past few years but are probably not urgent enough to legislate at this point in time yet. Legislation always lacks behind, which makes it hard to legislate some of the sustainability measures in the near future.

Another critical point of reflection is that the generalizability of this research might be called into question, because only one case, the sustainability vision of the WFC was examined and used as guidance during the interviews. However, multiple municipalities, legal experts and project developers were interviewed in the field and legal and policy documents were analyzed to find out what would already possible to legislate by public law and what might influence this. Therefore also a quite general view of the possibilities could be created, but only for the specific measures that were used in this sustainability vision.

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APPENDICES

Appendix I

Measures from the sustainability vision to find instruments for.

Theme	Measure
Mobility	<p>Flexible parking policy with:</p> <ul style="list-style-type: none"> • Parking norms as a maximum • Minimum percentage of charging stations • Possibility for parking garages that are detachable • Integration of shared mobility concepts
	Monitoring of the measures above, so when is a minimum or maximum achieved
Energy	Good balance between demand and supply of energy in the area
	Generate as much energy as possible in the area itself (BENG + BENG 3 100% + possibly building in a passive way)
Climate adaptation	Collect and reuse rainwater
	Green roofs (mixed-use with solar panels etc.)
	Map the problematic areas and take care of measures to store the rainwater
Circularity	Make the design with BIM and create a passport for materials with Madaster
	Use sustainable and ecological materials
	Building nature inclusive
	Use of measurement methods and an obligated minimum score, such as BCI and BREEAM for example

Appendix II

Explorative brainstorms with experts

Name	Area of expertise	Employer	When	Location
Thijs Aarden	Circularity	Over Morgen	9th of April 2019	Over Morgen, Amersfoort
Rijk van Voskuilen	Energy/project leader sustainability vision WFC	Over Morgen	9th of April 2019	Over Morgen, Amersfoort
Dick Neuteboom	Sustainability consultant of the WFC	Municipality of Ede	23rd of April 2019	Town hall of the municipality of Ede, Ede
Lianne Hulsebosch	Climate adaptation	Over Morgen	26th of April 2019	Over Morgen, Amersfoort
Tomas Mathijssen	Energy	Over Morgen	26th April 2019	Over Morgen, Amersfoort
Skadi Renooy	Mobility	Over Morgen	2nd of May 2019	City office at the town hall of the municipality of Utrecht, Utrecht
Danielle Reek & Juliet de Barbanson	The Environmental planning Act & area development legislation	Over Morgen	24th of May 2019	Over Morgen, Amersfoort

Explorative brainstorm session municipality of Ede

Date: 9th of May 2019

Location: Town hall of the municipality of Ede

Name	Area of expertise
Bart Janssen	Landscape architect
Evert Winkelmann	Real estate consultant
Wesley Scheffer	Legal consultant
Peter Scholtens	Sustainability consultant

Appendix III

Overview interview respondents

Municipalities

Name	Project	Area of expertise	Employer	Date and time	Location
Maarten Middelbeek	Zoning plan with a broader scope of Klein Plaspoelpolder	Senior legal advisor spatial plans	Municipality of Leidschendam-Voorburg	13th of June 2019, 11.00 AM	Town Hall municipality of Leidschendam-Voorburg
Maayke Houtman	Zoning plan with a broader scope of the Binckhorst	Legal advisor	Municipality of The Hague	20th of June, 11.00 AM	Town Hall municipality of The Hague
Sander van den Broek	Zoning plan with a broader scope of Floriade/Weerwater	Strategic advisor environmental legislation	Municipality of Almere	29th of May 2019, 2.00 PM	Town Hall municipality of Almere

Project developers

Name	Area of expertise	Employer	Date and time	Location
Eddo Braam	Senior Project Developer	Ballast Nedam Development	17th of June 2019, 3.00 PM	Office of Over Morgen, Amersfoort
Maarten Markus	Project manager sustainability	AM	24th of June 2019, 10.00 AM	Office of AM, Utrecht
Robert Koolen	Director of strategy and policy	Heijmans	3rd of June 2019, 5.00 PM	Via the phone

Legal experts

Name	Area of expertise	Employer	Date and time	Location
Aart Jan van der Ven	Senior attorney specialized in planning and environmental law	Pels Rijcken & Droogleever Fortuijn N.V.	26th of June 2019, 10.00 AM	Office of Pels Rijcken, The Hague
Dènes Jansen	Legal consultant in environmental law	Buro ontwerp & omgeving	5th of July, 2019, 4.00 PM	Office of Buro ontwerp & omgeving, Arnhem
Diana Winkelhuijzen & Roel Sillevius Smitt	Legal consultants	AT Osborne	5th of July, 2019, 10.00 AM	Office of AT Osborne, Baarn

Focus group experts

Date: 23rd of August 2019

Location: Office of Over Morgen

Name	Area of expertise	Employer
Anouk Paris	Environmental planning Act	Over Morgen
Astrid Benders	Environmental planning Act	Over Morgen
Lianne Hulsebosch	Environmental planning Act & area renewal	Over Morgen
Skadi Renooy	Environmental planning Act & mobility	Over Morgen
Dave Alberts	Area renewal & project leader of WFC	Over Morgen

Final interview WFC

Name	Area of expertise	Employer	Date and time	Location
Jos de Vries	Sustainability consultant	BPD	6 th of September 2019, 2.00 PM	HQ office BPD, Amsterdam

Appendix IV

Official documentation

- Bouwbesluit 2012
- Besluit Crisis -en Herstelwet (Bu Chw)
- Crisis -en Herstelwet (Chw)
- Duurzaamheidsvisie World Food Center
- Matrix duurzaamheidsvisie World Food Center
- Ontwikkelperspectief Gebiedsontwikkeling WFC
- Stadsvisie 2030 Ede
- Structuurvisie World Food Center
- Wet algemene bepalingen omgevingsrecht (Wabo)
- Wet ruimtelijke ordening (Wro)
- Wet Voortgang Energie Transitie (Wet VET)

Verdicts of the RvS

- ECLI:NL:RVS:2019:1398

Zoning plans

These zoning plans can be found on Ruimtelijkeplannen.nl with the name of the plan or the unique number of the plan.

Plan name	Plan number
Inpassingsplan Logistiek Park Moerdijk	NL.IMRO.9930.PIPLogistiekpark-va02
Chw Omgevingsplan de Binckhorst	NL.IMRO.0518.OP0274FOmgevBinck-50VA
Chw bestemmingsplan Kernen gemeente Dalfsen 2016	NL.IMRO.0148.Kernen2016-vs01
Chw bestemmingsplan Almere Centrum Weerwater - Floriade	NL.IMRO.0034.OP1HS2NW01-vg03
Chw bestemmingsplan Almere Centrum Weerwater – Floriade (draft)	NL.IMRO.0034.OP1HS2NW01-n01
Chw Hembrug e.o. (annulled)	NL.IMRO.0479.STED3725OP-0301
Bestemmingsplan Ede, Kazerneterreinen	NL.IMRO.0228.BP2012EDEO0001-0302
Chw bestemmingsplan Klein Plaspoelpolder (withdrawed & will be redesigned)	NL.IMRO.1916.KPP-ON01

Appendix V

Interview guide municipalities

Naam:

Functie:

Organisatie:

Locatie:

Datum:

Tijd:

Mijn naam is Sanne Veldhuizen. Ik studeer de master planologie met als specialisatie vastgoed aan de Radboud Universiteit in Nijmegen en ik ben nu bezig met de laatste fase van mijn studie, afstuderen. Ik ben dan ook bezig met mijn masterscriptie en hiervoor doe ik onderzoek naar welke instrumenten een duurzaamheidsvisie publiekrechtelijk kan worden verankerd met de focus op de Omgevingswet, maar ook de huidige wetgeving en beleidsinstrumenten kunnen aan bod komen. In dit interview zal ik u vragen stellen over onder andere welke instrumenten u kent, al bent tegengekomen in de praktijk. Dit interview zal worden opgenomen, maar er zal vertrouwelijk worden omgegaan met de opname en de informatie die hieruit komt en zal alleen worden gebruikt ten behoeve van mijn scriptie.

Algemene vragen

- Functie binnen organisatie
- Rol functie binnen een (duurzame) gebiedsontwikkeling

Biophysical and material aspects

Zo veel mogelijk uit gebiedsanalyses halen al van tevoren bij gemeenten

Duurzame ontwikkeling van een gebied, welke aspecten hebben een effect op het stellen van bepaalde duurzame eisen aan een gebiedsontwikkeling (fysiek) en hoe dit kan worden verankerd: ruimtelijke componenten, karakteristieken van een gebied en perspectieven op de ontwikkeling van een gebied.

Beschikbare bronnen voor implementeren duurzame maatregelen: Welke (financiële middelen) zijn er aanwezig? Subsidies/belastingen en de invloed op mate duurzame maatregelen/het vastleggen ervan.

Attributen stakeholders

- Invloed van waarde die wordt gehecht aan een duurzame gebiedsontwikkeling/maatregel
 - Waarde die wordt gehecht vanuit de gemeente aan duurzame ontwikkeling/duurzaamheid en daarmee een goede verankering
 - Bijv. eerder voor basis scenario duurzame maatregelen of streven naar een plus scenario (deel maatregelen is ook durven/imago)
- Invloed/belang van wederzijds begrip stakeholders onderling over de uitkomst
 - Hoe werken gemeente, projectontwikkelaars, andere stakeholders met elkaar samen/verhoudingen onderling bij het vastleggen van duurzame maatregelen?

Instruments (vergelijking zoeken met maatregelen WFC die overeenkomen met al publiekrechtelijke verankerde maatregelen via Chw)

Welke instrumenten zijn gebruikt om duurzame maatregelen te verankeren en wat is de (verwachte) uitkomst daarvan?

- Eerst instrumenten van Omgevingswet
 - Specifieke regeling Crisis -en Herstelwet?
 - Een van de zes kerninstrumenten
 - Of al ideeën voor nieuw instrument?
- Huidige wet (Wro, Wabo, bestemmingsplan, structuurvisie, etc.)
- Of niet juridisch verankeren maar via beleid?
 - Welk beleidsinstrument (communicatief, economisch, fysiek)
- Of niet publiekrechtelijke te verankeren, maar via de private weg?
- Hoe worden de instrumenten gebruikt?
- Waarom voor juist deze instrumenten gekozen?
 - Wat zijn/waren de verwachtingen bij het gebruik van dit instrument?
 - Wat is het resultaat (indien instrument al wordt gebruikt)?
- Wat zijn de (verwachte) impacten/uitdagingen die bij het verankeren van een instrument komen/kwamen kijken?
 - Ook financieel/maatschappelijk balans impacten/uitdagingen?

Samenvatting

Afronden met korte samenvatting wat er naar voren is gekomen tijdens het interview. Heeft u nog aanvullingen of vragen aan mij?

Afronding

Bedankt voor uw tijd. Ik zal de resultaten van mijn onderzoek met u delen.

Interview guide project developer

Naam:

Functie:

Organisatie:

Locatie:

Datum:

Tijd:

Mijn naam is Sanne Veldhuizen. Ik studeer de master planologie met als specialisatie vastgoed aan de Radboud Universiteit in Nijmegen en ik ben nu bezig met de laatste fase van mijn studie, afstuderen. Ik ben dan ook bezig met mijn masterscriptie en hiervoor doe ik onderzoek naar welke instrumenten een duurzaamheidsvisie publiekrechtelijk kan worden verankerd met de focus op de Omgevingswet, maar ook de huidige wetgeving en beleidsinstrumenten kunnen aan bod komen. In dit interview zal ik u vragen stellen over onder andere welke instrumenten u kent, al bent tegengekomen in de praktijk. Dit interview zal worden opgenomen, maar er zal vertrouwelijk worden omgegaan met de opname en de informatie die hieruit komt en zal alleen worden gebruikt ten behoeve van mijn scriptie.

Algemene vragen

- Functie binnen organisatie
- Rol functie binnen een (duurzame) gebiedsontwikkeling

Attributen stakeholders

- Invloed waarde die wordt gehecht aan een duurzame gebiedsontwikkeling/maatregel
 - Waarde die wordt gehecht aan duurzame ontwikkeling/duurzaamheid en daarmee verankering vanuit organisatie
 - Bijv. eerder voor basis scenario duurzame maatregelen of streven naar een plus scenario (deel maatregelen is ook durven/imago)
- Invloed/belang van wederzijds begrip stakeholders onderling over de uitkomst
 - Hoe werken gemeente, projectontwikkelaars, andere stakeholders met elkaar samen/verhoudingen onderling in het kader van het realiseren en afstemmen van duurzame maatregelen en de verankering ervan?

Biophysical and material aspects (evt. aan de hand van specifiek voorbeeld)

- Invloed van fysieke factoren van een gebied op de verankering van duurzame maatregelen of het willen toepassen van duurzame maatregelen?
 - Ruimtelijke componenten
 - Karakteristieken van een gebied
 - Perspectieven op de ontwikkeling van een gebied
- Invloed beschikbare bronnen op verankeren duurzame maatregelen
 - Invloed (financiële) middelen op duurzame maatregelen en de verankering ervan: subsidies/belastingen

Instruments

Welke instrumenten heeft u al gezien in de praktijk die zijn gebruikt om duurzame maatregelen te verankeren?

- Eerst instrumenten van Omgevingswet
 - Specifieke regeling Crisis -en Herstelwet?
 - Een van de zes kerninstrumenten
 - Of al ideeën voor nieuw instrument?
- Huidige wet (Wro, Wabo, bestemmingsplan, structuurvisie, etc.)
- Of niet juridisch verankeren maar via beleid?

- Welk beleidsinstrument (communicatief, economisch, fysiek)
- Of niet publiekrechtelijke te verankeren, maar via de private weg?
- Hoe worden/werden de instrumenten gebruikt?
- Uiteindelijke keuze opdrachtgever voor deze instrumenten
 - Wat zijn/waren de verwachtingen van hoe de instrumenten zouden werken?
 - Wat was het uiteindelijke eindresultaat?
- Wat zijn de (verwachte) impacten/uitdagingen die bij het verankeren van een instrument komen/kwamen kijken of voor uw organisatie om er mee om te gaan?
 - Ook financieel/maatschappelijk balans impacten/uitdagingen

Samenvatting

Afronden met korte samenvatting wat er naar voren is gekomen tijdens het interview. Heeft u nog aanvullingen of vragen aan mij?

Afronding

Bedankt voor uw tijd. Ik zal de resultaten van mijn onderzoek met u delen.

Interview guide legal experts

Naam:

Functie:

Organisatie:

Locatie:

Datum:

Tijd:

Mijn naam is Sanne Veldhuizen. Ik studeer de master planologie met als specialisatie vastgoed aan de Radboud Universiteit in Nijmegen en ik ben nu bezig met de laatste fase van mijn studie, afstuderen. Ik ben dan ook bezig met mijn masterscriptie en hiervoor doe ik onderzoek naar welke instrumenten een duurzaamheidsvisie publiekrechtelijk kan worden verankerd met de focus op de Omgevingswet, maar ook de huidige wetgeving en beleidsinstrumenten kunnen aan bod komen. In dit interview zal ik u vragen stellen over onder andere welke instrumenten u kent, al bent tegengekomen in de praktijk. Dit interview zal worden opgenomen, maar er zal vertrouwelijk worden omgegaan met de opname en de informatie die hieruit komt en zal alleen worden gebruikt ten behoeve van mijn scriptie.

Algemene vragen

- Functie binnen organisatie
- Rol functie binnen een (duurzame) gebiedsontwikkeling

Instruments

Welke instrumenten heeft u al gezien in de praktijk die zijn gebruikt om duurzame maatregelen te verankeren? (BELANGRIJK: ideeën van juristen voor de verankering zoeken voor maatregelen uit afgebakende duurzaamheidsvisie WFC)

- Eerst instrumenten van Omgevingswet
 - Specifieke regeling Crisis -en Herstelwet?
 - Een van de zes kerninstrumenten
- Huidige wet (Wro, Wabo, bestemmingsplan, structuurvisie, etc.)
- Of niet juridisch verankeren maar via beleid?
 - Welk beleidsinstrument (communicatief, economisch, fysiek)
- Ideeën voor een nieuw instrument
- Of niet publiekrechtelijke te verankeren, maar via de private weg?
- Hoe worden/werden de instrumenten gebruikt
- Keuze voor bepaalde instrumenten
 - Verwachtingen bepaalde instrumenten
 - Wat was het eindresultaat?
- Wat zijn de (verwachte) impacten/uitdagingen die bij het verankeren van een instrument komen/kwamen kijken?
 - Ook financieel/maatschappelijk balans impacten/uitdagingen

Attributen stakeholders

- Invloed waarde die wordt gehecht aan duurzame ontwikkeling/duurzaamheid en daarmee verankering bij opdrachtgever
 - Bijv. eerder voor basis scenario duurzame maatregelen of streven naar een plus scenario (deel maatregelen is ook durven/imago)
- Invloed en belang van wederzijds begrip stakeholders onderling over de uitkomst
 - Hoe werken gemeente, projectontwikkelaars, andere stakeholders met elkaar samen/verhoudingen onderling in het kader van het verankeren van duurzame maatregelen?

Biophysical and material aspects (evt. aan de hand van voorbeelden)

- Invloed van fysieke factoren van een gebied op de verankering van duurzame maatregelen of het willen toepassen van duurzame maatregelen?
 - Ruimtelijke componenten
 - Karakteristieken van een gebied
 - Perspectieven op de ontwikkeling van een gebied
- Invloed beschikbare bronnen op vastleggen duurzame maatregelen
 - Invloed (financiële) middelen, bijv. subsidies/belastingen

Samenvatting

Afronden met korte samenvatting wat er naar voren is gekomen tijdens het interview. Heeft u nog aanvullingen of vragen aan mij?

Afronding

Bedankt voor uw tijd. Ik zal de resultaten van mijn onderzoek met u delen.