

BACHELOR THESIS

STAKEHOLDERS' VIEWS ON REWILDING DE VELUWE

Rosanne Sumter

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Geography, Planning and Environment (GPE)

Nijmegen School of Management

Radboud University Nijmegen

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Supervisor: Cristina Yumie Aoki Inoue

Student number: s1043593

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1. SUMMARY

The Netherlands is a very densely populated country where humans are very dominant. To make sure the nature that is left in the country will be restored, retained and maintained, the provinces of the Netherlands created rules and measures which are written down in the Nature Conservancy Act. This act also includes the European Birds Directive and Habitats Directive to define which areas in Europe are qualified to function as Natura 2000 areas (Government of the Netherlands, n.d.). The fixed designation of the areas is registered within the European Union in order to prevent fragmentation of the species habitats, which makes it hard for the member states to change the use of a Natura 2000 area (Government of the Netherlands, n.d.). In addition to the Natura 2000 areas, the Netherlands created measures to realise a national network called *Natuurnetwerk Nederland* (NNN), which is also governed on provincial scale (Government of the Netherlands, n.d.). In Gelderland, the NNN is called *Gelders Natuurnetwerk* (GNN) (Provincie Gelderland, n.d.). A project that could contribute to the GNN is *Rewilding de Veluwe*, founded by ARK Natuurontwikkeling (ARK), a non-profit organisation with the goal to create more wild nature in the Netherlands (ARK Natuurontwikkeling, n.d.a). In the project of *Rewilding de Veluwe*, the organisation wants to restore the damaged nature in an area of 1600 hectares on the Veluwe just above Arnhem by using the practice of rewilding (ARK Natuurontwikkeling, n.d.b). With *Rewilding de Veluwe*, ARK wants to enrich the soil and connect Planken Wambuis (in the south-west) and the Velwezoo (in the east) with each other to increase species richness and biodiversity and encourage the natural dynamics to return (ARK Natuurontwikkeling, n.d.b). In order to achieve this, ARK has to work together with a lot of other organisations, actors and stakeholders, because the organisation does not own any land in the project area and conflicts should be minimized. However, as an outsider, right now it is not clear if all these stakeholders have the same view as ARK has for the rewilding area and are willing to participate. Therefore, the research problem discussed in this bachelor thesis is about the need to understand the stakeholders' views on the project *Rewilding de Veluwe*. The aim of this research is to understand how different stakeholders view the project of *Rewilding de Veluwe*. To provide this knowledge for this bachelor thesis, landowners in and close to the project area are interviewed and people living near the project area filled out a survey.

From these objectives follows the research question: 'How diverse are the views of stakeholders related to the project *Rewilding de Veluwe* on the goal of this project and the strategies to achieve this goal?' This question will be supported by the following sub-questions:

- 'What rewilding activities will be used to reach the goal of *Rewilding de Veluwe*?'
- 'In what way are the stakeholders related to the project *Rewilding de Veluwe*?'
- 'What do the stakeholders think of the project plans of *Rewilding de Veluwe*?'

This bachelor thesis is socially as well as scientifically relevant. Firstly, the findings of this paper can be helpful for ARK who is organising the project of *Rewilding de Veluwe*. It could contribute to the creation of a stakeholder analysis and to the decision making progress on using the right measures to convince stakeholders to cooperate. Secondly, with the results of the survey, government agencies can conclude whether their measures have sufficiently improved the awareness of nature of people from the municipality of Arnhem or if there should be some adjustments in their approach. Thirdly, this paper makes it possible for the stakeholders to form their own opinion with substantiated arguments about the planning of their surroundings and how nature fits in best. This paper is scientifically relevant because existing data in the Netherlands is outdated and on a much bigger scale than just a small part of Gelderland. Lastly, this bachelor thesis can contribute to the existing knowledge on different views of stakeholders to rewilding projects and the need for equal representation in the project.

The concept of rewilding is very important in the project *Rewilding de Veluwe*. There are a lot of papers discussing rewilding as a very popular tool used in conservation management, but at the same time, there is a lot of confusion about the definition of the concept (Butler et al., 2021; Carver et al., 2021; Genes, Svenning, Pires & Fernandez, 2019; Hayward et al., 2019; Jepson, 2016; Jørgensen, 2015; Lorimer et al., 2015; Pettorelli et al., 2018; Root-Bernstein, Gooden & Boyes, 2018). People see rewilding as a more progressive method to protect nature than the traditional forms of nature conservation. This is because the more traditional conservation methods, like the ones used in Natura 2000 areas, are focussed on reaching a certain goal which often is returning something to its former condition or state; it is more focussed on the past (Bakker, 2022; Du Toit & Pettorelli, 2019; Schepers, 2022). In rewilding, however, the focus is more on the future and it uses the past as a frame of reference. It is a form of open-ended management where the results of the conservation are not fixed beforehand (Bakker, 2022). Carver et al. (2021) tried to come up with a clear internationally recognized definition and after all the data collection, they developed the following definition and goal:

‘Rewilding is the process of rebuilding, following major human disturbance, a natural ecosystem by restoring natural processes and the complete or near complete food web at all trophic levels as a self-sustaining and resilient ecosystem with biota that would have been present had the disturbance not occurred. This will involve a paradigm shift in the relationship between humans and nature. The ultimate goal of rewilding is the restoration of functioning native ecosystems containing the full range of species at all trophic levels while reducing human control and pressures. Rewilded ecosystems should—where possible—be self-sustaining. That is, they require no or minimal management, and it is recognized that ecosystems are dynamic.’ (Carver et al., 2021, p. 1888).

Next to this definition, Carver et al. (2021) also developed ten guiding principles for rewilding. Those principles are as follows: (1) rewilding utilizes wildlife to restore trophic interactions and eventually create a self-sustaining ecosystem, (2) rewilding employs landscape-scale planning that considers core areas, connectivity, and co-existence, (3) rewilding focuses on the recovery of ecological processes, interactions, and conditions based on reference ecosystems, (4) rewilding recognizes that ecosystems are dynamic and constantly changing, (5) rewilding should anticipate the effects of climate change and where possible act as a tool to mitigate impacts, (6) rewilding requires local engagement and support, (7) rewilding is informed by science and local knowledge, (8) rewilding is adaptive and dependent on monitoring and feedback, (9) rewilding recognizes the intrinsic value of all species and ecosystems, and (10) rewilding requires a paradigm shift in the coexistence of humans and nature (Carver et al., 2021, p. 1888-1890).

All these principles can be elaborated on rewilding cases of the Netherlands. The most important principle for this bachelor thesis is the sixth one. Conflicts and resistance for *Rewilding de Veluwe* should be minimized. If the public support for the rewilding plans is too low, experience in, and knowledge of nature should be increased among the population. So, people might need to use and explore nature before treating it as equal to humans. Another thing the sixth principle is touching upon, is that the use of rewilding should be reinforced by embracing stakeholders’ participation. Rewilding projects need to accept that not one strategy will satisfy everyone all the time and that there will be barriers of acceptance (Carver et al., 2021). Schultz, Duit & Folke (2011) mention that including stakeholders increases the efficiency, improves the accuracy, and strengthens the legitimacy of management and conservation efforts. Butler et al. (2021) stated that, because of all the different stakeholders involved, rewilding is situated in social-ecological systems and without the right governance approach, conflicts can occur that limit the effectiveness of the rewilding initiatives. In the context of conservation, the governance should include the variety of governance types of a certain conservation area and the quality of

the governance should be high (Franks & Booker, 2019). Even though the two approaches are still evolving and have not been used in rewilding practices yet, Butler et al. (2021) believe that adaptive co-management (ACM) and social licence to operate (SLO) form a generic governance framework that can manage the human components of rewilding. Both approaches see stakeholder partnerships across scales, recognition of the diversity of their views, social justice, equal representation and power-sharing, new institutional arrangements, and conflict resolution aided by these principles as important (Butler et al., 2021). Besides, ACM also emphasises the need for leadership and the roles of bridging organisations or individuals to facilitate iterative co-learning, knowledge generation and cross-scale networks (Butler et al., 2021). SLO is more focussed on the establishment of trust and transparency between project proponents and communities, and the formation of novel public-private partnerships amongst multiple stakeholders (Butler et al., 2021). Through the elements of structure and process, ACM and SLO could be used in a governance approach.

The research method of this bachelor thesis is qualitative as well as quantitative. This is because in this research the main source of information will come from the stakeholders themselves who are in relation with the project of *Rewilding de Veluwe* and with each stakeholder the right methods had to be determined. The research design that is used for the qualitative part of this bachelor thesis is a case study and the specific case which is looked at is the view stakeholders have on the project *Rewilding de Veluwe*. To collect data about this specific case and see it from different angles, semi-structured interviews were conducted. Stakeholders that are interviewed are ARK and the three landowners Staatsbosbeheer, Geldersch Landschap en Kasteelen (GLK) and the municipality of Arnhem. There was also a short interview on the phone with Natuurmonumenten. Another stakeholder that is very important in making *Rewilding de Veluwe* succeed, but does not have as much power in the project as the landowners do, are the people living close to or inside the project area. To collect all their views on rewilding, a survey is used as quantitative research method. 164 people filled out the survey of which 103 were used in this bachelor thesis. Qualtrics was used to create the survey, Whatsapp and Facebook were used to spread the survey, and Excel and SPSS were used to analyse the data. Atlas.ti was used to analyse all the qualitative data.

After collecting all the data, the sub- and main-questions could be answered. ARK wants to reach the goal of the project of *Rewilding de Veluwe* by using rewilding activities like removing fences and restoring the damaged nature in such a way that important species can come back to the area. Some rewilding principles of Carver et al. (2021) could be recognised in these activities. As ARK's representative told: 'A wild, robust, connected nature is the main goal and there is certainly room for culture and people to enjoying and experiencing it', so there should be a balance between wild nature and giving people the opportunity to learn about this nature and enjoy it. The answer to the second sub-question is that all the stakeholders are related to the project in their own way. The municipality of Arnhem and GLK are related because they own land in the project area and ARK is performing or, if it is possible, wants to perform some rewilding practices here. Staatsbosbeheer and Natuurmonumenten are related because they are bordering the project area and need to have corresponding visions on the rewilding plans to be able to connect their nature reserves. The local residents are related to the project because they are visiting the natural areas or are living in or very close to it. Some aspects of ACM and SLO can be seen in the practices of ARK to make all the collaboration happen. As an answer to the last question it could be said that the stakeholders have a positive view on the project plans of *Rewilding de Veluwe*. However, they still see a lot of challenges, like creating enough public support or the possible negative consequences of removing fences in the area. Especially the individual views of the local residents on *Rewilding the Veluwe* are quite diverse.

In conclusion, the answer to the main question 'How diverse are the views of stakeholders related to the project *Rewilding de Veluwe* on the goal of this project and the strategies to achieve this goal?' is that despite some doubts here and there, the stakeholders are all quite

positive about the rewilding plans. A couple differences are that Staatsbosbeheer thinks that just strengthening the natural dynamics and processes is not enough and humans still have to intervene a lot in nature in order to sustain it. The municipality of Arnhem is not in line with the ideas of introducing more grazers in their area. GLK is also not very enthusiastic about introducing more animals, but as long as the visitors are not able to be in contact with them, they are more open to it. Next to this, GLK is sometimes limited in using rewilding practices because it wants to maintain the human cultural history in its area. The opinions of the inhabitants of the municipality of Arnhem on the rewilding plans differ a lot most of the time. However, most of the answers were more in favour of the rewilding plans.

The conceptual framework is quite related to the findings of the research. Not all the ten principles of Carver et al. (2021) are used in the strategies to achieve the goal of *Rewilding de Veluwe* and ACM and SLO are not completely applicable on the collaboration methods of ARK, but most of the model is quite accurate. Finally, there are some shortcomings in this bachelor thesis that should be acknowledged for future research on the topic of stakeholders in a rewilding project. First, people should be aware that there is a lot of information to be found about the topic of rewilding and that it is possible that outdated data is used or not all the important researches are mentioned. Second, it is hard to come in contact with some stakeholders and people should keep in mind that it could take a lot of time before the researcher can get in contact with someone. Interviews with organisations that are not primarily focussed on nature conservation would also be very interesting to look at. Third, it can be valuable to interview more people of one organisation from different departments. Fourth, it is important to think about the order in which the stakeholders are interviewed and the data is processed. Lastly, people should be aware of the kind of respondents that will react on the survey and make sure that it is not a too homogeneous group of people and make sure that they really understand programmes like Qualtrics before it is going to be used.

2. ABSTRACT

With the project *Rewilding de Veluwe*, ARK Natuurontwikkeling wants to restore nature in the southern part of the Veluwe to create more dynamic and resilient ecosystems. ARK does not own any land in the project area, so they need to work together with stakeholders to make their plans succeed. This led to the following research question: 'How diverse are the views of stakeholders related to the project *Rewilding de Veluwe* on the goal of this project and the strategies to achieve this goal?' After doing interviews with Staatsbosbeheer, the municipality of Arnhem, Geldersch Landschap en Kasteelen (GLK), and Natuurmonumenten and spreading a survey among local citizens, an answer to this question could be given. Most visions of ARK and the stakeholders are very similar like on the idea of connecting nature reserves. On some points the organisations are clashing with each other, for instance some stakeholders indicate that they are not ready for the introduction of large herbivores. In conclusion, most of the visions of ARK and the stakeholders are matching very well and maybe, the collaboration between all the organisations may lead to a collectively rewilding plan were everyone wants to be part of.

3. INTRODUCTION

The Netherlands is a very densely populated country with forty thousand square kilometres and over seventeen million inhabitants (Arts, Bakker, & Buijs, 2022a). The fact that the Netherlands was once dominated by wild nature is hard to imagine because nowadays, every square meter is planned and a lot of the nature had to make space for big cities and agricultural land. To make sure the nature that is left in the country will be restored, retained and maintained, there are a lot of rules and measures set up. Those are written down in the Nature Conservancy Act (Wet Natuurbescherming) and are executed by the provinces of the Netherlands. They create their own nature policy based on this Nature Conservancy Act to protect nature reserves and certain plants and animals in their own area (Rijksoverheid, n.d.; RVO, n.d.). The second chapter of the Nature Conservancy Act is all about the Natura 2000 areas in the Netherlands. This is a European network of protected natural areas in order to preserve biodiversity and to make it possible for species to move large distances within countries and across national borders (Government of the Netherlands, n.d.). Furthermore, Natura 2000 areas can play an important role in tackling environmental problems. For instance, the nitrogen crisis is a very big challenge in the Netherlands and the expansion of nature reserves can help by reducing the nitrogen levels (Government of the Netherlands, n.d.). To define which areas are qualified to function as Natura 2000 areas, the European Birds Directive and Habitats Directive are used (Government of the Netherlands, n.d.). These directives indicate which species and their natural habitats should be protected by the member states of the European Union (Bij12, n.d.). The designation of the areas is registered within the European Union in order to prevent fragmentation of the species habitats. This makes it hard for the member states to change the use of an area after it is labelled as Natura 2000 area, which has resulted in a fixed procedure for placing a natural area under the protection of Natura 2000 (Government of the Netherlands, n.d.).

In the Netherlands, there are 160 Natura 2000 areas designated all over the country. In Gelderland, a big part of the Veluwe is also part of the areas. However, the Veluwe is a very popular destination for people to visit and recreate. To protect the nature on the Veluwe, recreational zoning is incorporated within the management plan of Natura 2000 Veluwe (Provincie Gelderland, 2022). This plan should lead to a balance between nature and recreation. A zonings map has been made to make clear where on the Veluwe there is more space for recreation and in what areas nature gets some peace. There are four different zones on the map with zone A as a space for the intensive use of recreation, zone B as a space for moderately intensive recreational use shared with nature, zone C as a quiet area with extensive recreational shared use, and zone D as a space for seasonal recreation or even no recreation at all (Provincie Gelderland, 2022). To achieve all of this, the map also includes some zoning measures. In addition to the Natura 2000 areas, the Netherlands created measures to realise a national network called *Natuurnetwerk Nederland* (NNN) which is also governed on provincial scale (Government of the Netherlands, n.d.). In Gelderland, the NNN is called *Gelders Natuurnetwerk* (GNN) and every year, the Executive Counsel of the province creates a new nature management plan (*natuurbeheerplan*) (Provincie Gelderland, n.d.). This plan includes not just the policy objectives and possibilities for subsidies for the nature in the GNN, but also for the development and management of Natura 2000 areas, agricultural areas with natural values and agricultural areas with water targets in the province of Gelderland (Provincie Gelderland, 2021).

A project that could contribute to the GNN is *Rewilding de Veluwe*, founded by ARK Natuurontwikkeling (ARK). ARK is a non-profit organisation with the goal to create more wild nature in the Netherlands (ARK Natuurontwikkeling, n.d.a). In the project of *Rewilding de Veluwe*, the organisation wants to restore the damaged nature on an area of 1600 hectares on the Veluwe just above Arnhem by using the practice of rewilding (ARK Natuurontwikkeling, n.d.b). This project is financed by The Nationale Postcode Loterij with 2,185,000 euros (ARK

Natuurontwikkeling, 2021a; National Postcode Loterij, 2022). The soil in the southern part of the Veluwe is very poor, the area is quite fragmented, the tree species composition is not diverse enough and there is a decrease in the amount of animal species. Using *Rewilding de Veluwe*, ARK wants to enrich the soil and connect Planken Wambuis (in the south-west) and the Veluwezoom (in the east) with each other to increase species richness and biodiversity and encourage the natural dynamics to return (ARK Natuurontwikkeling, n.d.b). In order to achieve this, ARK has to work together with a lot of other organisations, actors and stakeholders. For example, fragmented nature should be connected, fences that separate privatized land have to be removed and farmers should shift to a more sustainable way of using their land (Vroege Vogels, 2021). Also, the local people who live in the municipality of Arnhem should be informed about *Rewilding de Veluwe* and the public support for the project should be high enough. It is possible that rewilding strategies and the wilderness ideal have lost a lot of public support because of the fiasco on the Oostvaardersplassen (Theunissen, 2019). Annually, the mortality rate of large herbivores in the area was very high during the winter. Nevertheless, in 2018 there was such a high food scarcity that more than 60 percent of the grazers had to be shot (Theunissen, 2019). This led to a mass of citizen protests and the police had to stop activists from feeding the animals (Theunissen, 2019). Here, the opinions of the local people were in conflict with the rewilding experiment in the area and the Province of Flevoland decided to stop with the rewilding program and changed the management regime drastically (Arts et al., 2022a; Theunissen, 2019).

3.1 RESEARCH PROBLEM, OBJECTIVES AND RESEARCH QUESTION

The research problem discussed in this bachelor thesis is about the need to understand the stakeholders' views on the project *Rewilding de Veluwe*. On their website, ARK states they have to work together with a lot of stakeholders to make the project succeed (ARK Natuurontwikkeling, n.d.b). Each of these stakeholders need to be on board and conflicts should be minimized. As an outsider, right now it is not clear if all these stakeholders have the same view as ARK has for the rewilding area and are willing to participate. This is in particular important for the stakeholders that own the area where ARK want to perform their project plans on, since ARK is not in possession of any land in the project area. The power to change the conservation plans on the Veluwe is not in the hands of ARK but scattered around several different stakeholders. This makes the objective of this research to provide knowledge on the view of the landowners in and close to the project area of *Rewilding de Veluwe* by interviewing different stakeholders. Also, a stakeholder that maybe has the least power in this project but, as is seen in the example of the Oostvaardersplassen, can cause a lot of conflicts around rewilding projects are the people living close to the project area. They can see up-close what is happening and see the effects of the rewilding plans. Therefore, another objective of this research is to provide knowledge on the view of people living near the project area of *Rewilding de Veluwe* by handing out surveys.

From these objectives follows the following research question: 'How diverse are the views of stakeholders related to the project *Rewilding de Veluwe* on the goal of this project and the strategies to achieve this goal?' This question will be supported by the following sub-questions:

- 'What rewilding activities will be used to reach the goal of *Rewilding de Veluwe*?'
- 'In what way are the stakeholders related to the project *Rewilding de Veluwe*?'
- 'What do the stakeholders think of the project plans of *Rewilding de Veluwe*?'

3.2 SOCIAL AND SCIENTIFIC RELEVANCE

This bachelor thesis is socially as well as scientifically relevant. Firstly, the findings of this paper can be helpful for ARK who is organising the project of Rewilding de Veluwe, because it will try to understand the important stakeholders' views on the project. This will give an idea of the public support for the project and show if there are conflicting ideas on how to manage the area where the rewilding will take place. For instance, this paper could contribute to the creation of a stakeholder analysis. The roles of the stakeholders in the project and their opinions on the rewilding practices are discussed, which could help by working out the kind of power, influence and interest they have. It is also possible that the key stakeholder of the project could be determined. However, not all the stakeholders of the project are mentioned in detail in this bachelor thesis. Next to this, this paper can contribute to the decision making progress of ARK by providing relevant knowledge on the way stakeholders are looking at the project of *Rewilding the Veluwe*. ARK has to decide what the right measures are to use to convince stakeholders to contribute to the project. This can vary per stakeholder. For instance, they can have a conversation with landowners about changing their conservation methods. However, for the citizens of the municipality of Arnhem, it is much more about informing people about nature and making them aware of the importance of it. For example, people can subscribe to a free newsletter so they are up to date of the activities of *Rewilding de Veluwe* (ARK Natuurontwikkeling, 2021b). Also, the opinions of all the different stakeholders can be useful for ARK in adjusting the project in such a way that the stakeholders are willing to cooperate and the process of performing the project will run more smoothly.

The knowledge of the amount of public support for nature protection is also very important for government agencies in the Netherlands. As is mentioned earlier, provinces are trying to restore, retain and maintain nature in Natura 2000 areas and, in case of Gelderland, the GNN, based on their annual nature management plan. To be able to manage the nature in Gelderland, the province stresses that it is necessary to cooperate with a lot of different stakeholders, including the residents of Gelderland (Provincie Gelderland, 2017). Therefore, a lot of strategies are already used to increase the connection between people and nature. In a report, the province presents four ambitions that together should contribute to nature in Gelderland and one of them is entirely focussed on making people more aware of the importance of the nature around them and how they can contribute to protect this nature (Provincie Gelderland, 2017). Here, the cooperation with the municipalities of Gelderland is also important, because they work on a smaller scale than the province does and therefore are much more involved in their residents' lives. This paper can be relevant for the province of Gelderland and the municipality of Arnhem by showing the way people view nature and the project itself. With these results, government agencies can conclude whether their measures have sufficiently improved the awareness on nature in the society or if there should be some adjustments in their approach.

Third, this paper is also relevant for all the other stakeholders involved with *Rewilding de Veluwe*, like farmers, private land owners and local residents of the municipality of Arnhem. In the process of data collection, information about the project could be shared with these stakeholders. This gives them the opportunity to form their own opinion with substantiated arguments about the planning of their surroundings and how nature fits in best. Also, it is possible that after reading this paper, they become more conscious about the importance of biodiversity and climate adaptation and the effect of rewilding on these things. All this new knowledge can help the stakeholders to be able to better understand discussions about nature and how they can best contribute to them. This can prevent misunderstandings and conflicts before and during the execution of planning projects related to nature.

Next, this paper is scientifically relevant. It can contribute to research which is focussed on the increase of social support for nature in the municipality of Arnhem. The data that is currently available is outdated and on a much bigger scale than just a small part of Gelderland (de Boer & Langers, 2017). Since 2021, the province of Gelderland started an annual questionnaire to get insight into the knowledge of its residents on biodiversity, the social support for biodiversity and the willingness to commit to biodiversity (Provincie Gelderland, 2020). However, this bachelor thesis will entail other aspects of nature conservation than biodiversity and can complement to the outcomes of the investigation of Provincie Gelderland (2020).

Also, this bachelor thesis can contribute to the existing knowledge on different views of stakeholders to rewilding projects and the need for equal representation in the project. There are already some papers written about this, but each of them states that it is a very complicated part of conservation activities (Butler, Marzano, Pettoirelli, Durant, du Toit & Young, 2021; Drenthen, 2017, Takacs, 2020). In the case of the Netherlands, the Oostvaardersplassen is often used as research area in investigations about stakeholder involvement in rewilding practises (Theunissen, 2019). Therefore, this paper can provide new insights because it is focused on another area in the Netherlands.

This bachelor thesis will firstly move on to the theoretical framework where the most important concepts that are used in this thesis will be explained and related to Dutch nature conservation. After this, the methods used for the research will be named and elaborated. This will be followed by a description of all the data collected, thereby answering the sub-questions of this research. Subsequently, the conclusion will give an answer to the research question. The discussion will touch upon the relation between the findings in the research and the conceptual framework . There will also be a reflection with recommendations for future research. This bachelor thesis will end with references to the used literature and an appendix.

4. THEORETICAL FRAMEWORK

4.1 DEFINING REWILDING

The concept of rewilding is very important in the project *Rewilding de Veluwe*, since it is even in the name. There are a lot of papers discussing rewilding as a very popular tool used in conservation management, but at the same time, there is a lot of confusion about the definition of the concept (Butler et al., 2021; Carver et al., 2021; Genes et al., 2019; Hayward et al., 2019; Jepson, 2016; Jørgensen, 2015; Lorimer et al., 2015; Pettorelli et al., 2018; Root-Bernstein et al., 2018). Jørgensen (2015) discussed in her paper that words do not stand still but change over time and take new meanings. After reading a lot of literature on rewilding to see how the term was adopted and modified in ecological scientific discourse, Jørgensen (2015) found six different uses for rewilding. Also, she discovered that some environmental activists had adopted the term and shaped it into something different from the scientists' visions (Jørgensen, 2015). This makes rewilding a 'plastic word', or in other words, a term scientifically developed for discrete ideas which took different meanings depending on the context after moving into the daily use (Jørgensen, 2015). According to Jørgensen (2015), this makes the term 'vague' and 'fuzzy'.

Prior & Ward (2016) criticise Jørgensen by saying that the combination of rewilding definitions is reinforcing which activities constitute rewilding rather than amounting to 'plasticity'. Hayward et al. (2019), on the other hand, agree with Jørgensen and proposed to use the term 'restoration' within scientific, policy or conservation discourses instead of rewilding, because this term is sufficiently broad enough to encompass virtually all existing rewilding definitions. This again got criticised by the fact that although rewilding and restoration are closely-related concepts and rewilding may be a subdiscipline of restoration, all restoration is not rewilding (Anderson et al., 2019; Derham, 2019; Carver et al., 2021). Because of all the confusion around the idea of rewilding, Carver et al. (2021) tried to come up with an internationally recognized definition through a survey of 59 rewilding experts, a summary of key organizations' rewilding visions, and workshops involving over 100 participants from around the world. After all the data collection, Carver et al. (2021) developed the following definition and goal:

'Rewilding is the process of rebuilding, following major human disturbance, a natural ecosystem by restoring natural processes and the complete or near complete food web at all trophic levels as a self-sustaining and resilient ecosystem with biota that would have been present had the disturbance not occurred. This will involve a paradigm shift in the relationship between humans and nature. The ultimate goal of rewilding is the restoration of functioning native ecosystems containing the full range of species at all trophic levels while reducing human control and pressures. Rewilded ecosystems should—where possible—be self-sustaining. That is, they require no or minimal management, and it is recognized that ecosystems are dynamic.' (Carver et al., 2021, p. 1888).

Next to this definition, Carver et al. (2021) also developed ten guiding principles for rewilding. Those principles can be seen in Table 1.

Table 1: Ten guiding principles for rewilding set up by Carver et al. (2021, p. 1888-1890)

(1) rewilding utilizes wildlife to restore trophic interactions and eventually create a self-sustaining ecosystem.
(2) rewilding employs landscape-scale planning that considers core areas, connectivity, and co-existence.
(3) rewilding focuses on the recovery of ecological processes, interactions, and conditions based on reference ecosystems.
(4) rewilding recognizes that ecosystems are dynamic and constantly changing.
(5) rewilding should anticipate the effects of climate change and where possible act as a tool to mitigate impacts.
(6) rewilding requires local engagement and support.
(7) rewilding is informed by science and local knowledge.
(8) rewilding is adaptive and dependent on monitoring and feedback.
(9) rewilding recognizes the intrinsic value of all species and ecosystems.
(10) rewilding requires a paradigm shift in the coexistence of humans and nature.

4.2 REWILDING AND TRADITIONAL CONSERVATION METHODS

Traditional nature conservationists try to prevent changes in the cultural landscapes and retain semi-nature in the Netherlands (Drenthen, 2022). Bouwma & van der Sluis (2022) explained that there are four typologies for the nature development in the Netherlands: almost natural, guided natural, semi-natural, and multifunctional units. Semi-natural landscapes are areas that are made by humans and can only be retained by intensive nature management. This means that humans always have to intervene through grazing and pruning among other things (Drenthen, 2022). Traditional agriculture measures could also play a role in this. Rewilding is mostly linked to ‘almost natural’ because the aim of this typology is to intervene as little as possible (Bouwma & van der Sluis, 2022). Rewilding is a more progressive method to protect nature than the traditional forms of nature conservation. This is because the more traditional conservation methods are focussed on reaching a certain goal which often is returning something to its former condition or state; it is more focussed on the past (Bakker, 2022; Du Toit & Pettorelli, 2019; Schepers, 2022). In the Netherlands this often means to protect a specific species by restoring and preserving nature as it was in 1850 before everything got changed by the intensification of the agricultural landscape (Bakker, 2022). In rewilding, however, the focus is more on the future and it uses the past as a frame of reference. It is about returning wildness in our current environment with a more unpredictable ending (Du Toit & Pettorelli, 2019; Schepers, 2022). It is a form of open-ended management where the results of the conservation are not fixed beforehand (Bakker, 2022). In this way, nature does not need a constant helping hand from humans but can sustain on its own.

A positive side effect of this is the cost of the nature conservation, with the traditional methods being much more expensive because of the constant nature management to preserve the desirable ecosystems (Blom & Linnartz, 2022; Bouwma & van der Sluis, 2022; Schepers, 2022). Schou et al. (2021) also showed that rewilding may in some cases be an economically preferable management strategy for increasing biodiversity in large natural areas. On the other hand, because there is not a specific goal in a rewilding project and the outcome of the measures taken are not entirely predictable, the assessment of potential costs and benefits is tricky (Pettorelli et al., 2018). This is also linked to the people living close to the rewilding site. Rewilding can

potentially reduce the earnings of landowners privileges like hunting, logging, beekeeping, crop production, and meat production. (Schou et al., 2021). These communities can also experience disadvantages when wildlife enters their land and causes crop and livestock depredation. For others however, the wildlife is a benefit as it creates profit through things like ecotourism (Pettorelli et al., 2018). All in all, these consequences are not yet proved and thus a better understanding of the potential socio-economic impacts of rewilding is needed.

A downside of rewilding that can certainly be a problem, is the loss of vulnerable species who are dependent on the intensive nature protection that is used in traditional conservation methods (Drenthen, 2022). This also may be the greatest difference in the thinking of rewilding and traditional conservationists, because rewilding proponents aim at restoring self-regulating ecosystems, whereas in traditional practices the argument is used that human intervention is needed to maintain biodiversity (Van Meerbeek, Muys, Schowanek & Svenning, 2019). This clashing thought is also the reason that it is difficult to perform the practice of rewilding in Natura 2000 areas in the Netherlands. As told, the policy that should be pursued in these areas is underpinned in legislation by the Birds Directive and Habitats Directive. Those are focussed on the protection of specific species and habitat types which makes it a more conservative and traditional conservation policy (Bouwma & van der Sluis, 2022; Pettorelli et al., 2018). This policy does not allow any deterioration in the species and habitat types in the Natura 2000 areas, even if they are dependent on very extensive (agricultural) practices (Bouwma & van der Sluis, 2022). On the other hand, Trouwborst & Svenning (2022) mention in their paper that Natura 2000 could also play positive roles regarding megafauna rewilding efforts. The Habitats Directive could provide an additional basis for the restoration of megafauna because it generally calls for measures to 'maintain or restore, at favourable conservation status', the habitats and species it covers (Trouwborst & Svenning, 2022). This means that megafauna restoration measures will in many cases be supported or required by the Directive's provisions regarding Natura 2000 sites (Trouwborst & Svenning, 2022). This sounds very promising, however Trouwborst & Svenning (2022) also indicate that rewilding processes may not be fully compatible with the Directive's requirements everywhere and species that are extirpated from Europe are also in many cases forgotten by European societies which creates blind spots in the biodiversity law and policy. Nonetheless, in the NNN areas which are not overlapping with Natura 2000 areas there is more space for rewilding. They may have the same targets as the Natura 2000 areas have, but because the legislation of the NNN areas is not strictly fixed, the conservation methods can be changed by the Executive Counsel of the province (Bouwma & van der Sluis, 2022).

4.3 REWILDING IN THE NETHERLANDS

The definition stated above with its principles for rewilding can be used as guideline in this bachelor thesis. However, even though Carver et al. (2021) said that '*We (...) developed a unified definition and goals of rewilding (...) and developed a unified set of guiding principles*' (p. 1885), people should keep in mind that there is still a lot of discussion about the definition and the exact use of rewilding. So, instead of blindly taking the ten principles and using it like it is applicable for every situation in the world, this paragraph is going to go through every principle with the help of the knowledge written in *Rewilding in Nederland* by Arts, Bakker and Buijs (2022b) to see in what way these principles are used in the Netherlands. The principles are very much linked to each other, so instead of going through them in a chronologic order, the most related principles are discussed together.

Carver et al. (2021) explained in their third principle that rewilding should make use of a self-sustaining and resilient reference system. Keystone species and ecosystem engineers, like large herbivores and apex predators, are important to have in a natural area to create these self-

sustaining ecosystems, as is mentioned in the first principle of Carver et al. (2021). They provide critical resources and are able to transform landscapes or waterscapes (Soulé & Noss, 1998). This big influence of the key species on the ecosystem can result in a trophic cascade, where changes at the top of a food chain work downwards which may restore trophic interactions (Arts et al., 2022a). When the key native species of the reference system have become globally extinct, they could be replaced with wild surrogates as long as they are chosen carefully, their ecological role is seen as important, and they are permitted by legislation (Carver et al., 2021). In the Netherlands it is very hard, maybe even impossible, to return to the once self-sustaining wild nature of the country. Over the years, all the nature in the Netherlands is at least once altered by humans. As a result of all the human influence, a lot of species disappeared out of the country. Trouwborst (2022) explains that it is important to make the nature more attractive for disappeared species, especially megafauna, because for millions of years they played a very dominant role in the food web of ecosystems in Europe. However, right now there are living over 17 million people in the Netherlands and urbanisation and agriculture fragmented the Dutch landscape. As a result, most of the megafauna cannot come back to the country on their own and have to be introduced by humans. However, this is also in a lot of cases not possible because of the lack of space for the animals, resistance of national legislation, and the absence of good alternative species when the original species went extinct (Trouwborst, 2022). Pettorelli et al. (2018) also argues that, next to human influence, global environmental change is driving some species far beyond their traditional ranges and some ecosystems far beyond their limits which make restoring historical condition not a realistic objective.

Nevertheless, there are some projects in the Netherlands which try to introduce key species based on a certain reference system. For example, in 2008 the Taurus Foundation started with the Tauros Programme with the goal to bring bovines back as a wild species into the Dutch landscape to take its original role as the European grazer that can cope with the rugged conditions of large European natural areas (Goderie & Hirschhofer, 2022). The tauros has to replace the extinct aurochs which once was part of the European landscape together with other large herbivores and their predators (Goderie & Hirschhofer, 2022). Bringing back important species like these, Carver et al. (2021) explain that they are able to maintain and enhance the biodiversity within landscapes through biotic and abiotic interactions, like predation, competition, and grazing. In the Netherlands, there is much more emphasis on introducing herbivores as key species than carnivores (Arts et al., 2022a). This is because it seems like the missing carnivores are returning to the country on their own and therefore do not need to be introduced. The outcome of rewilding activities, like introducing species into the landscape, should be well monitored, especially because the outcome of rewilding practices is unpredictable. This is also what Carver et al. (2021) are emphasizing in their eighth principle, because it is important that the rewilding trajectories are working as planned and further interventions can be implemented without the loss of project budgets and resources. Because of the uncertain outcomes of rewilding, it is difficult to determine beforehand which species or habitat types will emerge. For this reason, the monitoring should be more focussed on abiotic and biotic processes (Bouwma & van der Sluis, 2022). Unfortunately, the current monitoring systems in the Netherlands are based on the presence of species and vegetation types and thus not really suitable for rewilding practices (Bouwma & van der Sluis, 2022). Also, because of the limitation in international publications about the effect of rewilding, people cannot learn from the monitoring of other rewilding projects in the world (Schepers, 2022). However, more and more results are becoming available.

So, in rewilding there is the aim to reach a self-sustaining ecosystem. In order to reach this, landscape-scale planning with core areas, connectivity, and co-existence are needed. Carver et al. (2021) explain in their second principle that core areas should provide a secure space and are connected with each other. Arts et al. (2022a) explain something similar in their essay about rewilding in the Netherlands. They use the three C's of Soulé & Noss (1998), which stand for: Cores, Corridors and Carnivores. By Carnivores they meant the keystone species of an ecosystem,

which is already touched upon above. Next to those keystone species, the connection and realisation of core areas are also very important in the Netherlands, which can be seen in the execution of the NNN together with the strict Natura 2000 areas. People try to connect the core areas of the Natura 2000 and the NNN by placing wildlife crossings over highways and building wildlife underpasses. However, a lot of nature is still very fragmented because of a clash in visions of the right nature conservation of different landowners and all the fences that prevent animals from migrating (Arts et al., 2022a).

It is important that these connections between the cores are facilitated because they make nature more resilient for temporal changes in the landscape. Temporal change could be allogenic, like floods and wildfire, as well as autogenic, like nutrient cycles and genes flows. Carver et al. (2021) told in their fourth principle that these together with evolutionary processes are very important in the function of ecosystems and should have free reign. Besides, rewilding could also play a role as Nature-based Solution (NbS) for problems that are not reversible, like climate change. The fifth principle explains that that climate change needs to be considered in rewilding projects because generally these projects have the same time scales as the predicted scales and magnitudes of global climate change (Carver et al., 2021). When people speak of a NbS they want to make use of nature and its potential to absorb, ameliorate, and tackle the effects of climate change to make their surroundings more climate adaptive and mitigating (Carver et al., 2021). Even though most NbS's are much less focussed on the recovery of biodiversity and the creation of wild nature, for both the NbS and rewilding the realization of a natural system and natural processes are top priority (Van Hattum & De Rooij, 2022). However, in order to function as a solution to climate change, the restoration of nature in a rewilding project must take place on a large scale. This brings us back to the importance of connecting the fragmented core areas in the Netherlands.

Carver et al. (2021) also talked about the coexistence between wild species and humans in their second principle. They said that in the cores and connection areas, there should be zoned systems of compatible low-intensity human land use. This is also linked to the ninth and tenth principle, where Carver et al. (2021) stress that rewilding is much more an ecocentric, rather than an anthropocentric activity. This means that in order to make rewilding happen, there should be a shift in the relation between humans and nature that society no longer accepts degraded ecosystems and overexploitation of nature as the baseline for each successive future generation (Carver et al., 2021). This may be the biggest difference in the definition of rewilding by Carver et al. (2021) and the current rewilding in the Netherlands. This is because there is a lack in appreciation for and basic knowledge of ecological processes (Snep, 2022). People and nature are very much separated in the Netherlands which has led to a nature-deficit disorder under the population: a lack of nature experience which leads to negative effects for the persons health and wellbeing as well as to the affinity and support for nature (Snep, 2022). This public support is required to make nature conservation like rewilding succeed. This is because the rewilding area is located across social-ecological landscapes, in which human and natural systems interact and influence one another, making the conservation plans contingent on local support (Doyle-Capitman, Decker & Jacobson, 2018). Too much resistance among local residents can lead to situations like the Oostvaardersplassen as is already mentioned.

Therefore, experience in, and knowledge of nature should be increased among the population. Generally, nature evokes positive emotions in people and can contribute to their happiness (Jacobs & Buijs, 2022). Rewilding can give even more joy because they can lead to great attractive landscapes and the more magnificent the landscape, the more positive emotions it will evoke (Jacobs & Buijs, 2022). Also, rewilding is seen as the 'story of hope' because it shows that we do not have to change our habits radically all at once to restore the natural processes, but instead shows step-by-step how to make an area more natural (Bakker, 2022). This makes rewilding manageable and people feel less powerless than just hearing the story of doom in which humanity is only destroying nature (Bakker, 2022). This all sounds very promising but still, some

aspects of rewilding could lead to some resistance. For instance, people do not want to see dead organisms or rough vegetation in nature reserves or people are scared for keystone species to come back into the Netherlands. As mentioned, European societies suffer from collective amnesia regarding megafauna. The fear of the comeback of large animals in our ecosystem may be due to the shifting baseline syndrome in which people of a new generation forgot the lost species, they see the nature they grew up in without wisents or wolfs as normal (Bakker, 2022; Trouwborst, 2022; Trouwborst & Svenning, 2022). This again could lead to double disappearance where the knowledge about a certain species disappears because it disappeared out of the current ecosystem (Trouwborst, 2022).

This all shows that just the idea of rewilding is not enough, people really need to learn more about Dutch nature. Through excursions and communication people really start to gain faith in the rewilding practices and become more familiar with natural processes (Blom & Linnartz, 2022). For instance, through nature education for children parents indirectly learn more about nature too and Goderie & Hirschhofer (2022) explain that to decrease human-wildlife-conflicts, people really need to learn how to act when they encounter a large herbivore (Helmer, 2022; Smit, 2022). Given these points, it could be said that first the sixth principle of Carver et al. (2021) should be strived for before thinking about the ninth and tenth one (see Table 1 for the description of the principles). The sixth principle mentions the importance of public understanding and appreciation of wild nature among other things. Therefore, the public support for rewilding plans should be improved first before humans and nature can live less separately from each other. To do this, people might need to use and explore nature before treating it as equal to humans. Rewilding practices in the Netherlands might recognise that wild nature has its own intrinsic value and that humanity has the ethical responsibility to respect and protect it (Carver et al., 2021). However, it will take a long time before the whole society will act like this and new sustainable economic opportunities will be created, that will deliver the best outcomes for people as well as nature (Carver et al., 2021). For instance, right now people have an anthropocentric view of wildlife in the Netherlands, by thinking large mammals can pose a risk to human safety and livelihoods, which leads to classifying species as good or bad, without considering their intrinsic value (König et al., 2020).

Other things the sixth principle is touching upon, is that the use of rewilding should be reinforced by embracing stakeholders' participation. Rewilding projects need to accept that no one strategy will satisfy everyone all the time and that there will be barriers of acceptance (Carver et al., 2021). Schultz et al. (2011) mention that including stakeholders increases the efficiency, improves the accuracy, and strengthens the legitimacy of management and conservation efforts. It depends on who exerts legal and political sway in rewilding areas to determine the exact stakeholders that will have a saying in the project (Takacs, 2020). Butler et al. (2021) stated in their paper that, because of all the different stakeholders involved, rewilding is situated in social-ecological systems and without the right governance approach, conflicts can occur that limit the effectiveness of the rewilding initiatives. Smit (2022) argues that organisations who want to start a rewilding project should as soon as possible start a dialogue with involved parties and make clear agreements about shared interests of the rewilding principles. It is also important to make sure that there is a good communication strategy and that it can be changed a bit so it fits to every stakeholder that wants to be involved in the project and is willing to support it (Helmer, 2022).

4.5 THE GOVERNANCE OF REWILDING

The sixth principle is the most important one of this bachelor thesis, because it is focussed on the collaboration with stakeholders (see Table 1 for the description of the principle). As is mentioned,

it is important that a suitable governance approach is used to reach this principle. Franks & Booker (2019) explain that in the context of conservation, governance has two key aspects. Diversity is the first one and is concerning the nature and variety of governance types of a certain conservation area, determining how authority and responsibility for conservation is expected to be divided among stakeholders (Franks & Booker, 2019). Governance types include state governance (by government), private governance (by organisations or individuals), community governance (by indigenous peoples and/or local communities) and shared governance (where two or more groups share authority) (Franks & Booker, 2019, p. 12). The other key aspect is governance quality. Huang, McDonald & Seto (2018) explain in their paper that there may be a correlation between the combination of weak governance and future urbanization and the decline of biodiversity, which means that rapid urban growth under weak land governance globally undermines biodiversity. Also, Bennett et al. (2019) mention that good governance is one of the stronger predictors of increasing local support for conservation initiatives. According to Franks & Booker (2019) governance quality is one of the key aspects of governance in the context of conservation. Therefore, the governance quality is very important. This aspect is more about obtaining a high quality of stakeholder participation, which is important because acquiring as much engagement as possible is critical to achieving principles of wildlife governance (Franks & Booker, 2019; Pomeranz et al., 2021). The principles of good governance are used to determine the governance quality. A lot of papers describe a variety of good governance principles, like transparency, legitimacy, and fairness (Mollick et al., 2021; Pomeranz et al., 2021; Pomeranz & Stedman, 2020). However, according to Franks & Booker (2019) the governance framework that will be used for a certain conservation project should at least include the core principles of participation, transparency or accountability and mitigation of negative impacts on local communities or benefit sharing among stakeholders.

Butler et al. (2021) created a generic governance framework that can manage the human components of rewilding by integrating the principles of integrated adaptive co-management (ACM) and social licence to operate (SLO). Co-management as a governance strategy is becoming recognized as a way to solve multiple problems in current practices of conservation management, because it is an approach that holds promise for complex social-ecological systems (Armitage et al., 2009; Mollick et al., 2021). ACM refers to a cyclical iterative process that allows collaboration across stakeholders to share responsibility within a system where they can explore their objectives, find common ground, learn from their institutions and practices, and adapt and modify them (Fabricius & Currie, 2015). Here, co-management is focused on collaborative and inclusive decision making while the adaptive part of the approach is more about the focus on the feedback mechanism of learning-by-doing, so learning through experimentation, monitoring, evaluation and modification, taking into account a diversity of knowledge systems (Cundill & Fabricius, 2009; Fabricius & Currie, 2015; Fennell, Plummer & Marschke, 2008). All of this makes it possible to include formal scientific knowledge as well as informal, local and traditional knowledge and it allows the sharing of rights and power among the diverse range of relevant stakeholders (Fabricius & Currie, 2015). The collaboration, institutional development, and social learning builds trust among the stakeholders and facilitates effective governance to foster ecosystem management (Armitage et al., 2009). Also, the interactions may occur from a local community level to international levels and there is a variety of stakeholders (Fabricius & Currie, 2015). In the governance approach there is an emphasis on the participation of stakeholders with different types of ecosystem knowledge (both scientific knowledge and experiential, like local knowledge) and the participation of stakeholders working at different ecological scales and levels of decision-making (for instance, government agencies and non-governmental organizations that manage certain habitats or are policy-makers at local and national levels) (Schultz et al., 2011). All of this shows that ACM is useful for allocating tasks, exchanging resources, linking different types and levels of organization, reducing transaction costs, sharing risks, resolving conflict, sharing power,

increasing expectations as it aims to orientate socio-ecological systems towards sustainable trajectories, and increasing their robustness (Fennell et al., 2008).

Even though it sometimes sounds like it, ACM is not a governance panacea and therefore not applicable to all to all management challenges (Armitage et al., 2009; Fabricius & Currie, 2015). Both Armitage et al. (2009) and Fabricius & Currie (2015) set up conditions for successful ACM and Fabricius & Currie (2015, p. 174) mentioned that the approach '*may be inappropriate in contexts where stakeholder capacity is lacking, governance is weak, problems are 'tame', solutions are urgent and trust is low*'. Here, SLO can play a role in increasing the trust among stakeholders. SLO is an industry-based concept based on a risk-management perspective (Boutilier, 2014; Dare, Schirmer & Vanclay, 2014). It does not have a clear universally used definition, however Moffat, Lacey, Zhang & Leipold (2016) described it as '*the ongoing acceptance or approval of an operation by those local community stakeholders who are affected by it and those stakeholders who can affect its profitability*' (Moffat et al., 2016, p. 480). A social licence is often necessary to have in certain management projects, because it can improve corporate reputation, increase the ongoing access to resources, reduce regulation, improve market competitiveness, strengthen stakeholder relationships and it has positive effects on employees (Dare et al., 2014). A social licence can be attained by building trust between stakeholders through the establishment of meaningful partnerships between operations, communities and government, and creating the right set of demands and expectations for how a business will operate held by multiple local stakeholders and broader civil society (Moffat et al., 2016). Additionally, the expectations of corporate behaviour should match with the companies' actual behaviour (Moffat et al., 2016). In other words, the SLO of an operation is rooted in the beliefs, perceptions, trust, and confidence of stakeholders (Boutilier, 2014; Moffat et al., 2016). So, the perceived acceptability of an organisation is not just based on the specific practices or planning process a particular community engagement activity seeks to address, but also on other factors like the overall practices and image of the organisation (Dare et al., 2014). Dare et al. (2014) also emphasise that in forest management there cannot just be focussed on one singular social licence, as is usually implied. However, because of the range of social contracts from micro-scale (like local communities) to society-wide (like NGOs) stakeholders, a range of social licences must on the smaller scale be negotiated between individual parties or stakeholder groups and on the broader scale achieved through the accumulation of several smaller-scale overlapping licences (Dare et al., 2014).

In short, both approaches see stakeholder partnerships across scales, recognition of the diversity of their views, social justice, equal representation and power-sharing, new institutional arrangements, and conflict resolution aided by these principles as important (Butler et al., 2021). Besides, ACM also emphasises the need for leadership and the roles of bridging organisations or individuals to facilitate iterative co-learning, knowledge generation and cross-scale networks. SLO is more focussed on the establishment of trust and transparency between project proponents and communities, and the formation of novel public-private partnerships amongst multiple stakeholders (Butler et al., 2021). Even though the two approaches are still evolving and have not been used in rewilding practices yet, Butler et al. (2020) believe that their approach is sufficiently generic to be applicable across the context of rewilding. Their approach is primarily building on ACM and overlapping principles of SLO, which focuses on creating partnerships and trust between development proponents and local communities (Butler, Young & Marzano, 2019). Through the elements of structure and process, ACM and SLO could be used in a governance approach. The structural element is meant as a facilitation team which has to carry out a stakeholder analysis for the rewilding location and its social-ecological system and with this, has to acknowledge potential power asymmetries in the project (Butler et al., 2021). In the project of *Rewilding de Veluwe*, there are some stakeholders that could significantly have more power, like the province of Gelderland with all its rules around nature or experts in the field of conservation, like biologists or ecologists. As Takacs (2020) states, biologists claim to know how to fulfil the goals of a given biodiversity preservation law and therefore could have a privileged voice in rewilding practices.

However, as is said in the seventh principle of Carver et al. (2021), traditional knowledge, like traditional ecological knowledge (TEK), should provide a complementary body of knowledge to science and collaborations between researchers. Therefore, the team around the project has to make sure that weaker or marginalised stakeholders are also represented and the most powerful must be willing to share decision-making instead of dominating it (Butler et al., 2021).

In the Netherlands, there is no ecological knowledge and practices of indigenous and local cultures as TEK is usually referring to (Martin, Roy, Diemont & Ferguson, 2010). However, Westerink-Petersen (2008) argues that Dutch farmers have knowledge that is not always taken seriously by nature management organisations, while the distinction between agriculture and nature conservation is becoming less and less strict. Farmers are increasingly working on nature conservation which makes their knowledge on nature more and more valuable and increases their influence on the trajectory of rewilding. After generations of tillage during times of unpredictable events, like storms or disease outbreaks, farmers are very aware of the vulnerability of their land and the importance of the right care to create a healthy soil (Drenthen, 2022). Maybe it would make more sense to let farmers manage and develop the landscape, that is also created by farmers in the past, instead of the government or nature conservation organisations taking over the management (Westerink-Petersen, 2008). So, farmers do not necessarily have to form a threat for rewilding practices. However, rewilding initiatives could affect the farmlands. For example, the increase in the number of carnivores could lead to more predation on domestic livestock (Wynne-Jones, Strouts & Holmes, 2018). Here, communication is very important and, to some extent, farmers should be able to cooperate in creating the rewilding plans (Smit, 2022).

4.6 CONCEPTUAL FRAMEWORK

The conceptual framework of this research is as follows:

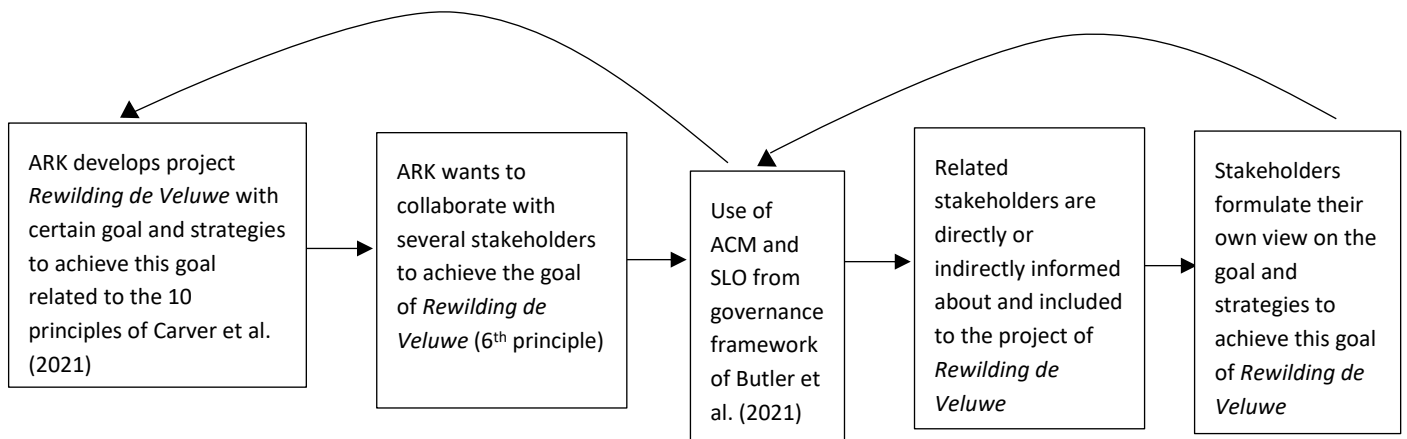


Figure 1: Conceptual framework

The theories discussed above can be seen in the conceptual framework in Figure 1. The rewilding definition of Carver et al. (2021) can be used to get a better understanding of the practices in the *Rewilding the Veluwe* project by comparing them with the ten guiding principles of rewilding. In the conceptual framework, the ten principles are coming back in the first step of developing the strategies to achieve the goal of *Rewilding de Veluwe*. After ARK drafted their goal of the project and came up with strategies to achieve this goal, it wanted to collaborate with several stakeholders and stakeholders who are related to the project to be able to actually perform the activities of rewilding. Here, the main focus is shifted to the sixth principle about local

engagement and support which is also the most important principle for this bachelor thesis. Key aspects of governance in context of conservation are diversity and quality (Franks & Booker, 2019). The generic governance framework of Butler et al. (2021) could be helpful by meeting these aspects and achieving this local engagement and support because of the integration of ACM and SLO. The framework was used to analyse and to understand the different views and how they are part of the Rewilding Veluwe process. After this, every stakeholder formulates their own view on the goal and strategies set up by ARK. This research tries to understand these different views held by the stakeholders. It is important that ARK listens to the voices of these stakeholders, takes them seriously and discusses the feedback. This feedback is again integrated in the use of ACM and SLO. The change in ACM and SLO could also lead to the adaptation of the goal and strategies of the project because maybe it will lead to better participation with the stakeholders.

5. METHODS

In this research, a mixed method is used to acquire all the empirical data. Therefore, the research method is qualitative as well as quantitative. This is because in this research, the main source of information will come from the stakeholders themselves who are in relation with the project of *Rewilding de Veluwe* and with each stakeholder the right methods had to be determined. Research methods that are used to acquire some knowledge before starting the interviews, to help with setting up the interviews and survey, and to use as an addition to the answers given, are a literature review and observations. The part of the project area of *Rewilding de Veluwe* that has been observed was de Kemperheide. The aim of the observations was to get a vision of what the area looks like at the moment in order to get a better understanding of the choices ARK is making to reach their goals. An observation protocol is not used for this. A literature review on subjects like the practice of rewilding and measures to convince stakeholders to participate in rewilding projects helped to get a better understanding of the answers given by the stakeholders. Also, some sources were used to analyse the answers given in the interviews and are incorporated in the results of this bachelor thesis. These sources were: the websites of ARK, Natuurmonumenten, and Geldersch Landschap en Kasteelen and two newsletters of ARK.

5.1 QUALITATIVE RESEARCH

The research design that is used for the qualitative part of this bachelor thesis is a case study. A case study is an empirical inquiry that investigates contemporary phenomena by looking at a large number of characteristics in a limited number of units of analysis (Vennix, 2019). In other words, a specific case is studied in detail and from a number of different angles (Vennix, 2019). In this bachelor thesis, the specific case which is looked at is the view stakeholders have on the project *Rewilding de Veluwe*. To collect data about this specific case and see it from different angles, semi-structured interviews were conducted. In this type of interview there is a list of subjects set up by the interviewer beforehand, so the order and formulation of the questions are already determined (Vennix, 2019). However, as a result of the open questions that are mainly asked by the interviewer and the follow up questions formulated on the spot as a reaction to the answers of the interviewee, the interviewee gets some space to move outside the script of the interviewer.

The first interview that took place was with an employee from ARK who has knowledge on the project of *Rewilding de Veluwe*. In this interview, there were several subjects the interviewer wanted to talk about. Those were: defining rewilding, what are the exact goals of the project, how to achieve rewilding, and what does the cooperation with stakeholders look like. The interview guide can be found in the appendix paragraph 10.1. This information was needed to answer the first sub-question of this research and it already gave an idea of what the answers of the other two sub-questions would be. However, to get a more detailed answer to the second and third sub-question, it was crucial to get some insights on a couple of stakeholders related to *Rewilding de Veluwe*. Beforehand, it was already quite clear which stakeholders were involved in the project but after the interview with ARK, a list was made with all the involved stakeholders. Those are: the municipality of Arnhem, the province of Gelderland, the Central Government Real Estate Agency, Defence, Natuurcentrum Arnhem, farmers, local citizens, recreational users of the project area, entrepreneurs, estate owners like De Hoge Veluwe National Park, and area management organisations (TBO's) which are Staatsbosbeheer, Natuurmonumenten en Geldersch Landschap en Kasteelen (GLK).

For this bachelor thesis, there has been a conversation with four of those stakeholders next to the interview with ARK. These stakeholders were chosen to collect data from because they are very important to make the goals of the project succeed, since they are all landowners in or around the project area and are the ones who decide what will happen on their ground. With a representative of Staatsbosbeheer, GLK and the municipality of Arnhem there was an interview which all three had quite the same questions with some alterations here and there. All the interview guides can be found in the appendix paragraphs 10.2 to 10.4, except the conversation with Natuurmonumenten because no interview guide is used. However, because it were semi-structured interviews, the structure of the three interviews changed a lot during the conversations. The interviews with ARK and the municipality of Arnhem were online via Teams instead of live on location, which was the case with the other two interviews. This went quite well, however sometimes it was hard to understand what the interviewees were saying in the recordings during the transcription of the interviews and the interviewer was not always able to interrupt the interviewees. There was also a chance of technical difficulties but those did not occur during the online interviews of this research.

In both the interviews with Staatsbosbeheer and GLK there were other people in or entering the room during the interviews. Despite the background noises of a coffee machine during the interview with GLK, this was most of the time not disruptive at all, however the presence of other people may have had an influence on the answers the respondents were giving because there were more ears in the room which maybe lead to desirable answers. It is possible that there were also more people in the room during the online interviews, however this could not be seen by the interviewer, was not mentioned by the interviewee and the interviewer did not question it. Besides the interviews, there was a short conversation on the phone with Natuurmonumenten. Because of full schedules and a holiday coming up, the interviewee did not have time to participate in an extensive interview. Still, the phone call gave some more insight in the view of Natuurmonumenten on the rewilding project and the collaboration with ARK.

To analyse all the data, the summary and all the interview transcripts are coded in Atlas.ti. The external validity of semi-structured interviews is not very high. Not all the statements of the interviewees can be related to the stakeholder they are representing because they will always give their own opinion which may be not in line with the general thought of the organisation they are working with. However, the internal validity may be higher, because a certain structure is used and the researcher is able to steer the interview in a certain way. The answers were compared with the literature and a lot of similarities were found, which increases the internal validity. The structure in the interviews is also in advantage of the reliability of the interviews. The interviewer sometimes asked if they had understood the answers correctly or asked some questions twice in another way and each time got the same answer as before.

5.2 QUANTITATIVE RESEARCH

Another stakeholder that is very important in making *Rewilding de Veluwe* succeed, but does not have as much power in the project as the landowners do, are the people living close to or inside the project area. To collect all their views on rewilding, a survey is used. Qualitative methods like an interview are not the best research methods to acquire the empirical data because a lot of people should be approached to be able to make a statement about the whole population and within this research there was not enough time to be able to do so many interviews. That is why a quantitative research method is more fitting. The survey is more linked to an empirical-analytical paradigm and is a less detailed research than the case study, however it is much more fitting when the researcher wants to make a statement of a greater amount of people (Vennix, 2019).

An online survey is created in Qualtrics and spread mainly among citizens of the municipality of Arnhem by sharing them over WhatsApp and Facebook. The survey contained questions about the knowledge and opinions of the respondent on nature, rewilding and the project itself. The complete survey can be found in the appendix paragraph 10.5. Usually, a survey is a questionnaire with mostly multiple-choice questions but in this research it was important to know why people thought in a certain way which resulted in nineteen closed and seventeen open questions. The large amount of open questions may ask for a greater amount of mental energy of the respondents and 36 questions also ask some time to fill them all in. This may lead to less people who complete the whole questionnaire or a decline in the amount of text in their responses. Despite these risks, 164 people filled out the survey of which 103 are used in this bachelor thesis. Around 60 responds were filtered out because these respondents did not answered enough questions or they were not living close enough to the project area. Excel was used to exclude those respondents and to sort the data. SPSS was used to analyse the data. Here, only the frequencies are examined because finding correlations was not the aim of this study.

The external validity of this survey is quite low because quite a small amount of the population is included in this research. For instance, of the 163,885 inhabitants of the municipality of Arnhem, only 0.05 percent participated (Gemeente Arnhem, 2022). However, the group of people who did fill in the survey was rather diverse. When looking only at the people living close to the rewilding area, the percentage of 0.33 is already a bit higher. 78 people said they lived close to the area while 23,405 people are actually living in the following nearby neighbourhoods: Klingelbeek, Burgermeesterswijk/Hoogkamp, Alteveer/Craneveld, Monninkenhuisen, Geitenkamp, and Schaarsbergen and surroundings. Though, these numbers are not very reliable because people have their own perception of distance to the area and thus may be coming from a whole other neighbourhood than the ones mentioned. The internal validity is quite high. The answers matched quite well with the literature and because of the open questions, it was more clear what people meant with their answers. This also increases the reliability. The open questions let people think more about their answers and sometimes people referred to other questions they already answered. This shows that they would probably give the same answers when they would fill in the survey again.

6. RESULTS

6.1 REWILDING ACTIVITIES

In the beginning of this bachelor thesis, three sub-questions were stated. The first question was: 'What activities will be used to reach the goal of *Rewilding de Veluwe*?' The goal of *Rewilding de Veluwe* is to make the area above Arnhem wild, healthy and full of nature again (ARK Natuurontwikkeling, 2021b). ARK's representative also confirmed this during the interview by saying: '*A wild robust nature is the main goal*'. As is in the name of the project, ARK wants to use rewilding to reach this goal. After interviewing a representative of ARK and analysing the rewilding project on their website, it appeared that the three main rewilding practices they try to execute are: connecting natural areas, creating healthy and vital forests, and trying to transform the agricultural land use (ARK Natuurontwikkeling, 2021b). In this part the first sub question will be answered by discussing each of these practices and relate them to the theoretical framework.

The project area where ARK is planning to do the rewilding is very fragmented because of all the fences and roads separating natural areas. This is a disadvantage for the movement of species on the Veluwe. Right now, not much migration is possible between different nature reserves: '*(...) in the part of the north of Arnhem where we are active, fences make it impossible for red deer to move from left to right, so from Planken-Wambuis to Veluwezoom. Above, there is the Hoge Veluwe, there are fences too, so the animals cannot migrate.*' ARK's representative explained further that: '*(...) what you wish is that those fences would be gone so that they can cross the entire Veluwe from left to right.*' From this can be seen that the borders of the project area of ARK are not fixed. Even though, there is a very clear map of this area on their website ARK's representative explained that it is just an indication for where they want to perform the rewilding practices and right now, ARK is only working on the places where the landowners want their help to think along the nature conservation. The representative further explained: '*Actually, our vision is for the entire Veluwe and at the moment, we happen to be practically active at Arnhem, but we hope to rewild the entire Veluwe. So, our vision does not stop at the borders of this part of the Veluwe (...) you always need the bigger picture.*' This bigger picture means that ARK also wants to connect the Veluwe with foreign nature reserves, like with German or Belgian areas. The representative stated that: '*(...) the connections to foreign countries are just as valid as the connections here (...) it is all about the three C's: cores, corridors, and carnivores (...) you could see the Veluwe as a whole as a natural core and then the animals can choose for themselves where they sit or stand or move.*' An example of a carnivore that could make a comeback when the connections to the Netherlands are improved is the lynx. Such large carnivores, or large herbivores like the red deer, could act as key species in the Dutch ecosystem. When these species could move more freely, there could be an increase in trophic cascades in the country, which in turn could restore trophic interactions (Arts et al., 2022a). This is all in line with the second principle of Carver et al. (2021) (see Table 1). As ARK's representative explained about carnivores: '*(...) we really want to have the lynx back. (...) It is a very different animal than the wolf but also very important because it also influences all kinds of animals in the system.*' and more about herbivores: '*In a normal system (...) animals could migrate from poor to rich and from rich to poor, for instance.*' With this migration, ARK's representative explained further that grazers could improve the quality of the poor soils on the Veluwe. When animals have the opportunity to migrate, herbivores are able to eat on the more fertile soils close to the water where more the nice fresh food can be found, and after that move to dry sandy soils which will be enriched by the minerals from the faeces of the animals. Next to this, overgrazing in the forests will decrease and deciduous trees will get the chance to grow when herbivores are more mobile. This is in line with the first principle of Carver et al. (2021) which says that rewilding should utilize wildlife to restore

trophic interactions and create a self-sustaining ecosystem. Key species are able to transform landscapes of the Veluwe which can result in a trophic cascade (Arts et al., 2022a; Soulé & Noss, 1998).

So, as a result of the increase of the movement of animals, the health of forests is able to improve. However, ARK's representative made it clear that the organisation does not want to introduce them just like that. Carnivores are never introduced, they should return by themselves. This will only happen when the quality of the ecosystem on the Veluwe is good enough and the area is connected with other areas where these carnivores are already occurring. In contrast with the carnivores, lost herbivores, like certain horse or bovine species, are sometimes introduced by ARK in their project areas. This is in line with Arts et al. (2022a)'s argumentation who said that the Netherlands is more focussed on introducing herbivores than carnivores. ARK's representative explained that a diverse group of herbivores on the Veluwe could lead to a biodiverse ecosystem because: *'In the past, they had a very big effect on the landscape because they ate plant species that are not eaten now and horses chew in a different way than bovines do.'* In this way, the animals facilitate each other and the ecosystem. Also, the representative told: *'(...) when you have a complete food web, not only the diversity will increase but it will also be more robust.'* so the forests will become more vital and therefore also resilient for not only temporal changes in the landscape but also climate change, just like Carver et al. (2021) talked about in their fourth and fifth principle.

Next to animals who could spread minerals through their faeces, there are several other ways the quality of the forest could increase. For instance by introducing other tree species. Right now, there are a lot of exotic species in the Veluwe that could speed up the acidification of the soil with their leaves or needles (ARK Natuurontwikkeling, 2021b). ARK's representative explained that they are very careful with introducing new species: *'We don't necessarily need to introduce a particular species unless it is missing from the system and is vital.'* However, when they do, they choose for tree species that traditionally fit in the area and whose leaves enrich the soil (ARK Natuurontwikkeling, 2021b). Dead wood and animals also help to enrich the soil. There is for instance the project called *Dood doet Leven* (Death gives Life) where mostly roadkill are placed somewhere in the forest to be digested. They can be placed randomly but there are also specific *Dood doet Leven* places, for instance on the Koningsheide (ARK Natuurontwikkeling, 2021b). These places are ideal for monitoring the rewilding principles because it attracts species to a fixed place where a camera can be placed. Carver et al. (2021)'s eight principle explained that monitoring is necessary for rewilding practices because their outcome is very unpredictable. With monitoring the *Dood doet Leven* places, it becomes more clear which animals are attracted to it, what happens to it or the data can be used for other research. Most other monitoring in the project area is done by students. To illustrate this, the representative of the talked about a project called Wolfbirds where researchers *'have provided several ravens with a transmitter (...) to see how ravens move around in the landscape but also: what relationship do they have with wolves, because it is sometimes said (...) that ravens and wolves work together.'*

Some of the above practices are incorporated in pilots on parts of the project area on the Veluwe. This could be connected to the adaptive part of ACM which is focussed on the feedback mechanism of learning-by-doing, but also again on Carver et al. (2021)'s eight principle because monitoring is constantly used in pilots. ARK discussed nature development and recreational zoning on the Kemperheide with the municipality of Arnhem and other land owners (ARK Natuurontwikkeling, 2022). To be able to create a natural open landscape on this area, former production forests need to be transformed. To be able to do this, the different parties discussed things like creating more rest areas by closing some hiking trails and giving people more space in other areas (ARK Natuurontwikkeling, 2022). ARK also wants to start a pilot on Rijk der Heide where it wants to bring back the dynamic of the forest by adding minerals in the ground through dead species and soil inoculation, quitting certain activities on agricultural fields and introducing specific grazers and plant species (ARK Natuurontwikkeling, 2022).

With all this information people could conclude that when there is effort in restoring forests as cores and realise good corridors, key species could be attracted and distributed on the Veluwe. In turn, those key species can play a very important role in creating healthy and vital forests. However, ARK's representative emphasised that grazers cannot easily be placed in an ecosystem to solve the problems on the Veluwe. The system needs to be strong enough to be able to handle the animals. As the representative told in the interview: *'In theory, nature can regulate itself. However, right now for instance, there are not enough wolves to regulate the entire population of deer.'* People should be very careful and look at the current situation and the future of an area. ARK's representative emphasized that they cannot choose the exact species to introduce to the Veluwe beforehand. This is because every species has its own value which makes it hard to focus on a particular species to come back. Also, ARK does not make use of a specific reference system. The representative explained: *'It is difficult because the Veluwe has a rather odd system. Human influence has been around for a long time. There is overgrazing, overexploitation, wind erosion, we cut down a lot of trees and planted a lot which resulted in a weird composition of species, and the system is very dry and poor with some richer areas around it.'* All this influence resulted in a very different ecosystem than the Veluwe once had, so that makes it hard to go back to the self-sustaining reference system of the past. It is possible to look at what species are missing in reference with the past or current other similar natural areas but the future of the Veluwe will never be the same as it once was. This is a bit in contradiction with Carver et al. (2021)'s third principle because they explained that rewilding should make use of a self-sustaining and resilient reference system, which is not always possible on the Veluwe.

The third practice is all about agricultural land use. In the project area, farmers are leasing land from the municipality of Arnhem, among others. Efforts are already being made to implement agriculture in such a way that it puts less pressure on nature and ARK wants to contribute to this by starting a conversation with the municipality, the province of Gelderland and farmers about business models that suit the return of agricultural land to nature (ARK Natuurontwikkeling, 2021b). ARK's representative confirms this in the interview by saying: *'Currently, we are working with a number of farmers to create alternative revenue models for them.'* Those models could include things like ecotourism or a natural burial ground (ARK Natuurontwikkeling, n.d.b). Good communication about the rewilding practices with the stakeholders could lead to a social licence of the SLO, because trust can be built through the establishment of meaningful partnerships between operations. The cooperation with farmers could also be connected to the co-management part of ACM because this part is focussed on collaborative and inclusive decision making. ARK's representative indicated that farmers are open to change: *'(...) farmers are located in the area and the soil is very poor so a part of the farmers have said: "yes, we would like to look at other ways."'.* This is in line with Drenthen (2022) who said that farmers are aware of the vulnerability of their land and the importance of the right care to create a healthy soil. Including the knowledge of farmers in the rewilding practices can provide a complementary body of knowledge, as is mentioned in the seventh principle of Carver et al. (2021).

The three main rewilding practices of ARK should lead to the main goal of the project. However, according to ARK, it is important that people also have the ability to recreate in the area and experience art and nature. ARK's representative nuances this by saying: *'(...) nature is of course under pressure, so a lot of people everywhere performing a lot of recreation is not favourable for nature (...) you will also have places on the Veluwe where it is a bit quieter, but this area is quite close to Arnhem and it will therefore also be very nice to be able to recreate and go outside.'* This shows that the sixth principle of Carver et al. (2021) is more important than the ninth and tenth one, as is mentioned earlier (see Table 1 for the description of the principles). People first need to learn more about Dutch nature so that the public understanding and appreciation of wild nature can be increased and a paradigm shift in the coexistence of humans and nature can occur in which the intrinsic value of wild nature is recognised. An example of

people learning about nature has to do with the collaboration of ARK and Natuurcentrum Arnhem in which they invite children to discover nature in the area. Children of around eleven and twelve years old are learning about the wild, self-sustaining forest at school and in the field. As ARK's representative explains: *'(...) we have field lessons for primary school children. We take them outside for a day and we introduce them to natural things, such as dead animals or the way water runs, (...) and we have special assignments about that.'*

In conclusion, ARK wants to reach the goal of the project of *Rewilding de Veluwe* by using three main rewilding practices to restore the damaged nature and balancing this with giving people the opportunity to learn about nature and enjoy it. As ARK's representative said it: *'A wild, robust, connected nature is the main goal and there is certainly room for culture and people to enjoying and experiencing it.'*

6.2 RELATION STAKEHOLDERS AND REWILDING THE VELUWE

In the interview with ARK's representative, they said that *'The support for projects like these differ per stakeholder. (...) Just getting people to the table can be a huge win. Getting all the opinions in the same direction or making stakeholders excited for the plans (...) is for us already a big success.'* Before we look at the opinions of different stakeholders on the project, we first need to answer the following sub question: *'In what way are the stakeholders related to the project *Rewilding de Veluwe*?'*

As mentioned, the stakeholders are Staatsbosbeheer, the municipality of Arnhem, Geldersch Landschap en Kasteelen, Natuurmonumenten and local residents. The municipality and GLK are both stakeholders who own land inside the project area. This exact area can be found on the ARK website (ARK Natuurontwikkeling, n.d.b). The representative of the municipality also confirms this by saying: *'That are our own grounds, we have 1200 hectares of forests and nature on the Veluwe. (...) this is not only the Kemperheide but also Rijk der Heide, Koningsheide, Schaarsbergenbos, well, a lot of areas.'* GLK's representative however denies that they are part of the project area of ARK: *'ARK has nothing here at all. Rijk der Heide is where ARK is working on.'* This is in line with ARK's representative saying that this online map is not fixed but more of an indication.

Staatsbosbeheer and Natuurmonumenten do not own land in the project area, but are bordering it. The representative of Staatsbosbeheer told in the interview: *'I don't think we own any land in that part, I thought it was entirely owned by the municipality of Arnhem. However, we are probably bordering it.'* and the representative of Natuurmonumenten made clear: *'Natuurmonumenten does not own land in the project area and therefore cannot do anything itself to rewild the area. Two nature reserves to which the project area borders and are owned by Natuurmonumenten are Planken Wambuis in the west and National Park Veluwezoom in the east.'* The two stakeholders are still very related to the project *Rewilding de Veluwe* because ARK wants to create a large nature reserve in which connections with nature outside the project are also important. Staatsbosbeheer and Natuurmonumenten both made clear in their interviews that they want to work together with ARK to connect their natural areas with the rewilding area and try to be in line with the goal of *Rewilding de Veluwe*. However, the representative of Natuurmonumenten also said that they cannot work outside the borders of their own area and therefore it is up to ARK to get started with the migration possibilities of species between the nature reserves.

The local residents are related to *Rewilding de Veluwe* in a whole different way than the other four stakeholders. They are the ones who do not directly have a saying in the nature conservation but are more visiting and experiencing it. All respondents occasionally visit a nature

reserve or estate. Most of them, 36.9 percent, visit them even more times a week. The nature reserve in or close to the project area that most respondents have visited is Park Sonsbeek (91.3 percent). However, the respondents are also visiting areas that are very close to the pilot areas Kemperheide and Rijk der Heide: De Hoge Veluwe National Park 82.5 percent, Deelerwoud 40.8 percent, Westerheide 12.6 percent, and Heikamp 6.8 percent. In natural areas people are mainly hiking (94.2 percent), biking (39.8 percent), and walking their dog (32 percent).

ARK has contact with all the stakeholders and the representative made clear that they work as: *‘mediator and inspirer, as connector and we show in what way people can do things because we of course already have a lot of experience on how to set up such a project in other areas.’* ARK tries to get every stakeholder around the table and discuss the rewilding plans with them. They can help them with the plan building and execution of conservation plans. ARK also realises that rewilding is not the only solution and that there are a lot of other ways to make nature more resilient. ARK’s representative told: *‘When are all the stakeholders satisfied? Defence has a whole other goal that the farmers and maybe ARK has another goal than the locals. So you all have to find each other. (...) Some nature organisations are already very busy with rewilding, while (...) others are saying: “Well, we are much more focussed on culture or recreation”, so in that case rewilding is less suitable.’* So, all the different stakeholders have their own vision on the best way to manage their natural area, and with that in mind ARK sees getting people around the table and agreeing with each other on certain topics already as a big success in the cooperation process. Nevertheless, ARK is still trying to show how rewilding can be used to achieve a healthier forest on the Veluwe. The representative told: *‘If we can show how that works and that it is indeed successful and results in beautiful nature, that would make us very happy.’*

To show this image of rewilding, ARK is having private conversations with the stakeholders but there are also group sessions. ARK is always present in these conversations and the relation differs per stakeholder. This together with the flexibility of ARK to listen to the current visions of the stakeholder about their natural area, as is said in the previous paragraph, is related to the sixth principle of Carver et al. (2021), which is about including the participation of stakeholders in rewilding plans, and to the governance framework of Butler et al. (2021). Just like in ACM, the stakeholders are able to explore each other’s objectives and find common grounds. Knowledge from different sources can be used in the rewilding plans and the power in the project will not just lie in the hands of the biggest landowners, but are much more spread among different stakeholders. The cooperation between ARK and the stakeholders could also lead to a good SLO because when the stakeholders are treated seriously, trust can be build. In the interviews with the representatives of every stakeholder, they told about the collaboration with ARK as is seen in Table 2. Next to this, the representative of Natuurmonumenten talked about the experience of ARK in other nature conservation projects in the Netherlands where they could learn from in their own area. This is also in advantage of the SLO because with this overall image of the organisation, ARK can show that they already have experience with nature conservation projects which builds trust among the stakeholders that *Rewilding de Veluwe* also will be successful.

Table 2: Stakeholders’ representatives talking about the conversations with ARK about collaborating in the project of *Rewilding de Veluwe*

<p>Representative of Staatsbosbeheer</p>	<p><i>‘We have already had a conversation with ARK about this topic (...) four or five people of ARK came to visit us to talk about the bigger plan and how we can work with this. (...) It is more about the vision: what does rewilding mean on the Veluwe? What is the ARKs view on this? What is the view of Staatsbosbeheer on this? And how can we work together in this? (...) We try to come up with a conclusion together, to do things that we both support. I think the idea was to work on the same goal.’</i></p>
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Representative of Natuurmonumenten	Talks with the ARK about how they can strengthen and support each other. ARK can use the practises of Natuurmonumenten in their own plan: <i>'The ARK is able to show how nature management can also be done in a different way.'</i>
Representative of Municipality of Arnhem	<i>'(...) sometimes we sit together with for instance Natuurmonumenten or there are, organized by ARK, sessions with stakeholders. (...) The ARK can play a role in how other land owners and stakeholders could work together with the municipality to achieve the main goal'</i>
Representative of Geldersch Landschap en Kasteelen	There had not been a deep conversation with the ARK on the day of the interview, however: <i>'It is coming. I am curious. I will hear what they want and if we can work together with them, who knows. Maybe we are able to create a large nature reserve.'</i>

The collaboration with the people living in or close to the project area is a little different from the rest. ARK's representative explained: *'You involve the local residents when you want to do things in their backyard, then you sit down with them. (...) we also often communicate via the drawings of Jeroen Helmer, my colleague (...), we use this as some kind of vision where we want to go and that often appeals people.'* ARK also tries to learn something from every stakeholder and tries to find solutions together in the project. For instance, the representative told that they can learn a lot from comparable projects: *'(...) when you look at other nature organisations then there are some who are already working on it, like Natuurmonumenten on the Veluwezoom.'* but also from the local residents: *'Together with residents of the Buitenplaants close to Arnhem, we are currently working on a layout plan (...) and with a couple farmers we are working on alternative business models for them.'* This shows, related to the SLO, that ARK is focussed on social licence from a range of social scales, which is very important according to Dare et al. (2014) as is mentioned earlier. Also, local engagement and using local knowledge is important in the sixth and seventh principle of Carver et al. (2021).

To conclude, all the stakeholders are related to the project because ARK needs their knowledge and support to make it succeed. Every stakeholder has a certain stake. The municipality of Arnhem and GLK are related to the project because they own land in the project area and ARK is performing or, if it is possible, wants to perform some rewilding practices here. Staatsbosbeheer and Natuurmonumenten are related because they are bordering the project area and need to have the corresponding visions on the rewilding plans to be able to connect their nature reserves. The local residents are related to the project because they are visiting the natural areas or are living in or very close to it. A summary can be found in Table 3.

Table 3: Relation of the stakeholders with the project area of Rewilding de Veluwe

Municipality of Arnhem	Owns land in the project area
Geldersch Landschap en Kasteelen	Owns land in the project area
Staatsbosbeheer	Bordering the project area
Natuurmonumenten	Bordering the project area
Local residents	Visiting the project area or are living in or very close to it

6.3 THOUGHTS OF LANDOWNERS ON THE PROJECT PLANS

The last sub question of this bachelor thesis is: ‘What do the stakeholders think of the project plans of *Rewilding de Veluwe*?’ This part will go through all the practices ARK hopes to perform in the project area and see what the interviewed stakeholders think of them. The first practice is about connecting natural areas and as is said earlier, Natuurmonumenten is very interested in working together with ARK to create a connection between their nature reserves. Actually all stakeholders are very in line with ARK on creating connections, as can be seen in Table 4.

Table 4: Stakeholders’ representatives about the importance of creating connections on the Veluwe

Representative of Staatsbosbeheer	<i>‘I am pro less compartmentalization (...) the ARK is of course in favour of removing all fences and letting everything go its own way, I think that’s a fantastic idea.’</i>
Representative of Municipality of Arnhem	<i>‘(...) rewilding means for me the increase of the size of the areas (...) in our own areas we want to remove as many fences as possible.’</i>
Representative of Geldersch landschap en Kasteelen	<i>‘If wild animals will be able to migrate, the use of rewilding would be very interesting. (...) We will never place fences. We are happy we got rid of them. (...) It should happen on much more places. National Park, Kroondomein, it is best to lose the fences.’</i>

The stakeholders had different reasons for their enthusiasm to connect natural areas. The representative of Staatsbosbeheer mentioned the problems that arise when grazers are trapped in a small area: *‘There are so many deer that (...) there is very little tree regeneration. (...) In winter or early spring, when the food is scarce, they cannot go somewhere else to a nutrient-rich area. So every small plant that comes up will be eaten immediately.’* The representative of the municipality agreed with this by saying that small systems always will need a helping hand because of the pressure on the vegetation. In a segmented area, there will be a lot of small ecosystems that cannot sustain themselves. This also applies to the Veluwe where the grazing pressure of animals like deer and wild boar on the vegetation is too high, which results in little or no progress in forest development. Besides the herbivores that create a problem in small, fragmented areas, GLK’s representative also mentioned that predators like the wolf cannot live in such areas: *‘Two wolves are a burden for the National Park. (...) They already decimated the mouflons for fifty percent and if they don’t do something about it, within two years they will have zero mouflons. Then it will be the turn of the deer. (...) They are all locked up, but when the fences are gone the wolf can migrate to another place. (...) Right now, wolves cannot live in National Park (...), someday the last deer or boar will be eaten.’*

Next to all the positive reactions on removing fences to create more connections on the Veluwe, the stakeholders also talked about problems that can arise. From the interviews it became clear that the three stakeholders emphasized very different reasons why removing barriers is not always favourable (see Table 5). The representative of the municipality disagreed with the representative of Staatsbosbeheer, who explained that wild animals could cause conflicts when they are able to enter agricultural land: *‘There are almost no fences around both the farmland we have leased and the land we manage by ourselves. (...) The animals could cause some trouble but not that much to be worried about.’* The municipality sees the fences more as a tool to keep humans away from nature and create more peace. GLK also uses fences to prevent people to enter certain areas. This is because they strictly separate humans from bigger animals in order to guarantee safety for their visitors. They also see all the roads on the Veluwe as a problem.

GLK's representative argued that this barrier is not simply removed because it will take a lot of time and money to build wildlife crossings. Next to this, the representative of the municipality argued that it will be hard to connect all the separated areas on the Veluwe, because not every land owner is as excited about removing fences as they are.

Table 5: Stakeholders' representatives about the disadvantages of removing fences on the Veluwe

Representative of Staatsbosbeheer	<i>'More space is complicated to realise. This is because, for instance, deer may not enter agricultural land where they can cause damage. (...) Deer entering agricultural land is not accepted at the moment.'</i>
Representative of Municipality of Arnhem	<i>'Could you use a fence to prevent people from entering instead of animals (...); how can you influence recreation in certain ways to create peace for (...) certain species of the Habitats Directive? (...) Basically no fences, only there where it is necessary to manage the balance between nature and recreation.'</i> <i>'There are a couple fences but they are from Defence or other institutions (...) they have to guarantee safety. (...) There are so many (...) parties with fences around them. We prefer to have them gone and it is a challenge where you can remove them.'</i>
Representative of Geldersch Landschap en Kasteelen	<i>'On Westerheide (...) and Warnsborn (...) there are Veluwe heath with a low fence around them. (...) we are not letting people be in contact with large grazers. The area must be closed (...) it should be surrounded by a fence. Low fences of course. Everything can go under and over it (...) You keep the bigger animals outside.'</i> <i>'There is a fence along the Amsterdamseweg (...). More migration will be interesting but you will always come across a highway (...). You have to build tens of wildlife crossings, you have to make tens of roads traffic-calmed (...). This cannot simply be arranged.'</i>

Next to making the area less fragmented, the stakeholders also agree with the idea of creating a healthy and vital forest, which is the second main rewilding practice proposed by ARK. This can be seen in Table 6. Using dead wood and animals as a resource to enrich the poor soil is to a certain extent used by the stakeholders, and all the stakeholders do have some forests reserves where there is very little management of the forest and natural processes have free reign. However, from the interviews it also became clear that most of the land owned by the stakeholders is still very much managed. For instance, maintaining cultural history in the area is limiting rewilding and especially for the GLK, cultural history is very important. As GLK's representative explained: *'(...) For Geldersch Landschap, cultural history is most important, that's what we originated from. (...) Cultural history high, rewilding difficult. But not impossible because it is the challenge of the manager and his people to see what they can do.'* Also, every stakeholder is still cutting wood in their forests, which could limit the rewilding practices. In the areas of Staatsbosbeheer and the GLK logging is taking place as a source of income. The representative of Staatsbosbeheer explained in the interview: *'(...) we also have functional forests where we not only look at the nature but also harvest trees for sustainable trade. (...) We are not fully paid by the government to do our things so we need more income with for instance wood production.'* In the areas of the municipality and the areas of Natuurmonumenten close to the project, there is no forestry. However, the representative of the municipality explained that they perform thinning to create a better forest. Not all the dead wood they create with this will stay in the forest, because too much of the same kind of wood will remain while the municipality wants a diversity

of dead wood. The wood that is removed by the municipality is being sold on the roundwood auction. So, there are some practices by the stakeholders that could be seen as a limitation for the rewilding plans, like maintaining cultural history, forestry, and thinning.

Table 6: Stakeholders' representatives about creating a more vital and healthy forest

Representative of Staatsbosbeheer	<i>'(...) I think that is a fantastic thought because dead animals in nature brings a lot of extra biodiversity. Fortunately, in some areas you can allow this on a certain scale. (...) I am in favour of more dead wood in our forests. The more dead wood the better. The prettiest tree is a dead tree.'</i>
Representative of Municipality of Arnhem	<i>'In rewilding you should focus on the recovery of the soil (...). Nitrogen is acidifying and poisoning the soil which results in a broken system without soil life. (...) There should be looked at vegetation development and moisture retention. Right now everything directly flows to the rivers, hence all the dehydration on the Veluwe.'</i>
Representative of Geldersch Landschap en Kasteelen	<i>'(...) creating and retaining a high quality soil with dead wood and dead animals. On Westerheide I have a charnel field where roadkill or other animals we find go to.'</i>

In the interviews, the use of grazers in rewilding practices was talked about. For instance, the representative of Staatsbosbeheer told: *'ARK believes that: "in the forest you really don't have to intervene actively, you don't actually have to manage it. The forest itself does that with the help of grazing and then you don't really have to do that much."* Heathland was often used as example where sheep herds could maintain the landscape instead of all the current management by humans. This would fit more in the vision of rewilding. It also became clear that the stakeholders are aware that with using herbivores, ARK does not so much focus on the management of the heathland created by humans, but more on creating varied landscapes with alternated forest and open landscapes. To be able to create these kinds of landscapes, ARK might introduce more large herbivores on the Veluwe, like they did in other projects where they used natural grazing to reach their goals. The introduction of large herbivores is a more doubtful measure for the stakeholders, especially the municipality and GLK and, as can be seen in Table 7, some stakeholders are in a disagreement with the animal introduction plans of ARK. Natuurmonumenten emphasized in their interview that they could play a part in helping ARK to show the other stakeholders a way to use grazing on their land. The representative told: *'Natuurmonumenten can share their experiences with ARK on (...) natural grazing on the Veluwe, so that ARK again can show these results to other stakeholders, like the municipality of Arnhem, and maybe adjust their image on this matter.'* Right now, the municipality believes that the ecosystems in their natural areas are not yet ready for large herbivores. The grazing pressure of animals will be too high, causing little or no progress in forest development, as is said earlier. The reason that GLK is not very enthusiastic about the introduction of large herbivores is also already touched upon. They want to keep them strictly separate from humans to maintain safety. This makes GLK not as opposed to introduction as the municipality, however, as GLK's representative told in the interview, if ARK wants to let animals migrate to an estate of the GLK: *'Then they have to place fences and they make sure that visitors cannot enter it. (...) We want our visitors to be save.'* Staatsbosbeheer is more open to the use of grazers than the other two stakeholders. However, as can be seen in Table 7, when the natural grazing is not going as planned, they will still intervene. This is not in line with the first rewilding principle of Carver et al. (2021), because if people will keep influencing the ecosystem, it will never be self-sustaining.

Table 7: Stakeholders' representatives about the introduction of large animals on their natural area

Representative of Staatsbosbeheer	<i>'In my opinion you can do a bit of both things, so you could say: "we are going to use more natural grazing on heathlands but when we see that too many trees are coming up, we will remove the juveniles." (...) At some point, you run into limits of what is possible and then it is not possible to let go of everything.'</i>
Representative of Municipality of Arnhem	<i>'They also want this on the Veluwe with more grazing and I have said as a municipality: "no, we already have enough grazers (...). Let us start at the soil, the nitrogen, and making connections before thinking about the role of grazers to achieve the goal." The basics have to be in order first (...). You have no control over the grazers and now you already can see a grazing line in the forest (...) which is a sign of overgrazing.'</i> <i>'Let us first work on the other goals and after that we will see in the future when the balance is complete in the area whether you can also have certain types of grazers in it.'</i>
Representative of Geldersch Landschap en Kasteelen	<i>'Geldersch Landschap once decided not to let large grazers and public walk together (...). We do not have large grazers. (...) The chance that we introduce large grazers on the Westerheide? Minimal. Very small. (...) We are not going to introduce wisents on places that are accessible for visitors.'</i>

The third practice is trying to transform the agricultural land use. No stakeholder is against this, as can be seen in Table 8. From the interviews it became clear that they are aware that there should be a shift to nature-inclusive agriculture in order to sustain the Dutch nature. All the stakeholders are leasing some of their land to farmers. They want to encourage them to change to a more nature-inclusive practice but this is not always easy. As can be seen in Table 8, the stakeholders are not really able to change the agricultural practises as long as a farmer is leasing a part of the area. They can talk to them when they indicate that they want to make a transition or try to tempt them to be more nature inclusive, but they cannot force the farmer to change their practices. However, when the leases expire and land becomes available, all the stakeholders are trying to choose a new tenant who is more nature-inclusive to increase the nature values of their area.

The stakeholders indicate that changing the agricultural practices in their area is a very small step and that things should also change on a much larger scale. The representative of Staatsbosbeheer argued in the interview that politics have to do something to make the agricultural sector more sustainable: *'If you want to make big steps, then politics really have to have the guts to say: "We are now going to buy out these companies and we will give the land that becomes available to pioneers and we will finance and support it to set up a different type of agriculture".'* Natuurmonumenten also finds that the care for nature and landscape in the farmland must be improved and lobbies in all sorts of ways for legislation, regulations and subsidies that help farmers make the transition to nature-inclusive agriculture (Natuurmonumenten, n.d.a; Natuurmonumenten, n.d.b). They believe that the farmers who are open to change their practices should be rewarded and politics is needed to make policy for this (Natuurmonumenten, n.d.b). Maybe it would have more impact if other stakeholders are also starting a lobby like Natuurmonumenten. However, Staatsbosbeheer and the municipality cannot do this, because they are too much related to the government. As the representative of Staatsbosbeheer explained: *'You come to the point that Staatsbosbeheer is ultimately also part of*

the government. We try to stimulate the good and we also have an opinion about things which we discuss with people from the province and the government, but we are not an organization that goes to the Malieveld to protest. We do have to stick to what politics ultimately decides. It is different from an organization such as Natuurmonumenten, which is a member organization and is able to express its opinion more in that regard.'

However, the stakeholders are also aware that it is very hard to change something in the Dutch agricultural sector. The representatives of the municipality and GLK said in the interviews that they understand the anger of the farmers and that people cannot expect that things can radically be changed. This is because the agricultural sector in the Netherlands is producing food for the world market and therefore has a lot of mouths to feed. According to GLK's representative: *'You cannot just say about the nitrogen: "okay, it's the turn of the Gelderse Vallei now. Eighty percent has to go". Yes, and then? Eighty percent of those farmers who have animals there, they will lose eighty percent of their animals. But aren't they all being eaten now? Who ends up without the food?'* Besides, people have to live off of the revenues of the farms. As the representative further explained: *'It must be profitable too. For the farmer and for the Geldersch Landschap. (...) It also brings in quite a bit of money, it's revenue.'*

Table 8: Stakeholders' representatives about the collaboration with farmers

<p>Representative of Staatsbosbeheer</p>	<p><i>'We have seen in recent years that something really needs to change in the agricultural sector. (...) For instance with the nitrogen deposition and with pesticides among other things. And the Dutch agricultural sector needs to become a lot more extensive in order to be able to go hand in hand with, for example, nature and recreation, but also with housing among other things.'</i></p> <p><i>'We lease land with different nature types, so we really need farmers to manage nature. (...) We really want to make agreements with farms who want to make that transition, who want to work with closed cycles of nitrogen and phosphate and who are going to work in a truly nature-inclusive way. (...) However, it's really not that easy and so we try to do everything we can to encourage that, to help them, and to choose good examples. (...) When the leases expire, we can enforce that a bit by choosing tenants who are more progressive, but it's taking small steps at a time.'</i></p>
<p>Representative of Municipality of Arnhem</p>	<p><i>'From an administrative point of view, what you see is that nature-inclusive agriculture is an ambition, wherever possible.'</i></p> <p><i>'In the existing lease contract you often have to tempt farmers rather than force it on them. (...) You have to discuss if it is even possible with, for instance, the specific soil type to make agricultural land more sustainable. What can you do with it? Can you combine nature developments and recreation?'</i></p>
<p>Representative of Geldersch Landschap en Kasteelen</p>	<p><i>'You have to seek for the places where it is possible. We are not going to oblige it. But does he himself indicate that he wants to be more nature-inclusive? Then we definitely want to talk about it. (...) If land comes available due to the closure of a farmer who regularly leased it, then the first thing we think of is: "what can we do with it to increase nature values?". It is possible that we can lease it in SNL or change to organic agriculture. And if this is once changed, it will never change again. (...) Once organic stays organic.'</i></p>

Last but not least is the opportunity for people to recreate in the project area. Every stakeholder finds this very important (see Table 9). However, balancing nature and recreation is often still a challenge. The rewilding area is very close to Arnhem which attracts a lot of visitors. For instance, the natural areas of the GLK were discovered by people during Covid times and GLK's representative explained that they cannot just close natural areas for the public or change the rules of the estates: *'There are off-leash areas for dogs. In some of those areas we do have some trouble because it is so busy but you cannot easily turn it back. The dog is sacred and you will bring people to riot. (...) There are also people living inside the area because of the beautiful surroundings. And then Geldersch Landschap comes and closes everything for visitors? Then you won't be happy, so that is almost impossible.'* This does not mean that people can go wherever they want in the area because recreational zoning is set up to decrease the pressure of the visitors on certain areas, while other places become more busy, like the Westerheide will have less visitors according to GLK's representative. However, this could also lead to some trouble, because people will experience changes in the availability of the nature reserves. As GLK's representative told: *'Suppose I remove the white walking route over there, then I can get some resistance because a lot of people are coming especially for that route because it is a nice narrow path with a lot of vegetation.'*

So, to do things like this, public support is necessary. However, the stakeholders are not sure if there is enough support for rewilding. They indicate that the plans are too fresh to really say if there is public support. ARK is giving people a nice story about how great the rewilding plans are, but the representative of Staatsbosbeheer argued that the stories of ARK are sometimes too good to be true and not giving people the full picture of all the consequences of rewilding practices. The representative told this by saying: *'If you can give a nice story, like ARK can do like no other, by saying things like: "we're going to let nature take its course and we're going to stop hunting", then a lot of people will initially say: "wow, that's great". However, when hundreds of deer are dying along the paths in winter, you suddenly get completely different opinions from the visitors.'* GLK's representative told that through education, information and a lot of effort, the support could be increased. However, there will always be people who ignore the measures that are taken to make some nature reserves less accessible for people.

Table 9: Stakeholders' representatives about recreation in their natural areas

Representative of Staatsbosbeheer	<i>'We have a responsibility to the public to enjoy and use our nature and to walk and cycle and experience nature.'</i>
Representative of Municipality of Arnhem	<i>'The public supports you as a nature conservation organization or culture conservation organisation (...). If the public doesn't like it at all what we do, why should the government give us a little bit of subsidy? 25 percent we live of subsidies and the rest is all income from our own areas.'</i>
Representative of Geldersch Landschap en Kasteelen	<i>'Tourism, recreation, agriculture, all should be in balance with nature.'</i>

Overall, the stakeholders have a positive view on the project plans of *Rewilding de Veluwe*. However, they still see a lot of challenges, like creating enough public support or the possible negative consequences of removing fences in the area. There are also some matters of which the stakeholders have a different idea about than ARK. Staatsbosbeheer thinks that just strengthening the natural dynamics and processes is not enough and humans still have to

intervene a lot in nature in order to sustain it. The municipality of Arnhem is not in line with the ideas of introducing more grazers in their area. GLK is also not very enthusiastic about this idea, but as long as the visitors are not able to be in contact with the animals, they are more open to it. Also, they are sometimes limited in using rewilding practices because they want to maintain human cultural history on their area.

6.4 THOUGHTS OF LOCAL RESIDENTS ON THE PROJECT PLANS

In the survey, local residents answered questions about their opinion on nature in the Netherlands and the planned rewilding practices of ARK. First there were some more general questions to get an idea of what people think about the nature reserves on the Veluwe. On the questions 'Are you interested in Dutch nature?', only two people disagreed and on the question 'Do you think it is important that the nature reserves close to Arnhem are preserved?', all respondents agreed. From their argumentation, it can be seen that there is a lack of appreciation for ecological processes (Snep 2022). Quite some people said that we really need nature and that the Netherlands is already built up enough, but this was more argued from an anthropogenic point of view. Less than twenty people (around 17 percent) mentioned that nature is not just important for humans but also for the conservation of certain species and ecosystems. On the other hand, in a closed question where people had to choose an answer on the question 'According to you, what are the two most important functions of nature?' The answer *Survival of various animal and plant species* got with 91.9 percent the highest score. *Recreation (such as hiking and sports)* came in second with 50 percent. This was reflected in other answers on the open question. People told that they really valued the opportunity to recreate on the Veluwe and future generations should also have the opportunity to enjoy nature. Next to this, they found the green image of Arnhem important and it was practical that they could cycle to nature instead of taking the car. Human health was also seen as very important. The Veluwe brings a nice balance between the busy city and calm nature. People indicated that they are able to move and relax in nature and it brought positive emotions to them. In the question about what kind of emotion people experienced because of nature, peace was by far the most given answer. Almost no negative emotions were mentioned by the respondents. People felt at home and got the feeling of freedom, calmness, joy, admiration, happiness, relaxation, relativization, amazement, and much more. They argued that they enjoyed the beauty, silence, forest noises, and smells of nature. People said they could escape the busyness and were able to clear their heads and de-stress. This is in line with the statements of Jacobs & Buijs (2022) because they said that nature evokes positive emotions in people and can contribute to their happiness.

Snep (2022) also mentioned that people lack basic knowledge of ecological processes. On the question 'How much knowledge about nature do you have?' With zero meaning no knowledge and ten a lot of knowledge, most of the respondents (29.1 percent) indicated that they score a six. Besides, 95.1 percent of the people thought that it is important that people possess basic natural knowledge. They argued that people become more aware of the importance of nature and that people have to realise that we are part of nature. People become aware of their influence on nature and knowledge can help to gain support for nature conservation. Some respondents stated that people should respect nature and that it is important for our future. On the question 'According to you, what kind of influence do humans have on nature?' people answered that we have a great influence that is mostly negative. They mention pollution, destruction, taking space, littering, climate change, deforestation, depletion of natural resources, disruption of ecological processes, among other things.

The second part of the survey was more about the term rewilding. 35.3 percent of the respondent had already heard of the concept of 'rewilding', however, if the answers with a literal

translation in Dutch do not count, over fifty people explained the term quite correctly. The same amount of people also know the difference between rewilding and more traditional nature conservation. Most of them said that humans are less intervening and managing the nature in rewilding projects and some even mention that it is more focussed on the future. Only 16.5 percent of the respondents heard specifically about the project of *Rewilding de Veluwe*. These people mainly came across the project through social media (5.8 percent).

Going back to the sub-question 'What do the stakeholders think of the project plans of *Rewilding de Veluwe*?'. Measures that were stated in the survey were: remove obstacles, like fences of private land owners, to connect nature reserves with each other, transform agricultural land to more natural landscapes and leave dead animals and plants in the area to increase the amount of minerals in the soil. 76.8 percent of the respondents thought these are good measures to resolve the issues on the Veluwe. The issues that were mentioned were: obstacles, such as fences and roads, that prevent animals from moving around and the poor quality of the soil, such as shortage of minerals, which results in a decrease in animal and plant species. The people who were positive about the measures argued that animals could have more space in the Veluwe and that nature gets a change to repair itself. The people that do not agree with the measures said that not all landowners are willing to remove their fences and that sometimes fences are necessary to maintain safety. Besides, people said the agriculture is very important for our food production and farmers are suffering enough. They also said that the Netherlands is too small for rewilding activities and that there are better areas to perform rewilding. After this question, people were asked what they thought of the possible consequences of rewilding, like wild animals who are entering and affecting agricultural land and an increase in the animal mortality rate caused by food shortages in winter. Not a lot of people answered this question, but the answers were still very diverse. Some were very negative and really disliked the idea of dead animals, like what happened with the horses on the Oostvaardersplassen. Others saw them as natural consequences and said that we have to deal with them.

People were also asked to give their opinion on the idea of having more large wild animals in the Netherlands, such as the wolf, wisent, or lynx. The reactions to this were very mixed. Again, the small size of the area was used as an argument to be against it, but people also said that they think large animals are scary and not necessary for our nature because they do not belong here. Others had mixed feelings. They were enthusiastic about the idea but also hesitant because of again the area size of the Netherlands and the human safety. Nevertheless, most people were positive in their answers. They were fine with the idea and saw benefits in creating a balance using natural wildlife regulation.

Lastly, people answered the question: 'Do you think that people should always have access to recreate in nature reserves?' The answers were very related to the idea of ARK that people should have the opportunity to recreate in the project area. As is said earlier, all the respondents visit nature quite frequently and they are using it as a space to recreate. However, 75.7 percent of them said that people should not always have access to recreate in nature reserves. The main argument that people used is that nature sometimes also needs some peace and therefore need some protections against humans and their dogs. Some people said that areas should be temporarily closed, for instance during mating or breeding season, while others said that people may not enter certain areas at all. Some of the respondents disagreed and said that the nature belongs to everyone. Humans are also part of nature and with so many people living in the Netherlands, it is not possible to close up natural areas.

To sum up, most local residents are quite positive about the rewilding plans of ARK. Mostly the limited space in the Netherlands is a reason for people to disagree with some measures. Safety is also seen as very important. When the survey showed some consequences of rewilding, like a higher mortality rate among herbivores in the winter, people were more hesitant.

However, overall more than 75 percent of the respondents were positive and excited about practices of *Rewilding de Veluwe*.

7. CONCLUSION

In the introduction of this bachelor thesis, the following research question was mentioned: 'How diverse are the views of stakeholders related to the project *Rewilding de Veluwe* on the goal of this project and the strategies to achieve this goal?' To get an answer to this question, four interviews have taken place, there was a short phone call and a survey was distributed. Eventually, information was gathered of five different stakeholders. In this conclusion, all these stakeholders will be discussed to answer the research question.

Overall, Staatsbosbeheer was quite enthusiastic about *Rewilding de Veluwe*. They are in favour of allowing more natural processes to take place in nature and they believe that we have to experiment with how these natural processes can expand more on the Veluwe. Staatsbosbeheer also agrees with some measures ARK had proposed, like leaving more dead wood and animals in the forests, removing fences, and transforming the use of agriculture in the area. However, Staatsbosbeheer also told that there are some situations in which they are in conflict with the ideas of ARK. Next to the protection of nature, Staatsbosbeheer has functional forests where they harvest wood for income. Also, Staatsbosbeheer does not want to fully stop with nature management. In their opinion, some semi-natural landscapes should be maintained to prevent biodiversity loss and Natura 2000 sometimes obliges people to intervene in nature. Staatsbosbeheer explained that people run into certain limitations of what is possible in the Netherlands and that we maybe need more of a combination of managed nature and rewilding nature. A last difference with ARK is the possibility to disagree with national policy. Staatsbosbeheer is part of the government and even though they are an independent organisation, they cannot fully show their disagreement towards certain rules or regulations, while ARK can. To sum up, Staatsbosbeheer and ARK agree on a lot of things in the project of *Rewilding de Veluwe* and some practices that are currently performed by Staatsbosbeheer fit within the vision of ARK. However, there are some points where the nature conservation of Staatsbosbeheer differs with the rewilding plans. This is not just because Staatsbosbeheer disagrees with some measures, there are also some practical limitations that prevent the visions of the two organisations from being the same.

The current ideas and practices of the municipality of Arnhem were already in line with the things ARK aspires. The ambition of the municipality is, just like ARK, to improve the natural processes on the Veluwe in such a way that it does not need any management anymore. However, in order to achieve this, they emphasize that size of natural areas should be drastically increased and there should be many more connections to other nature reserves. This explains the enthusiasm of the municipality to decrease the amount of fences on the Veluwe. However, a difference in the ideas of ARK and the municipality is the introduction of large grazers. The municipality stressed that first, the system has to be good enough, so the soil quality must be improved and the area must be enlarged before the large animals can come. They do not want to start with the grazers before there is a balance in the ecosystem.

Geldersch Landschap en Kasteelen is, just like the other two stakeholders, in line with ARK on the use of dead wood and animals and indicated that they are already doing this a lot in practice. Migration of animals is also very important and therefore GLK is against placing fences, except when public and large grazers could come in contact with each other. To maintain the safety of their visitors, GLK strictly separates the large animals from people. At the time of the interview, GLK had an appointment planned with ARK about the plans of *Rewilding the Veluwe* and the interviewee indicated that they are open for discussion. So the introduction of large grazers is possible as long as a fence is placed. Next to this, GLK explained that rewilding will be very hard on their property when it comes in conflict with the cultural history of the area.

Maintaining cultural history is of more importance than restoring nature so in those places rewilding becomes quite difficult.

On the phone call with Natuurmonumenten, it did not become clear in what ways they exactly agree or disagree with the rewilding plans of ARK. However, it seemed like Natuurmonumenten is very in line with ARK. They are strengthening and supporting each other, for instance by creating a sort of reference system for the rewilding area of ARK. ARK can show to other stakeholders the way Natuurmonumenten is using large grazers like horses and highland cattle in their nature reserves so they could adjust their opinion about the increase in natural grazing.

The individual views of the local residents on *Rewilding de Veluwe* are quite diverse. Some people are more hesitant and do not agree with all the aspects of the project. However, the overall opinions are in favour of the rewilding plans. As long as ARK keeps communicating with them and they will get the opportunity to enjoy nature, people are generally quite enthusiastic about the plans.

Despite some doubts here and there, the stakeholders mentioned above are all quite positive about the rewilding plans. Maybe this is because of the way ARK tried to cooperate with all the stakeholders. If the practices ARK has used are compared with the two key aspects of Franks & Booker (2019) of right governance, then they would match with both the diversity and the quality aspect. All the different stakeholders show that several governance types are used and it has a high quality because aspects of ACM and SLO are coming back in the cooperation between ARK and all the stakeholders. For instance, ARK wants to collaborate with a lot of different stakeholders from the residents of the municipality of Arnhem to the province of Gelderland, which shows that there is a focus on a stakeholder partnership across scales, and they recognise the diversity of their views on nature conservation. This shows that there is a focus on collaborative and inclusive decision making in the rewilding project where knowledge from different sources can be used the power is spread stakeholders. Also, the adaptive part of ACM is coming back in the project, because the concept of learning-by-doing is used when ARK helps the stakeholders with the plan building and execution of conservation plans in pilots on parts of the project area on the Veluwe. In the terms of SLO, ARK is doing its best to build trust among the stakeholders by treating the stakeholders seriously by organizing a meeting with each one of them and recognizing that they may have other ideas about the way to manage their nature reserves. Not all the aspects of SLO can be reflected from the results of the research, for instance if the expectations the stakeholders have on the corporate behaviour are matching with the actual behaviour of ARK. However, the overall image of ARK seems to be in advantages of the SLO, because the stakeholders mentioned in the interviews that they have seen the great results of other project plans of ARK.

It could also be concluded from analysing all the proposed rewilding practices that ARK is not fully using rewilding as Carver et al. (2021) explained the term. For instance, ARK sees the nature experience of humans as very valuable which may not always be in line with the ninth and tenth principle, which claim that there should be a paradigm shift in the coexistence of humans and nature in which the intrinsic value of wild nature is recognised. However, if the explanation of using rewilding in the Netherlands by the authors of the book *Rewilding in Nederland* (Arts et al., 2022b) are kept in mind, those conflicts with the principles can be explained. Namely, the Dutch are very separated from nature that lead to a nature-deficit disorder which means that there is not appreciation and support for nature in the Netherlands (Sneep, 2022). ARK told that they are working with the vision of rewilding but that they are also aware that this is not the only possibility to recover the natural system on the Veluwe. They want to do what is most logical for a specific area and the coming four years that ARK will be active on the Veluwe, they want to implement their measures step by step. Sometimes, just getting stakeholders to the table for a discussion can be a huge win. Every stakeholder has a different goal and they will have to find

each other in this. The actual rewilding plans that will eventually be implemented all depend on what is feasible and desirable.

8. DISCUSSION AND REFLECTION

Earlier, there was a conceptual framework mentioned including the way ARK could use the theories like ACM and SLO in the project *Rewilding de Veluwe*. The first part of this discussion will reflect on this conceptual framework. The second part is more of a reflection on the research with some recommendations.

8.1 DISCUSSION

The first box of the conceptual framework, as can be seen in Figure 1, claimed that ARK develops the project *Rewilding de Veluwe* with certain goal and strategies to achieve this goal which are related to the ten principles of Carver et al. (2021). This is true indeed, as a lot of the measures ARK wants to perform are close to the principles, like the importance of creating connections between nature reserves (principle two) or creating a more vital forest that is resilient for changes in the landscape (principle four and five). A principle that is not quite in line with the plans of ARK is the third one. This principle claims that rewilding should be based on a certain reference system. However, as Trouwborst (2022) explained, in the Netherlands the landscape is so much changed and a lot of key species disappeared out of the country, which makes it almost impossible to go back to the situation the nature ever was before all the alterations in the landscape by humans. Also, the ninth and tenth principles are in contradiction with the planned practices of rewilding on the Veluwe, as is frequently mentioned before (see Table 1 for the description of the principles). First, there should be an increase in the public support for nature conservation, which can be acquired through the sixth principle.

This bachelor thesis is most focussed on this sixth principle and therefore, the second box shifts focus to only this principle. Out of the interview with ARK's representative it became clear that the organisation really is in need of a stakeholder collaboration to be able to execute the strategies to achieve their goal in practice. In order to increase the local engagement and support for *Rewilding de Veluwe* and embrace the participation of stakeholders, as the sixth principle suggests, it is important that the right governance framework is used. The conceptual framework proposed that ARK might use some aspects of ACM and SLO here. From the interviews this seems to be quite true, because a lot of the themes of ACM and SLO that Butler et al. (2021) mentioned in their governance framework, like the stakeholder partnerships across scales, the establishment of trust and the recognition of the diversity of their views, are coming back in the cooperation of ARK with the stakeholders. The inclusive decision making, which is part of the co-management part of ACM, could lead to a shift back to the first box in the conceptual framework. This is because ARK might want to change their goal and strategies when this could lead to a better participation with the stakeholders.

The third box is also influencing the fourth one, because the use of the generic governance framework of Butler et al. (2021) leads to an involvement of stakeholders. This is because they are directly informed during a meeting with ARK about the project *Rewilding de Veluwe*, or indirectly through for instance the website of ARK. After receiving information about the plans of ARK, the stakeholders formulated their own views on the goal and strategies to achieve this goal. As was seen in the interviews with and the survey of the stakeholders, not everyone is as excited about the rewilding practices, like the municipality of Arnhem who does not want to introduce large herbivores before the ecosystem is more strengthened. As ARK's representative told in the interview, they are aware that not everyone will be in line with their ideas and that there are a lot of other ways to make nature more resilient. So, the conceptual

framework goes from the last box back to the third one about the use of ACM and SLO when stakeholders are not in line with the ideas of ARK and have some feedback. Here, the cyclical iterative process of the ACM where ARK and the stakeholders explore their objectives, find common ground, learn from their institutions and practices, and adapt and modify them can be recognised (Fabricius & Currie, 2015).

8.2 REFLECTION

There are some shortcomings in this bachelor thesis that should be acknowledged for future research on the topic of stakeholders in a rewilding project. First of all, there are a lot of papers written about the concept of rewilding. This bachelor thesis used a couple of them, but it is important to be aware that every year people discover new things about rewilding and researchers should be very careful that the used resources are not outdated. It could be possible that in this bachelor thesis some 'old' information is used and some important researches are missing.

Second, keep in mind that not every stakeholder is as approachable as the other. With some of the stakeholders, the communication went quite smoothly. Sometimes it took some time before the researcher could get in contact with the right person, however from there on it went quite well and the interviews were scheduled on a very short notice. Only with Natuurmonumenten it was not possible to find a right time to do the interview because of the holidays coming up. This has led to very little information from this stakeholder. It is more than nothing, but for future research, it is recommended to really start contacting people as soon as possible and try more sources than just email, like LinkedIn or via another stakeholder. Also, if it is possible, it would be a good addition to interview some stakeholders who are not nature organisations, like Defence or farmers. Those stakeholders were very hard to get in contact with, but their opinions on rewilding would be very interesting to hear. Mikołajczak et al. (2021) already wrote a preprint, based on interviews with members of the farming community in England, about the diversity of farmers' attitudes towards rewilding practices because as said themselves: *'a comprehensive assessment of how farmers perceive rewilding, including both positive and negative perspectives, is still lacking.'* Additionally, it would be very nice to hear the opinions of Dutch farmers.

Third, it would also be interesting to hear what other people from the same organisation thought of the project. In this research, only one person per stakeholder was interviewed and they all were very focussed on the ecology part of their organisation. More interviews with people of every stakeholder who might be more interested in the recreation part of the organisation could give a clearer view of every stakeholder. During the interviews, Staatsbosbeheer also indicated that: *'(...) it is good to know that we as Staatsbosbeheer do not have just one general view on things but that there is also an entire organisation inside Staatsbosbeheer with different visions and opinions etc. (...) I will do my best to tell you how we as Staatsbosbeheer think about it, however it is also influenced by my own opinions. So you have to take that into account. If you were to interview someone else from Staatsbosbeheer you might get different answers.'* Input from different people coming from the same organisation could increase the external validity.

Fourth, maybe future research on the stakeholder collaboration could take into account the order in which they do the interviews. For instance, it would be very interesting to do an interview before the stakeholder talked with the project developer and also afterwards. That way it can be seen if the stakeholders are sticking to their own views or that the project developer is able to change them a little to promote collaboration in the project. Anyway, the order in which it worked this bachelor thesis could be much better. Right now, all the data was collected before writing it down in detail. However, if everything was already written down what ARK had told in the interview, that information could have better been used in the following interviews. Also, for

this bachelor thesis the interviews took place at the same time as the questionnaire was distributed. It is recommended to do the interviews first so they can be incorporated earlier on in the survey. In this research, some questions were added and adjusted while the survey already was online, which resulted in some questions that had way less response than the other ones.

Two recommendations are about the survey. Sharing a questionnaire in a Facebook community group works great if the research is in need of a lot of respondents in a short amount of time. However, the people using Facebook are around the same age. The survey of this research is also mainly answered by people with the age of 45 to 54 (34 percent). More different sources should be used if it is preferred that a more diverse age group fills out the survey. Next to this, the questions in the survey could be improved. There was one question where people had to pick two answers, but some of them just chose one and others chose them all. For further research, it is recommended to really understand Qualtrics so situations like this do not occur. Also, it is possible that not every respondent understood the questions correctly because some answers did not match the associated question.

Lastly, a thing that can be learned from this bachelor thesis is that people are quite positive about the practice of rewilding. The results of the interviews and the survey showed that most people do care about nature and that good communication is key to perform conservation practices like rewilding. It seems like that *Rewilding de Veluwe* has a lot of potential, considering the views of the stakeholders about it. However, rewilding like Carver et al. (2021) explained it is not possible in the project, because the stakeholders have doubts about some practices, like the introduction of large grazers. Therefore, more research on the best way to perform rewilding in the Netherlands is recommended and other places in the Netherlands should be looked at where rewilding might be a better fit than the current nature conservation methods.

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10. APPENDIX

10.1 INTERVIEW GUIDE ARK NATUURONTWIKKELING

Interview 1

Organisation: ARK Natuurontwikkeling

Place: Online

Date: 14-04-2022

Introductie interview (hoeft nog niet opgenomen te worden)

- Bedanken voor participatie onderzoek
- Voorstellen → naam, studie etc.
- Onderzoek uitleggen → onderzoeksvraag: hoe divers is de kijk van actoren, gerelateerd aan het project Rewilding de Veluwe, op het doel van dit project en de strategieën om dit doel te bereiken?
- Informatie van interview → hoelang duur het (45 min); geïnterviewde hoeft vragen niet te beantwoorden wanneer die dat niet wilt, interview; kunnen altijd stoppen met het interview.
- Anonimiteit → transcript van interview zal alleen met de scriptiebegeleidster gedeeld worden; geïnterviewde kan anoniem blijven (gebruik van pseudoniem); geïnterviewde mag het transcript lezen als die dat wilt.
- Toestemming vragen om op te nemen, interviewer enige die het hoort.
- Vragen of geïnterviewde nog vragen heeft.

Vragen (start opname)

Rewilding de Veluwe

- Kun u uzelf voorstellen?
- Wat is uw functie in het project Rewilding de Veluwe?
- Wat betekent volgens u 'rewilding'?
- Wanneer is 'rewilding' project succesvol?
- Als ik het goed heb begrepen is het doel van het project 'het gebied ten noorden van Arnhem weer wild, gezond en natuurrijk maken', is dit het enige doel?
 - o In hoeverre is het creëren van een recreatiebos en educatie een doel van het project?
 - o Is de focus vooral op het laten verdwijnen van de invloed van de mens op het gebied of zijn uiteindelijk menselijke waarden belangrijker dan die van de natuur?
- Als ik het goed heb is het grootste probleem van het gebied op dit moment de slechte kwaliteit van de bodem. Om dit op te lossen willen jullie het referentie ecosysteem terugbrengen met behulp van aanplanten van bomen die hier van oudsher voorkomen, worden er ook bepaalde diersoorten geïntroduceerd?

- Wat is precies het referentie ecosysteem waar jullie op doelen?
- Jullie willen ook barrières verwijderen en Planken-Wambuis in het zuidwesten en de Veluwezoom in het oosten met elkaar verbinden. Is het gebied van dit project dan meer een kern waar dieren naartoe trekken of wordt het juist eerder als verbindingsgebied gebruikt en gebruiken dieren het voor migratie?
- Zijn er bepaalde soorten in het project waar vooral de focus op ligt dat ze terugkeren/meer voorkomen?
 - Zal het gebied in voordeel zijn van deze (of andere) soorten door de rewilding?
 - Zorgen deze organismen er juist voor dat de natuur zichzelf weer kan onderhouden?
- In uw nieuwsbrief stond dat het vasthouden van regen- en grondwater topprioriteit heeft, hoe willen jullie dit gaan aanpakken?
- In hoeverre kan dit project problemen rondom klimaatverandering tegengaan/verminderen?
- Op welke manier zal het gebied voorbereid zijn op grote veranderingen in de toekomst (zoals overstromingen of lange tijd van droogte)?
- In hoeverre gaat de natuur op de Veluwe zichzelf kunnen onderhouden zonder hulp van de mens?
 - Zal er nog steeds jacht zijn in voordeel van het ecosysteem of verkeersveiligheid etc.?
- Voor het project 'dood doet leven' zijn er bepaalde gebieden aangewezen waar dode organismen neergelegd worden, wordt alles hier neergelegd of alleen de verkeersdoden?
- Wordt er naast 'dood doet leven' meer gemonitord in het natuur reservaat?

Cooperation with stakeholders

- Ik heb gelezen dat jullie met veel partijen samen gaan werken. Dit zijn gemeente Arnhem, provincie Gelderland, Rijksvastgoedbedrijf, Natuurcentrum Arnhem, Defensie, agrariërs en de lokale bevolking, mist er iemand in dit rijtje?
- Op welke manier gaan jullie samenwerken met al deze stakeholders?
 - Jullie gaan samenwerken met stakeholders over verschillende schalen (lokaal, regionaal etc.) in hoeverre zijn deze stakeholders gelijk gerepresenteerd?
 - Staat iedereen gelijk aan elkaar (heeft de ARK het laatste woord)? Hebben alle stakeholders even veel te zeggen?
 - Staat de ARK als leider tussen alle stakeholders in of werken ze ook samen op wat kleinere schaal zonder dat ARK er tussen komt?
 - Zijn er veel conflicterende meningen over het project?
 - Veel landeigenaren zijn betrokken bij het project, hoe gaan jullie met hen samenwerken?
 - Moeten stakeholders hun land afstaan?
 - Wat zijn de na- en voordelen voor de stakeholders?
 - Zijn er bepaalde kosten of juist verdiensten?
- Wordt het project zelf volledig gefinancierd door de Postcodeloterij?

- Is er genoeg lokale betrokkenheid en steun voor het project?
- Wordt er ook lokale kennis gebruikt in het Rewilding de Veluwe project?
- Hoe gaan jullie samenwerken met boeren?
 - Moeten zij hun landgebruik of functie volledig veranderen (ecotoerisme, wildernisvlees, natuurbegraven of een zorgfunctie)?
- Wat is de rol van vertrouwen in dit soort projecten?
- Wat is momenteel het beeld van mensen op rewilding projecten?
 - Hebben projecten als Oostvaardersplassen hier invloed op gehad?
 - Hoe kan dit beeld veranderd worden?
 - Hoe maak je mensen bewust van hun invloed op de natuur?

Afsluiting

- Bedanken medewerking geïnterviewde.
- Anonimiteit benadrukken → transcript kan gedeeld worden en gebruik van een pseudoniem.
- Vragen of geïnterviewde het uiteindelijke verslag wilt ontvangen.
- Vragen of geïnterviewde nog literatuur weet op het gebied van rewilding, samenwerking met stakeholders of het beeld wat mensen van rewilding hebben.
- Vragen of interviewer het gebied mag bezoeken.
- Vragen of interviewer weer contact op mag nemen als het nodig is.
- Vragen of geïnterviewde nog iemand weet die geïnterviewd kan worden.
- Vragen voor laatste vragen en opmerkingen.

10.2 INTERVIEW GUIDE STAATSBOSBEHEER

Interview 2

Organisation: Staatsbosbeheer

Place: Office of Staatsbosbeheer in Ugchelen

Date: 30-05-2022

Introductie interview (hoeft nog niet opgenomen te worden)

- Bedanken voor participatie onderzoek
- Voorstellen → naam, studie etc.
- Onderzoek uitleggen → onderzoeksvraag: hoe divers is de kijk van actoren, gerelateerd aan het project Rewilding de Veluwe, op het doel van dit project en de strategieën om dit doel te bereiken?
- Informatie van interview → hoelang duur het (30 min); geïnterviewde hoeft vragen niet te beantwoorden wanneer die dat niet wilt, interview; kunnen altijd stoppen met het interview.
- Anonimiteit → transcript van interview zal alleen met de scriptiebegeleidster gedeeld worden; geïnterviewde kan anoniem blijven (gebruik van pseudoniem); geïnterviewde mag het transcript lezen als die dat wilt.
- Toestemming vragen om op te nemen, interviewer enige die het hoort.
- Vragen of geïnterviewde nog vragen heeft.

Vragen (start opname)

Rewilding de Veluwe

- Kun u uzelf voorstellen?
- Wat is uw functie bij Staatsbosbeheer?
- Als ik het goed begrijp is Staatsbosbeheer onderdeel van de Ministerie van Landbouw, Natuur en Voedselkwaliteit. Moet ik het dan zien als dat zij regels maken voor het beheren van natuur in Nederland en dat Staatsbosbeheer die uitvoert?
- Hoe moet ik de samenwerking met de Provincie zien? Stellen zij Natuur Netwerk Nederland op en door jullie subsidie te geven voeren jullie die plannen uit?
- Is Staatsbosbeheer in bezit van grond in het gebied waar het project Rewilding de Veluwe plaatsvindt?
 - o Had Staatsbosbeheer zelf al projecten lopen in dit gebied voordat ARK Natuurontwikkeling met hun eigen plannen kwam?
- U heeft al een keer met ARK Natuurontwikkeling rond de tafel gezeten. Op welke manier zijn jullie van plan om samen te werken?
 - o Delen jullie kennis met elkaar?
 - o Gaat het meer om de uitvoering van de rewilding plannen?

- Sluiten de doelen van Rewilding de Veluwe aan op de doelen die Staatsbosbeheer heeft voor dit gebied?
 - o Het hoofddoel van Rewilding de Veluwe is 'het creëren van een wilde robuuste aaneengesloten natuur'.
- U gaf aan dat in het werk van Staatsbosbeheer 'rewilding' niet erg leidend is, maar dat sommige van onze doelstellingen en beheermaatregelen wel onder dat begrip zouden kunnen vallen. Wat betekent volgens u 'rewilding'?
- Kunt u voorbeelden wat de grootste overeenkomsten en verschillen zijn tussen het beheer van Staatsbosbeheer en 'rewilding'?
- Denkt u dat de plannen van Rewilding de Veluwe en het huidige beheer van Staatsbosbeheer met elkaar zullen botsen?
- Een groot deel van het gebied behoort tot Natura 2000 gebied met daarmee strenge regels voor het onderhouden van de natuur. Denkt u dat rewilding mogelijk is in deze gebieden?

- Met wie werkt Staatsbosbeheer verder samen naast ARK Natuurontwikkeling om de rewilding plannen uit te kunnen voeren?
 - o Hoe verloopt dat?
- Denkt u dat er genoeg draagkracht is voor een project als Rewilding de Veluwe?
- Pacht Staatsbosbeheer ook grond aan boerenbedrijven in het Rewilding de Veluwe gebied?
 - o ARK Natuurontwikkeling geeft aan dat boeren hun land 'terug moet geven aan de natuur' en daarom misschien van functie moeten veranderen. Wat vindt u hiervan?
 - o Kan Staatsbosbeheer hier een rol in spelen?
- Wat is volgens u de grootste uitdaging voor het rewilding project?

Afsluiting

- Bedanken medewerking geïnterviewde.
- Anonimiteit benadrukken → transcript kan gedeeld worden en gebruik van een pseudoniem.
- Vragen of geïnterviewde het uiteindelijke verslag wilt ontvangen.
- Vragen of interviewer weer contact op mag nemen als het nodig is.
- Vragen voor laatste vragen en opmerkingen.

10.3 INTERVIEW GUIDE MUNICIPALITY OF ARNHEM

Interview 3

Organisation: Municipality of Arnhem

Place: Online

Date: 08-06-2022

Introductie interview (hoeft nog niet opgenomen te worden)

- Bedanken voor participatie onderzoek
- Voorstellen → naam, studie etc.
- Onderzoek uitleggen → onderzoeksvraag: hoe divers is de kijk van actoren, gerelateerd aan het project Rewilding de Veluwe, op het doel van dit project en de strategieën om dit doel te bereiken?
- Informatie van interview → hoelang duur het (30 min); geïnterviewde hoeft vragen niet te beantwoorden wanneer die dat niet wilt, interview; kunnen altijd stoppen met het interview.
- Anonimiteit → transcript van interview zal alleen met de scriptiebegeleidster gedeeld worden; geïnterviewde kan anoniem blijven (gebruik van pseudoniem); geïnterviewde mag het transcript lezen als die dat wilt.
- Toestemming vragen om op te nemen, interviewer enige die het hoort.
- Vragen of geïnterviewde nog vragen heeft.

Vragen

Rewilding de Veluwe

- Kun u uzelf voorstellen?
- Wat is uw functie bij Gemeente Arnhem?
- Hoe werkt het precies met beleid maken voor natuur in Gemeente Arnhem?
 - o De Provincie maakt plannen voor Natura 2000 gebieden en Natuurnetwerk Nederland, volgt de gemeente die op of mogen ze zelf ook dingen beslissen?
- Wat betekent volgens u 'rewilding'?
- Gemeente Arnhem bezit best wat grond in het projectgebied van de ARK. In jullie beheerplan staat als missie: "Het duurzaam beheren van zo groot mogelijke eenheden bos- en natuurgebied om de biodiversiteit te verhogen en beter bestand te laten zijn tegen verdroging, vermessing, verzuring (o.a. stikstofdepositie), klimaatverandering en versnippering". Speelt rewilding ook een rol in het behalen van deze missie?
 - o Kunt u zeggen dat er op de bosreservaten rewilding plaatsvindt?
- Er staat ook in het beheerplan dat jullie de geschiedenis van het landschap zichtbaar willen houden. Is dit wel mogelijk wanneer je rewilding toepast?
 - o Hetzelfde voor recreatie en houtproductie?
- Heeft u al een keer met ARK Natuurontwikkeling rond de tafel gezeten?
 - o Op welke manier zijn jullie van plan om samen te werken?
 - o Delen jullie kennis met elkaar?
 - o Gaat het meer om de uitvoering van de rewilding plannen?

- Sluiten de doelen van Rewilding de Veluwe aan op de doelen die Gemeente Arnhem heeft voor dit gebied?
 - o Het hoofddoel van Rewilding de Veluwe is 'het creëren van een wilde robuuste aaneengesloten natuur'.
 - o In plaats van substraten (steenmeel) meer dode dieren en planten laten liggen.
- Kunt u voorbeelden geven van wat de grootste overeenkomsten en verschillen zijn tussen het beheer van Gemeente Arnhem en 'rewilding'?
- Denkt u dat de plannen van Rewilding de Veluwe en het huidige beheer van Gemeente Arnhem met elkaar zullen botsen?
- Een groot deel van het gebied behoort tot Natura 2000 gebied met daarmee strenge regels voor het onderhouden van de natuur. Denkt u dat rewilding mogelijk is in deze gebieden?

- Met wie werkt Gemeente Arnhem verder samen naast ARK Natuurontwikkeling om de rewilding plannen uit te kunnen voeren?
 - o Hoe verloopt dat?
- Denkt u dat er genoeg draagkracht is voor een project als Rewilding de Veluwe?
 - o Onder burgers en de politiek.
- Pacht Gemeente Arnhem ook grond aan boerenbedrijven in het Rewilding de Veluwe gebied? Of bezitten de boeren zelf de grond?
 - o ARK Natuurontwikkeling geeft aan dat boeren hun land 'terug moet geven aan de natuur' en daarom misschien van functie moeten veranderen. Wat vind u hiervan?
 - o Kan Gemeente Arnhem hier een rol in spelen?
 - o Ik las dat Gemeente Arnhem vooral wil dat boeren meer biologisch worden. Heeft de Gemeente ook als doel dat ze meer de kant op gaan van bijvoorbeeld natuurinclusieve landbouw of ecotourisme?
- Wat is volgens u de grootste uitdaging voor het rewilding project?

Afsluiting

- Bedanken medewerking geïnterviewde.
- Anonimiteit benadrukken → transcript kan gedeeld worden en gebruik van een pseudoniem.
- Vragen of geïnterviewde het uiteindelijke verslag wilt ontvangen.
- Vragen of interviewer weer contact op mag nemen als het nodig is.
- Vragen of geïnterviewde nog iemand weet die geïnterviewd kan worden.
- Vragen voor laatste vragen en opmerkingen.

Interview 4

Organisation: Geldersch Landschap en Kasteelen

Place: Office of Geldersch Landschap en Kasteelen in Arnhem

Date: 09-06-2022

Introductie interview (hoeft nog niet opgenomen te worden)

- Bedanken voor participatie onderzoek
- Voorstellen → naam, studie etc.
- Onderzoek uitleggen → onderzoeksvraag: hoe divers is de kijk van actoren, gerelateerd aan het project Rewilding de Veluwe, op het doel van dit project en de strategieën om dit doel te bereiken?
- Informatie van interview → hoelang duur het (30 min); geïnterviewde hoeft vragen niet te beantwoorden wanneer die dat niet wilt, interview; kunnen altijd stoppen met het interview.
- Anonimiteit → transcript van interview zal alleen met de scriptiebegeleidster gedeeld worden; geïnterviewde kan anoniem blijven (gebruik van pseudoniem); geïnterviewde mag het transcript lezen als die dat wilt.
- Toestemming vragen om op te nemen, interviewer enige die het hoort.
- Vragen of geïnterviewde nog vragen heeft.

Vragen

Rewilding de Veluwe

- Kun u uzelf voorstellen?
- Wat is uw functie bij Geldersch Landschap en Kasteelen?
- Maakt GLK volledig zelf hun beleid voor het natuurbeheer (met regels als Natura 2000 in het achterhoofd)?

- Wat betekent volgens u 'rewilding'?
- GLK bezit best wat grond in het projectgebied van de ARK. Klopt het dat alleen de landgoederen Vijverberg, Warnsborn en Hoog Erf in het projectgebied ligt (Lichtenbeek, Boschveld en Mariëndal (onder Amsterdamse weg/N224), park Zypendaal en park Sonsbeek (meer in stad Arnhem) liggen er volgens mij net buiten)?
 - o Zijn al deze landgoederen volledig omheind?
 - o Waarom is dit precies?
- Op de website las ik dat jullie de verscheidenheid aan dier- en plantsoorten in stand willen houden. Speelt rewilding ook een rol in het behalen hiervan?
- Zijn er bosreservaten op deze landgoederen?
 - o Kunt u zeggen dat er op de bosreservaten rewilding plaatsvindt?
- Er staat ook in het beheerplan dat jullie de geschiedenis van het landschap zichtbaar willen houden. Is dit wel mogelijk wanneer je rewilding toepast?
 - o Hetzelfde voor recreatie en houtproductie?

- Heeft u al een keer met ARK Natuurontwikkeling rond de tafel gezeten?
 - o Op welke manier zijn jullie van plan om samen te werken?

- Delen jullie kennis met elkaar?
- Gaat het meer om de uitvoering van de rewilding plannen?
- Sluiten de doelen van Rewilding de Veluwe aan op de doelen die GLK heeft voor dit gebied?
 - Het hoofddoel van Rewilding de Veluwe is 'het creëren van een wilde robuuste aaneengesloten natuur'.
- Kunt u voorbeelden wat de grootste overeenkomsten en verschillen zijn tussen het beheer van GLK en 'rewilding'?
- Denkt u dat de plannen van Rewilding de Veluwe en het huidige beheer van GLK met elkaar zullen botsen?
- Een groot deel van het gebied behoort tot Natura 2000 gebied met daarmee strenge regels voor het onderhouden van de natuur. Denkt u dat rewilding mogelijk is in deze gebieden?

- Met wie werkt GLK verder samen naast ARK Natuurontwikkeling om de rewilding plannen uit te kunnen voeren?
 - Hoe verloopt dat?
- Denkt u dat er genoeg draagkracht is voor een project als Rewilding de Veluwe?
 - Onder burgers en de politiek (geeft land aan GLK omdat er te weinig geld voor is).
- Pacht GLK ook grond aan boerenbedrijven in het Rewilding de Veluwe gebied? Of bezitten de boeren zelf de grond?
 - ARK Natuurontwikkeling geeft aan dat boeren hun land 'terug moet geven aan de natuur' en daarom misschien van functie moeten veranderen. Wat vind u hiervan?
 - Kan GLK hier een rol in spelen?
 - Ik las dat GLK vooral wil dat boeren meer biologisch worden (minder bestrijdingsmiddelen). Heeft GLK ook als doel dat ze meer de kant op gaan van bijvoorbeeld natuurinclusieve landbouw, ecotourisme of natuurbegraven?
- Wat is volgens u de grootste uitdaging voor het rewilding project?

Afsluiting

- Bedanken medewerking geïnterviewde.
- Anonimiteit benadrukken → transcript kan gedeeld worden en gebruik van een pseudoniem.
- Vragen of geïnterviewde het uiteindelijke verslag wilt ontvangen.
- Vragen of geïnterviewde nog literatuur weet op het gebied van rewilding, samenwerking met stakeholders of het beeld wat mensen van rewilding hebben.
- Vragen of interviewer het gebied mag bezoeken.
- Vragen of interviewer weer contact op mag nemen als het nodig is.
- Vragen of geïnterviewde nog iemand weet die geïnterviewd kan worden.
- Vragen voor laatste vragen en opmerkingen.

10.5 QUESTIONS SURVEY

U kunt de taal rechtsboven naar Nederlands veranderen.

Nijmegen School of Management

Dear participant,

Thank you for your interest in participating in my research. I am Rosanne and I am doing a research for my bachelors Geography, Planning and Environment at the Radboud University Nijmegen. You can contribute to my research by completing a short questionnaire. Before starting this questionnaire, it is important that you are aware of the procedure of this research. Please read this carefully before deciding whether you want to participate.

Aim of the research

The aim of the research is to gain insight in the amount of social support for a rewilding project on the Veluwe of people living nearby the project area. In this questionnaire I ask for your opinion on several topics. There are no wrong answers.

Procedure

You will answer the questions completely anonymous. The questions are about your knowledge of nature in the Netherlands and your opinion about a rewilding project on the Veluwe. I will also ask some general questions about, for example, your age. You voluntarily participate in this research and could stop at any time. Answering all questions takes about 20 minutes.

Target group

You can participate in this research when you

- are older than 18 years old
- are living in or around the municipality of Arnhem

Confidentiality of the data

All the research data remains completely confidential and is processed anonymously. Only the researcher has access to it. No personal information is requested. The data is anonymized and cannot be traced back to you. For further questions about the research, you always can contact me by email: rosanne.sumter@ru.nl

I have been informed about the research

I have read the all the information above. I was given the opportunity to ask questions about the study. I have been given the opportunity to reflect on my participation in the research and it is completely voluntary. I have the right to withdraw the consent I grant and to stop participating in the research at any time without giving a reason. I am aware of and agree that the fully anonymized research data relating to me can be used for further scientific research, both in the Netherlands and abroad. I understand that if I have already participated in this study, I cannot participate again.

I have been informed and I agree to participate in this research:

- Yes
- No

Are you interested in Dutch nature?

- Yes
- No

How much knowledge about nature do you have? Think about topics like ecological processes in the Netherlands. 0 means no knowledge and 10 means a lot of knowledge.

- My knowledge about nature (pick a number on a scale of one to ten)

Do you think it is important that people possess basic nature knowledge?

- Yes
- No

Could you explain why?

- (enter text)

According to you, what kind of influence do humans have on nature?

- (enter text)

How often do you visit a nature reserve or estate?

- More times a week
- Once a week
- More times a month
- Once a month
- More times a year
- Once a year
- Never
- Other (enter text)

Which nature reserves or estates near Arnhem have you ever visited (multiple answers possible)?

- Het Nationale Park De Hoge Veluwe
- Nationaal Park Veluwezoom
- Planken Wambuis
- Deelerwoud
- Landgoed Warnsborn
- Westerheide
- Hoog Erf
- Vijverberg
- Heikamp
- Landgoed Mariendaal
- Landgoed Lichtenbeek en Boschveld
- Wolfhezerheide
- Zijpenberg Veluwe
- Park Sonsbeek
- Uiterwaardenpark Meinerswijk
- Other (enter text)

What do you do in nature reserves (multiple answers possible)?

- Hiking
- Biking
- Exercising
- Walking the dog
- Let the kids play
- Other (enter text)

What emotions does nature evoke in you?

- (enter text)

Could you explain why?

- (enter text)

Do you think it is important that the nature reserves close to Arnhem are preserved?

- Yes
- No

Could you explain why?

- (enter text)

According to you, what are the two most important functions of nature?

- Survival of various animal and plant species
- Flood and drought protection
- Water extraction
- Education for, for example, children and youth
- Recreation (such as hiking and sports)
- Other (enter text)

What would you think if there were more large wild animals in the Netherlands, such as the wolf, wisent (European bison) or lynx?

- (enter text)

Do you think that people should always have access to recreate in nature reserves?

- Yes
- No

Could you explain why?

- (enter text)

Did you ever hear of the project of Rewilding de Veluwe?

- Yes
- No

How did you come across this project?

- Social media
- Told by friends or family
- The ARK Natuurontwikkeling website
- The newsletter of ARK Natuurontwikkeling
- Told by your children after an excursion from Nature Centre Arnhem on the Veluwe
- Other (enter text)

(Figure of project area of *Rewilding de Veluwe*)

Above you can find the project area of Rewilding de Veluwe (it is outlined in orange). Do you live near the project area?

- Yes, I live inside the project area
- Yes, I live just outside the project area
- Yes, I live (enter number) kilometres from the project area

- No
- I don't know
- I'd rather not say

At the north of Arnhem, there is a project called Rewilding de Veluwe that wants to 'rewild' the nature over there.

Did you ever hear of the concept of 'rewilding'?

- Yes
- No

What do you think this concept means?

- (enter text)

One definition used for 'rewilding' is the restoration of damaged ecosystems in such a way that nature can sustain itself in the future with as little help from humans as possible.

What do you think of 'rewilding' after reading this definition?

- (enter text)

How do you think 'rewilding' differs from other types of nature conservation?

- (enter text)

A few problems that occur in nature north of Arnhem are:

- Obstacles, such as fences and roads, that prevent animals from moving around.
- The poor quality of the soil, such as shortage of minerals, which results in a decrease in animal and plant species.

According to you, what measures can be taken to restore nature?

- (enter text)

Measures that will be taken to resolve the issues on the Veluwe include:

- Remove obstacles, like fences of private land owners, to connect nature reserves with each other.
- Transform agricultural land to more natural landscapes.
- Leave dead animals and plants in the area to increase the minerals get in the soil.

Do you think these are good measures to restore nature?

- Yes

- No

Could you explain why?

- (enter text)

Possible consequences of these measures are:

- Wild animals who are entering and affecting agricultural land.
- An increase in the animal mortality rate caused by food shortages in winter.

What do you think of these consequences?

- (enter text)

According to you, whose job is it to protect the nature in the Netherlands?

- (enter text)

How could you yourself contribute to the protection of nature in the Netherlands?

- (enter text)

If you could choose what the function of the area to the north of Arnhem should have, what would you choose?

- Nature reserve
- Residential area
- Shopping facilities
- Leave it as it is
- Other (enter text)

Are you...

- Woman
- Man
- Non binary
- Other (enter text)
- I'd rather not say

What is your age?

- 18 to 24
- 25 to 34
- 35 to 44
- 45 to 54

- 55 to 64
- Older than 64
- I'd rather not say

What is your current or highest completed education?

- High school (vmbo, havo, vwo)
- Middelbaar beroepsonderwijs (mbo)
- Hoger beroepsonderwijs (hbo)
- Wetenschappelijk onderwijs (university)
- Other (enter text)
- I'd rather not say

In what municipality do you live?

- (enter text)

I live...

- In a city
- In a town
- In a town on the countryside