

SUSTAINABLE NATURE-INCLUSIVE  
DEVELOPMENT (2.972)  
PROJECT: DE WILDE LANDEN

# NURTURE THROUGH **NATURE**

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**A practical roadmap for the first steps of  
restoring the human-nature connection  
in the IJsselvallei**



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**ACT**  
**REPORT**

September - October 2022

# Colophon

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## Academic Consultancy Advice

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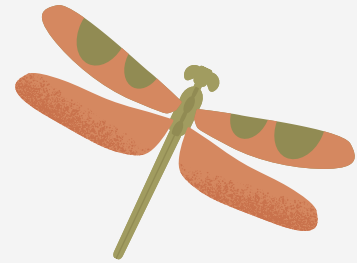
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# Executive summary

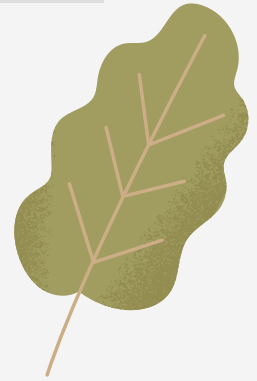
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De Wilde Landen (DWL) is an organisation initiated by Lidewij Bosman which aims to transform former agricultural land into a multifunctional natural area where humans are involved. The aspiration of DWL is the creation of more natural areas in the Netherlands and a space to tackle societal challenges, such as strengthening the human-nature connection. Karin Peters is the commissioner of this project and acts as an intermediary between DWL and our ACT group. The expertise on our team consists of knowledge in environmental sciences, ecology, nature-inclusive agriculture, environmental education, human-animal relations, and communication. The purpose of our ACT project is to contribute to DWL by creating a plan on what practical steps need to be taken to transform an agricultural plot of land in the IJsselvallei into a nature-inclusive flower-rich grass land. This output was achieved by researching similar projects and consulting experts by interviews with the use of questionnaires, as well as conducting a literature review to validate the steps of this plan which were extracted from these interviews. The output of the project is a roadmap with steps on how to transform agricultural land into a flower-rich grassland based on the findings on nature development, human involvement, and finances. This roadmap consists of four phases: 1) the Scouting phase, which encompasses getting a piece of land, finding funding and getting expertise, 2) the Observing phase, which includes observing the land, observing the social context, making a plan for nature and making a plan for human involvement, 3) the Growing phase, which includes the implementation of restoration techniques, media outreach and collaboration, and low recreation and housing, and finally 4) the Thriving Phase, which is comprised of maintenance, income generation, high recreation and harvesting.



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# Introduction

## Problem Definition and Context

Urbanisation is increasing in the Netherlands, and this comes at the expense of nature. To be specific, from 2010 to 2021, the Netherlands lost 2,42 kha of their natural forest (Global Forest Watch, 2022). This is accompanied by an increasing disconnection between people and the environment. Contrary to most ancient peoples who made little distinction between the human and natural worlds, human beings today see nature as a separate entity, even when attempting to preserve it (Williams, 2010). Moreover, conservation projects often see local people as a threat to nature and biodiversity (Rai et al., 2021). Rather than trying to encourage human beings to live amongst and see themselves as a part of nature, conservation often focuses on keeping untouched pieces of natural land away from humans in an approach known as 'fortress' conservation (Siurua, 2006). This is particularly unfortunate because an increased feeling of connectedness to nature influences peoples' identity and increases their intention to engage in conservation (Lokhorst et al., 2014).

Furthermore, a deeper connection between humans and nature is essential to address some of our biggest challenges such as climate change, biodiversity loss, and mental and physical well-being. Concerning the latter, it has been proven that time spent in nature is good for mental health with benefits including reductions in stress, ADHD, depression, and anxiety (Mygind et al., 2021; Louv, 2008). Moreover, it has a positive effect on physiological health as it reduces blood pressure, type 2 diabetes, asthma, obesity, and mortality (Sandifer et al., 2015). Moreover, Fention et al. (2022) argue that experiencing nature raises awareness of the environment and creates a stronger connection with it. Moreover, deepening our relationship with nature will lead to a greater desire to protect it.



Figure 1: an elevation map of the IJsselvallei, the Netherlands. Orange indicates highest, blue lowest

De Wilde Landen (DWL) an organization initiated by Lidewij Bosman which aims to start a project focussing on transforming agricultural land in the IJsselvallei into natural areas that serve a multifunctional purpose. The multifunctional land use will seek to conserve nature and could result in people appreciate nature more for its intrinsic value, as well as addressing societal challenges such as climate adaptation, health, biodiversity, and inclusion. Lidewij and the advisory committee of DWL have a wealth of expertise and experience. However, there is still a lack of knowledge on how to put the DWL project into practice. The aim of this research is to establish a concrete roadmap on the transformation of a former plot of agricultural land to flower rich grassland. This transformation process encompasses practices of rewilding and reconnecting people with nature.

The IJsselvallei was chosen by DWL as the area of interest for the development of the project, and hence the focal area of this study. The IJsselvallei region (Netherlands, see figure 1) is located between the Veluwe which lies to the west and the IJssel which lies to the east of it. The IJsselvallei region is a good candidate for the DWL project as there is currently a lot of agricultural land and there are already existing plans for a transition into more nature-based landscapes for the region (Bureau Peter de Ruyter Landschapsarchitectuur). In addition, the IJsselvallei lies next to the Veluwe, the largest natural region and park in the Netherlands, which is under strain from an increase in tourism, reducing the area's ecological value. The revival of nature in the IJsselvallei might therefore also be able to alleviate some of this pressure from the Veluwe (Ruyter, 2020). As such, our commissioner decided that this would be a good area to focus on when searching for a piece of land for DWL.

This consultancy project aims to address the main problem that DWL currently faces:

There is a lack of practical knowledge on how to transform a plot of agricultural land in the IJsselvallei into a human-inclusive flower-rich grassland.

This includes giving advice on what actually needs to happen on the piece of land obtained, but also on getting to know the surrounding area and people. This is because first and foremost, carrying out a rewilding project requires having information on the context of the geographical area, as every environment is unique and embedded within a specific context (Perino et al., 2019). This means that both the biophysical and the socioeconomic background of an area are of utmost importance in order to produce specified recommendations that are functional for the region. Distilling this available knowledge from experts and similar projects into a synthesised overview of the relevant information would be hugely beneficial for turning DWL into reality.



**TONDENSE HEIDE, OWN SOURCE**

# Stakeholder Analysis

The main stakeholders in DWL project are:

- ·Lidewej Bosma
- ·De Wilde Landen advisory committee (Anneke van Mispelaar, Roel During, Frans Holleman, Arjan Pellis, Shavonne Korlaar and Sharona Ceha)
- ·De Veluwe Alliantie (commissioner of the IJsselvallei masterplan)
- ·Peter de Ruyter (creator of the IJsselvallei masterplan)
- ·Citizens of the IJsselvallei area (potential users of the natural area)
- ·Children of the area
- ·Farmers in the IJsselvallei (land that has potential for transformation)
- ·Relevant municipalities
- ·Potential Investors
- ·WUR Science Shop (Wageningen University and Research has in the past conducted research for DWL and continues to do so)
- ·Rijkswaterstaat – Ministry of the Environment
- ·Agrarische Natuurvereniging (ANV) – Agricultural Nature Association

The influence and power of these stakeholders is visualized in the following matrix. A more detailed exploration of each stakeholder, their role and their power and interest are given in Appendix E.

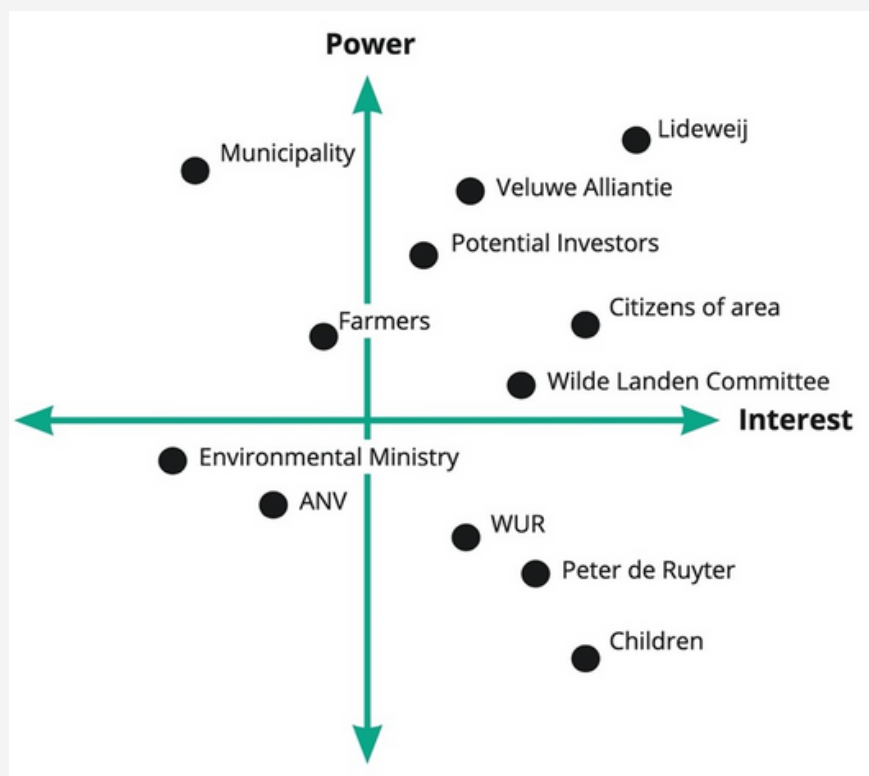


Figure 2: Power-Interest Matrix showing the stakeholders involved in DWL

# Aim of the research and Research Questions

## Aim of the research

The main aim of this ACT project is to develop a project plan consisting of practical steps for the transition of a former agricultural area into a flower-rich grassland in the IJsselvallei, Netherlands. The roadmap will be based largely on information gathered during interviews with people involved in other similar projects, many of which are based in the IJsselvallei or the Netherlands and expert interviews. The roadmap consists of four phases, each of them containing more specific sub-steps. The focus is on giving an overview of the important steps and questions that will arise in implementing this roadmap. The roadmap is expected to be as practical as possible, but the level of detail in each section is limited because DLW has not yet acquired any land. The 12 steps of rewilding by Rewilding Britain (2022) have been used as guiding framework to establish the roadmap. This framework is further expanded in the methodology section. Therefore, our main research question is as follows:

What are the steps in transforming an agricultural area into a human-inclusive flower-rich grassland in the IJsselvallei?

General research question

What are the steps in transforming an agricultural area into a human-inclusive flower-rich grassland in the IJsselvallei?

This general research question will be divided into three sub research questions as given below:

RQ 1: What steps need to be considered in the physical restoration of nature on degraded land?

This question focuses on the physical restoration of nature through natural processes. This includes how to analyse biophysical properties of a piece of land that DLW want to transform (soil, hydrology, vegetation, etc.), what types of nature are appropriate, which restoration techniques can be used in the IJsselvallei and how much maintenance and management is required. The focus here is largely on local projects in the IJsselvallei as they can give more relevant information and techniques than international projects, due to the similarities in their physical landscape and nature.



RQ 2: What steps need to occur on the social side in order to enable this restoration?

This question focuses on the topics of citizen engagement, finances, and to a little extent legislation in order to make DWL project a reality. The visible output is a piece of land that has been rewilded, but in order for this to happen, you need to involve people. This question looks at things such as financing the initial stages, reaching self-sufficiency, involving the local community, reaching participants, and keeping them interested in the long run. Here a focus on local projects in the IJsselvallei is not important, as a wide range of projects can give a wider range of solutions to these questions.

RQ 3: How can these steps be organized chronologically into a cohesive roadmap?

Once the first two research questions have been answered, it is crucial to organise the information into a cohesive roadmap so that the information is presented in a useful and chronological way. Our commissioner is interested in a practical plan, so this step involves compiling and selecting the relevant information, bringing together diverse perspectives and information and tailoring to the needs of our commissioner to produce visual and written recommendations.



**Tondense Heide, own source**

# Methodology

In order to answer our main research question qualitative methods have been used. The methods which have been used are semi-structured interviews, the integration of literature both from external sources as from the academic background of the ACT members, and the consultation of academic experts. The use of these three approaches seeks to ensure data triangulation to increase the academic validity of the presented results.

The focus of our project is quite general, since the commissioner preferred to have advice on many different subject areas: natural rewilding, social inclusion, housing, and minor details on legislation.

The first and second sub-research questions are mainly answered through interviews, and the experts interviewed are seen as credible sources of information on their subject matter. If multiple sources corroborated the same piece of advice, the piece of advice was considered more credible. Otherwise, where possible and necessary, the information obtained is backed up by relevant literature.

The third sub-research question is answered by compiling the advice given and the literature read into a series of steps. This was done through brainstorming sessions, where the steps necessary for rewilding were refined through an iterative process. The final roadmap is a result of these sessions.

The scientific methods which have been used were chosen to reach the final aim for this project. The aim of this project has been to make a roadmap with a range of possibilities on practices of nature restoration and the forthcoming social, financial, and legislative enquiries once land is acquired for de Wilde Landen. This roadmap includes four different phases, namely scouting, observing, growing, and thriving, referring to a chronological order of possible steps.

## Time planning

This research of this ACT project has been carried out from 5th of September till the 21st of October, which covers a time span of seven weeks. The project started with an orientation phase in which the main problem of the commissioner, research questions and methods have been identified. After the orientation phase a proposal has been written in which problem statement, purpose, research questions and time planning have been explained. In the fourth week a list of similar projects to the commissioners' project has been made and emails have been written to contact them. In week five and six interviews have been conducted, transcribed and coded, an area visit has been done, and an outline of the final product has been made. In week seven the collected information has been written down in logical subjects and provided with additional information from scientific literature, and a visual output has been made.

## Qualitative research

Since our commissioner's project is still in the early stages and that there is no concrete piece of land on which it will develop, we chose to focus our research on qualitative research methods in the form of interviews. We chose qualitative research methods as they are much more suited to the commissioner's needs, which is broad advice on many different topic areas, and not detailed quantitative information on a specific subject area.

We chose to focus on interviews instead of an extensive literature review, as interviewing allows for more open-ended answers to a wide range of questions and allows for easier access to a broad range of relevant information.[BJvd1] Since our commissioner asked for advice on a broad range of topics from housing to legislation to nature restoration techniques, it is also a way of finding out which kinds of information are most relevant for a project like this one. People who are involved or are experts in similar projects can easily filter the most relevant information so this is a more efficient way of gathering the required data, otherwise we would have to try to distil and prioritise the information when looking through literature, without prior experience in such projects. In addition, our commissioner asked for practical steps and concrete guidelines, which the interviewees have first-hand experience with.

### Open and semi-structured interviews

First, we conducted research on around 40 different projects to identify which were the most relevant to DWL. This project list was based on a list of expert contacts and similar projects provided by our commissioner, as well as internet searches and using our own personal networks and connections within the field of environmental and conservation work. We shortlisted 17 projects and experts out of these to reach out to. We then used snowball sampling, asking these projects whether they knew of other relevant projects that we could reach out to.

Snowball sampling is suitable when the population of interest is hard to reach and so we chose this technique because the projects we wanted to reach out to are often small-scale, potentially off-grid, and are easier to contact through the human network (Etikan et al., 2015). In the end, with this method, we reached out to a total of 27 different projects and experts and asked them if they were available for an interview. In total, based on the responsiveness and availability of the participants, we managed to conduct 12 interviews and questionnaires.

Once we had established contact with the projects, we established an interview date, either in person or online depending on the distance to the project. Some projects also did not have the time to attend an interview, so we sent them a list of questions for them to answer over email. In the interviews, we chose the method of semi-structured interviews, since they allow room for dialogue and for more freedom to explore the knowledge of the people that get interviewed, while still staying on topic (Kendall, 2008).

For the interviews a topic guide has been established with a range of concepts (see Appendix C). The concepts of this topic guide have been tailored into the wishes of the commissioner and has resulted in retrieving information on nature restoration, finances, community engagement, etc. The topic guide has been used for each interview and more specified interview questions have been distilled to fit every interviewees area of knowledge and experience. By having done so, all interviews have been transcribed and coded. These transcriptions are not included in the Appendixes due to confidentiality towards all participants.

A thematic analysis has been carried out on all interview outcomes. Through a thematic analysis large quantity of text can be examined and themes can be identified (Vaismoradi et al., 2013). A thematic analysis has therefore provided a systematic way of coding while narrowing a to broad interpretation of the results.

### Questionnaires via email

4 out of 12 of the contacted experts have contributed to the research by answering a questionnaire as they were unable to meet for an interview. The topic guide was used as a general outline for the questions and topics, and this was further refined through an in-depth information search on each expert or project leader to make sure we were asking the most relevant questions. Check Appendix F for an example of an email questionnaire sent to the Trees for Life project, owner of the Dundreggan estate.

### Literature

In the orientation phase of our research, we have conducted a focus literature review on the IJsselvallei region. This has done by using search engines as Google and text were made advised by Lidewei Bosman. In addition, after the interview phase we looked for literature to back up findings and expand on knowledge gaps that were remaining. For example, the text "Particulier Natuurbeheer. Subsidieregelingen voor het maken en beheren van natuurgebieden door particulieren in de provincie Gelderland" has been used for the financial section of the ACT report as interviews could not provide this specific information. The following terms have been used in search engines Google, Google Scholar, WUR library, and Scopus: participatory processes, principles of governance, Arnstein's participatory ladder, rewilding practices and nature restoration in the IJsselvallei.

### Visit to the Tondense Heide

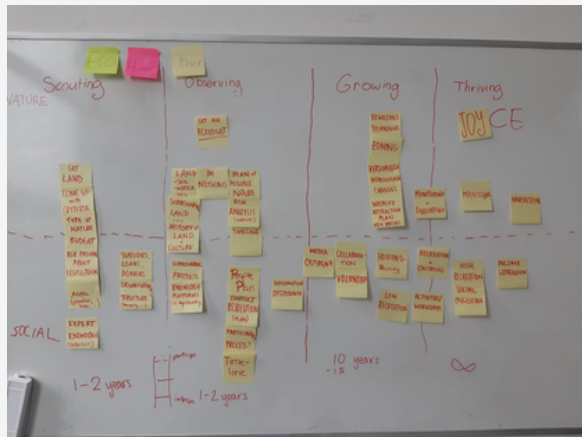
A field visit to the Tondense Heide has been arranged by Lidewei Bosman (DWL). This visit was guided by Ellen ter Stege who is a forester from Natuurmonumenten and is expert on ecology. Besides the expertise from ter Stege observation of the landscape in the IJsselvallei was possible which gave information on the vegetation and hydrology of the land.

### ACT team expertise and transdisciplinarity

The ACT team contributed to the purpose of the project by combining the expertise of the team members from their study programs and former experiences. The expertise on our team consists of knowledge in environmental sciences, ecology, nature-inclusive agriculture, environmental education, human-animal relations, and communication. The educational background of our team members was of contribution to our research methods in two ways. First, several team members are experienced with social science research methods and are familiar with conducting interviews. Second, the expertise of all members is used to critically analyse and evaluate the research findings. Topics were divided and appointed to the team member with the most expertise or interest on this site.

The creative group discussion method was used to refine the final product and come up with final steps that incorporate all the knowledge obtained through the research process (interviews and literature review) and our own personal backgrounds which contributed to the interdisciplinary negotiations. For wicked problems, group discussions akin to scenario analysis can help to integrate different points of view and produce a better final output (Wright et al., 2019). Due to the amount of advice given and the interdisciplinary nature of the information, this stage was essential in order to produce a coherent and comprehensive output. See Figure 3 for an example of the process at work.

Figure 3: Example of a brainstorming session. Here post-its were used to arrange all the relevant steps into their corresponding phases on the timeline.



The ACT team has reached out to experts to establish transdisciplinarity. The word expert is being used to recognize every respondent for their knowledge or experience. Expert therefore refers to academic scholars, people engaging in organizations, and credible knowledge possessors on ecology and nature restoration. Therefore, this research can be considered as form of citizen's science. One of the core values of the ACT team has been to value each participant for their own knowledge and experience and engaged with them in dialogues. The term expert has therefore been used to value people's knowledge and expertise beyond the notion of scientific accreditations. Besides the interviews the ACT team has received academic advice from drs. Jolanda van den Berg, senior researcher at Wageningen Economic Research (WEcR). Because of the guidance of van den Berg social scientific approaches have been integrated, an expertise which has been underrepresented in the ACT team itself. With the assistance of van den Berg the ACT team was able to reach out to Thomas Mattijssen (WEcR) who provided insights on social scientific perspectives towards environmental projects. Additionally, the ACT team has gained support from Jettie van den Houdt to critically reflect on the process of working in an inter- and transdisciplinary environment.

The range of knowledge in our ACT team includes expertise on environmental sciences, organic agriculture, forest and nature conservation, international development & social sciences as well as animal science & bioinformatics. All these areas were essential in some way in the production of the final product. For example, knowledge of the social sciences was key for conducting interviews in a proper way and following the correct procedure of transcription and coding as well as on what is necessary in order to make the DWL project socially inclusive and participatory. Knowledge on forest and nature conservation facilitated the production of output related to nature restoration techniques. Knowledge on environmental sciences, and particularly environmental systems analysis was useful for seeing how DWL fits in to the bigger picture and can tackle bigger environmental issues including climate change and increasing encroachment on nature. Bioinformatics and a familiarity with technology and programming was also beneficial for the coding programme used in interviews, for transcript generation and for the creation of the final visual output. Knowledge on organic agriculture provided background on land, land restoration, making agriculture more nature inclusive and on innovative techniques such as food forests, encouraging pollinators and agroecology.

All our areas of expertise as well as the interdisciplinary knowledge provided in the interviews was incorporated in the brainstorm sessions and in the iterative refining of the final recommendation – practical steps for DWL. In the visual output, many different angles, perspectives, and disciplines were brought together under one visual, an intuitive and comprehensive plan for our commissioner that is easy to grasp thanks to this.

## Ethical implications

We also acknowledge the possible risks involved by taking a role as a researcher. The influence of science does not exist in a vacuum but rather involves an ongoing power relationship with society. As researchers often enjoy greater credibility within society, they risk a confirmation bias towards their own expertise and background. Such confirmation bias risks a biased interpretation of research findings. Additionally, as science has a greater credibility advance within society, other people risk having a credibility deficit. Therefore, researchers can benefit from being self-reflective on their own presence within research projects. This is especially relevant for transdisciplinary research as cooperation happens between different societal actors.

## Limitations of the methods used

The biggest challenge of this research is to give very specific recommendations as there is no land available yet for de Wilde Landen. The focus of this research has been on flower rich grassland in the IJsselvallei as this was proposed by the commissioner. When a specific plot of land is available a more detailed study can be conducted on the situatedness of the land, both in environmental as social, cultural, and historical terms.

The methodology used for our research also has some pitfalls. By using qualitative methods this research is specific to the methodology outlined above. As every interview has been unique and there has been room for asking questions which haven't been set out before the reproductivity is relatively low, especially in comparison to quantitative research methods. In addition, the results of this research have been very dependent on the collaboration of others and the time span given to carry out the research. This requires flexibility by the researchers and changing plans along the way accordingly.

We did not focus on policy and institutional context for acquiring a piece of land because this is outside of our areas of expertise and too broad for the scope of this 8-week project.

One of the biggest challenges for de Wilde Landen is finding a piece of land. Many questions have been raised on the institutional and policy context of the IJsselvallei. This ACT project has not investigated the details of policy and legislative inquiries as the ACT team has no expertise on these subjects. In addition, there were no expert contacts available during the process who could share their knowledge.

Although snowball sampling is criticised for selection bias and a lack of validity, generalisability and representativeness, we view this as appropriate since our research is explorative and qualitative in nature, we had a limited amount of time for our interview process and because we did not use strictly linear snowball sampling (starting with a single participant), but rather identified a range of different projects to begin with (Parker et al., 2020).

Working in a transdisciplinary environment also involves challenges. Everyone who contributed to this research has their own area of expertise, both in experience as educational background. This means that interpretation often differs largely and communication about both understanding, and misunderstandings has been key. Recognizing different viewpoints is not enough and effort has been undertaken by the ACT team to ensure a safe work environment. Transdisciplinarity is not simply integrating different viewpoints but an ongoing learning process in which dialogues are central (Boogaard & Ludwig, 2022). Language barriers were also present during the project as most of the ACT team members do speak English as native language. Some interviews have been carried out in Dutch when this was requested by participants and had to be translated for the final report.

**Theoretical framework**

One of the challenges we encountered was to find a suitable theoretical framework for our research because we have admitted focusing on both natural sciences as on the humanities. Therefore, we have chosen to embrace the notion of de-theorizing which allows for more room of interpretation. De-theorizing has been used by Saskia Sassen (2014) to critically reflect on the positionality of the researcher and the performativity of scientific research. The latter refers to researchers' abilities of bringing ideas into practice and keeping specific societal norms in place. By de-theorizing researchers embrace flexibility during the process and think about the norms and construct they keep in place. As this ACT project focused on a wide range of topics, we have chosen to use the 12 steps of rewilding by Rewilding Britain (Figure ). Rewilding Britain is a network of different rewilding projects in Britain that aims to support and encourage other rewilding projects. To do so they designed 12 steps as a rough guideline for other people that aim to start their rewilding project. For this ACT project, the 12 steps were very influential, as they served as an overview and guideline for the most important topics that need to be considered by doing a rewilding project. As additional information was gathered, through interviews and literature, these steps were adjusted and made more specific for DWL. The final roadmap does not strictly follow the 12 steps but are loosely based on this framework and adapted to meet the specific needs of the commissioner and the context of the IJsselvallei.

1. Do nothing for a while
2. Gather information about your land
3. Get expert help and advice
4. Look at what's next to you and near you
  
5. Develop a plan
6. Think natural processes
7. Mimic natural processes
8. Encourage the return of native species
  
9. Embrace the unexpected
10. Measuring and monitoring
11. Collaborate and connect
12. Engage and communicate

Figure 4: 12 Rewilding Steps source: Rewilding Britain (2022)

Regarding citizen participation we used the Arnstein's Ladder of Citizen Participation as a framework. Arnstein's Ladder of Citizen Participation describes increasing stages of citizens participation. Which each rung citizens get more agency, control and power over the process. The eight rungs are summarized in 3 phases from Nonparticipation (no agency) to Tokenism (fake agency) and Citizen Participation (actual agency) (see Figure 5).

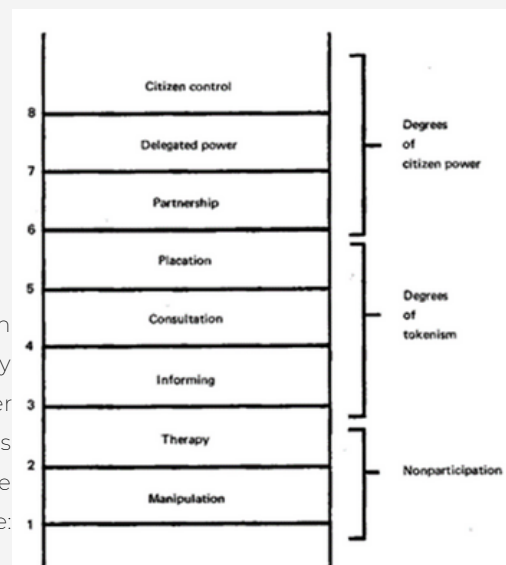


Figure 5: Ladder of Citizen Participation by Sherry Arnstein. The ladder consists of eight steps that describe the degree of participation. Source: Arnstein, 1969

The first rung, Manipulation, is an illusory form of participation. In this case participation is used to not give power to the citizens but rather to educating them or gain their support. Participation is just used to advertisement or public relations activities.

The second rung, Therapy, the organisation leaders try to convince the citizens that they are the cause of a problem, instead of working on their own failures and problems in their structures. People are invited to participate, but the focus is on the symptoms triggered by deeper mostly structural problems. This does not treat the actual trigger of the problem.

The third rung, Informing, is an important first step towards legitimate citizens participation. In that step the project spreads information about what their aims are and what they are going to do when. However, it is not meant to get receive opinions from the citizens back. In Arnstein's words, informing is often used to provide 'superficial information, discouraging questions, or giving irrelevant answers' (Arnstein, 1969).

The fourth rung, Consultation, describes the process of gathering citizens' opinions. This can happen through opinion polls, neighbourhood meetings, and public hearings. Due to Arnstein this is also an important step toward a citizen's precipitation. However, to reach real participation these methods should be combined with other forms of participation. The reason for this is that collecting opinions does not give any assurance that this ideas and concerns will also be considered.

The fifth rung, Placation, gives citizens are a limited degree of influence. However, this participation has a symbolic effect. Usually, it is used when marginalized groups are invited to give their opinions, but they do not have the power to change things as their ideas can be easily outvoted from the powerful people.

The sixth rung, Partnership, takes place if there is a partly shift of power form the project leaders to the citizens. Citizens have the actual opportunity to give their Veto on decisions, to discuss alternatives and that their applications are at least partly considered.

The seventh rung, Delegated Power, happens if citizens get some degree of control, management, decision-making authority. An example would be a citizen body, or a body charged that has the responsibility for a part of the organisation. This means that a part of the decision-making power will be handed over to them.

The eighth rung, Citizens Control, citizens have to full control over the project. They run the project with all the associated responsibilities such as funding, implementation, administration, etc. They have full decision-making power on for example how to allocate funds and in which direction the organisation will develop.

To summarize, the first two steps are no participation by an illusion of it. Organization leaders want to give the impression that citizens do contribute to the process, but they do not have a say at all. They are rather used to giving a good impression of the project (e.g., for advertisement). The next two steps, tokenism, means that the project already set everything on paper, I just want to give the feeling to participants that are having a voice. However, the last 3 steps describe real participation as their is power given to the citizens. Their ideas are considered and in the higher stages they are even taking the responsibility of the whole organization.



# Results

The final result is a roadmap that was developed based on information gathered from interviews and literature (see Figure 6). The aim of this map is to provide the commissioner with concrete steps to follow, from the very first stages in deciding what land is appropriate, to the very end, where the project should involve people in workshops and activities. Because many of the steps may overlap in time or go on for longer or shorter than expected, not all the steps are numbered, but rather divided into four main phases. The overall timeline should proceed from Scouting to Observing to Growing and finally Thriving.

The steps within each phase are divided into two main areas, those above ground represent the physical transformation of the land that needs to occur in order to make DWL a reality, and those below ground represent all the things that happen behind the scenes, and particularly on the social side. Although the roadmap is thought to be more or less exhaustive – comprising all the necessary elements to turn DWL into a reality – the level of detail is not equal in every section. This is because the advice received from interviews was rather unpredictable and so in some areas, we received a lot more information than in others. In addition, we focused on areas that were within our expertise, so again, some sections may contain much more detail because of this.

For a more detailed summary of the projects and experts interviewed as well as a compilation of all the advice they gave, check appendix B.

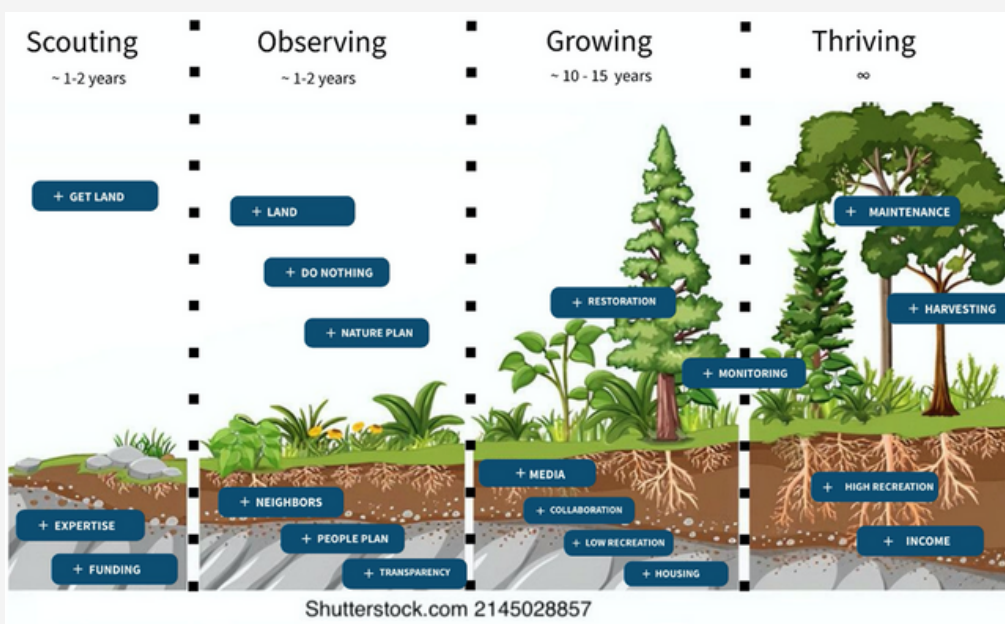


Figure 6: The visual representation of the results including the four phases and detailed steps of making the DWL project a reality. The interactive version can be seen.

# Phase 1: Scouting

Finding a piece of land is your first priority in the scouting phase. Not having a piece of land yet can be an advantage, because it means that you have no limitations in terms of what you could eventually do! You could gather relevant information before you choose your piece of land. This includes information on what type of nature is relevant to your project, what the citizens of that area want and what pieces of land are available.

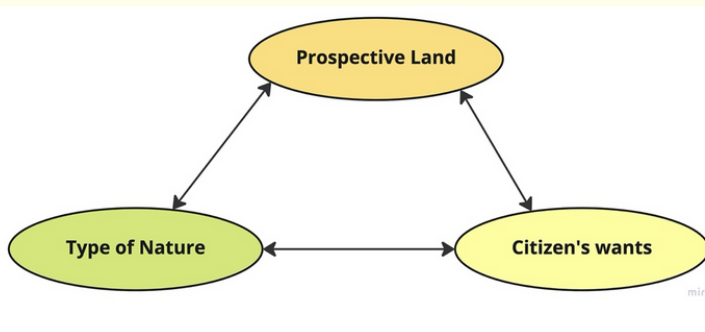


Figure 7: Iterative process of finding a piece of land

This is an iterative process in which the three elements affect each other. The land affects what options you have for nature and who the citizens living around it are. Equally, citizen's wants affect which pieces of land are appropriate (you don't want your project to be surrounded by citizens who are not enthusiastic about it) and what type of nature they would like. Finally, the type of nature that fits with your project also impacts which pieces of land you would like to choose (if you want to build grassland, certain land types are more appropriate than others) and what the citizens think of it.

Be aware that keeping all your options open also means that nothing will ever materialise. Now is the time to start narrowing down the direction you want to go in, a list of criteria is crucial in order to end up with the best possible piece of land.

## Get Land

When choosing a piece of land there are several things that you need to take into consideration such as the surroundings, the legal possibilities of the plot, and pricing. For a concept such as de Wilde Landen it might be preferable to choose a land adjacent to a natural area (Cipollone; Ter Stege; McEvoy), this however limits the search area because someone must be willing to sell (Van Scheppingen).

When choosing to have an area that is surrounded by agriculture land, the possible nature options will be very different. There will be a lot of nettles and blackberries or grass as these are plants that thrive on soil with a lot of nutrients (Ter Stege). A guideline for this can be the four areas appointed in the IJsselvallei in the masterplan as can be seen in image 8. (Bureau Peter de Ruyter Landschapsarchitectuur).



Figure 8: 4 Zones of different soil and nature types in the IJsselvallei

A second point of consideration would be budget. Agricultural land is more expensive than a nature area. The location of the

area will also be an influence on the price. A third point to consider would be the municipality's policy. Some of them will be more open to the project idea and be cooperative. It is possible to check 'bestemmingsplannen' on the [website](#) (van Scheppingen). A fourth point to consider in selecting a land is the type of nature De Wilde Landen is going to be. The IJsselvallei has four zones, depending on the area the plot is located grassland or forest is more appropriate (Bureau Peter de Ruyter Landschapsarchitectuur).

### Tip summary box

- When choosing a piece of land, consider:
  - proximity to a natural area
  - the land and soil type
  - the local municipality's land policies

## Expert knowledge

In the scouting phase, it is important to use the knowledge of as many different experts as possible to help you in securing the right piece of land. Once you have clear criteria for your land and a real prospective piece(s) of land, you could discuss with them whether this piece of land is appropriate. Knowledge that is relevant here includes information from experts on land legislation, rewilding and project leaders who can speak from experience on what they went through to get land.

Ask yourself explicitly what knowledge you are lacking, then try to gather this knowledge and ask experts for advice (de Graaf). Ideally your board should consist of people from many different backgrounds and experience, including trained ecologists (Murphy). These experts can also assist you in coming into contact with people who would be willing to sell land. The local Agrarische Natuurvereniging may be a good place to look for farmers willing to sell their land and to see what farmers are already doing in order to transition into more nature-inclusive practices: for the IJsselvallei these are the [Veluwe IJsselzoom](#) and [IJsselvallei Boert and Eet Bewust](#), (Mattijssen, van Scheppingen). In general, it is a good idea to keep in touch with the ANV, informing each other about what you are doing and what they are doing in this field. (van Scheppingen). At this stage you can also start to think about forming partnerships such as with your province, your municipality, the waterboard or [Natuurmonumenten](#) (van Scheppingen).

### Tip summary box

- Ask experts in legislation, housing and ecologists about what you should look for in a piece of land
- Ask yourself what knowledge you lack and find this expertise in others
- Make partnerships with local organisations if you want their help in finding or purchasing a piece of land (i.e. province, municipality, Agrarische Natuurvereniging, waterboard or Natuurmonumenten)

## Funding

There are several ways to fund this project, one option being subsidies from the province and municipality (Overbeek; Erkens; de Graaf). The province of Gelderland has budget to support individuals that want to create nature on agricultural land (Provincie Gelderland). The province will compensate for the decrease in the value of the land, but this might mean that there is no temporary housing allowed. So, receiving subsidies always has conditions and it is important to be aware of this. Furthermore, municipalities have subsidies for a diverse range of activities. For example, in Rotterdam, you can get subsidies for removing tiles in the city. There are many possibilities of subsidies which can be overlooked at the first sight, be aware of the many possibilities! (de Graaf)

Other options are to collaborate with organizations that already have land such as Staatsbosbeheer. In this cooperation, they can cover some of the costs and help with maintaining nature as well (Erkens). And finally, the third option for funding this project would be loans and donations.

There is also some international funding which you can take into consideration. Rewilding Europe Capital (REC) has loans available for rewilding projects and at the European level different institutions also have subsidies. Carbon offsetting can also be profitable on large areas of land but make sure you avoid practices of green washing (Cipollone).

### Tip summary box

- Look for subsidies and be creative when applying for subsidies
- Collaborate with organisations like the Staatsbosbeheer to offset costs

# Phase 2 Observing

This phase is not so much about doing but more about actively observing and planning. At this stage, you want to make sure that you have enough information about your surroundings to make your project a reality. This includes observing your land with an ecologist, looking at the history and culture of the land, observing the surrounding areas and projects, making a plan for what kind of nature you want to create, making a plan for how and to what extent to involve people, and finally distributing information about your project to locals in the area. The more time you take to do this stage properly, the more prepared you will be for the obstacles that may come your way.

Observing is because first and foremost, carrying out a rewilding project requires having information on the context of the geographical area, as every environment is unique and embedded within a specific context (Perino et al.). Specifically, this means that both the biophysical and the socioeconomic background of an area are of utmost importance for setting up project goals and nature restoration plans that are functional for the region.

## Do nothing

The very first step you should do when you have a piece of land is to do nothing. Before doing anything on your land it serves you well to let the vegetation grow and see what comes up. In the vegetation step, it will be further explained why this is necessary. The time span should be around a few months in order to be sure slow-growing vegetation has the time to grow, but before deep-rooting plants are too hard to take out. Think about in which season you are doing this as well. Different vegetation grows in different seasons and leaving the land empty in winter, for example, will tell you very little.

### Tip summary box

- Let Vegetation grow for some month

## Observe the Land

When you have a piece of land, it is important to see what you are dealing with. It can aid you in your decisions and nature planning when you have this information. Commonly a Landscape Ecological System Analysis (LESA) is done, which is a practice that looks at “the intersection of soil, water, flora and fauna and human actions to determine the most optimal nature possible at that specific site.” (van Dijk). Thus, get into the details of the soil, hydrology, wildlife and vegetation, but also look at who your neighbours are and what history your land has (Murphy). In these steps getting an ecologist to help you and carry out some of these steps will be very helpful.

Locals know the local climate well and could also be smart to contact for advice (de Graaf). Most of the information you need during this phase can be found in the ‘Masterplan IJsselvallei’ (de Ruyter).

### Soil

While you are letting the vegetation grow you can perform a soil analysis. This is important to see whether you need to take measures like taking out or adding nutrients to the soil. Things to take into account are for example the nitrogen and phosphate layer (van Scheppingen). The time it takes for removing nutrient-rich substances depends on the amount of nutrients and the iron level in the ground (ter Stege). Also, find out what type of soil you are dealing with. In the IJsselvallei you will most likely have a clay or sandy soil. This is important to for instance figure out what vegetation will be able to grow. Another important thing in the IJsselvallei, is that you have to check for explosives left by the world wars because you are close to the IJssel (van Scheppingen). WaardeVOL Brummen hired somebody to look at the soil and explosives, so consider getting help for this step as well.

### Vegetation

After you have left the land untouched for a while in the step 'do nothing' you can see what type of vegetation you are dealing with on your land. This can show you what kind of seeds arrive or are stored in your soil and thus what you may need to extract or introduce (Rewilding Britain). Some plants might have the ability to regenerate on their own, and some may need some help. For example, in Dundreggan non-native trees were felled, and some areas were left to regenerate on their own, but others had been without their natural cover for so long that they were replanted manually. These areas did not have the seed source or genetic diversity for resilient natural regeneration. Next to checking whether vegetation can come back by itself, survey what kind of plants arise that might be unique so you can protect these.

### Wildlife

Your land may have a multitude of animal visitors, it is important in this phase to survey what and how many are visiting. You may, for example, find there are some imbalances such as high deer numbers that prevent regeneration and thus the expansion of forest (Murphy). In this case, the solution implemented by the projects we interviewed was to introduce fences in the initial stages to prevent grazing or even to manage deer numbers when there are no natural predators. (McEvoy, Murphy) In other areas, the introduction of grazers is actually used as a tool to regenerate nature (KNEPP) so therefore it is important to know your land and what it needs. Apart from this it is also important to survey whether there are protected species in your area that require special care or permits.

### D Water

What is also important is to check the water flow, or hydrology, in your area. Find out where the water comes from and what ions and nutrients that influx brings to see how that is going to affect your nature (van Scheppingen). The outflow on the other hand will tell you where the dryer areas of your land are and what ions and nutrients are flushed away. The Veldbeek in the Tondense Heide for example was too deep and drained most of the water from the area towards a nearby river (ter Stege).

For vegetation and wildlife, it is also important to see what the ground water level is and what happens to it in the different seasons. Some birds for example need to have the insects close to the surface to reach them, and when the water table is low the insects will be deeper (Sanders et al.) in the soil as well. See whether there are ditches and what rivers are nearby, and what areas are close that might influence seepage or welling of groundwater

### Surrounding land

In order to see what is possible on your land you need to take into consideration what your neighbours are doing and where the nearest nature is. If a farmer is heavily working the land and an influx of nutrients is coming from there, or a busy road is close and a lot of particulate matter (fijnstof) is landing on your area you need to make a different area design that might counter these influences. It is also important whether a nature area or a corridor is close to your area. This will influence which seeds and animals can travel to your land and whether you can adjust your design to be a type of corridor or steppingstone for this flora and fauna.

### History and Culture of the land

Figure out what happened on your land. Look at historical maps and data in order to see what was originally there (van Scheppingen; ter Stege). It might also prove an inspiration source for what you can do with your hydrology in your area (Oakley; van Scheppingen). Dundreggan took history to heart by planting only native species adapted to local conditions and Duiventoren was advised by Brabants Landschap to bring back nature from about 150 years ago (Dundreggan, Duiventoren). De Veldschuur mentioned that people are very interested in finding out about the history and culture of the area which could aid you in attracting people to your area (Erkens). Ennerdale even urges to look at the history and culture in the area to make the transition of the land gradual instead of sudden. They respected farmers and culture by respecting the way they treated the land (sheep herding and silviculture) and gradually shifting the landscape towards fewer sheep and native tree species (Oakley).

## Tip summary box

- Check nutrients, iron, and type of soil and whether there are explosives buried
- Survey the type of vegetation to see what plants regenerate or are unique
- Survey the wildlife to check the grazing intensity
- See where water comes from and where it goes
- Check surrounding nature and neighbouring land
- Dive into the history and culture of your land

## Surrounding Projects

Observing the land also means observing the surrounding area and its inhabitants. This means getting to know your neighbours, for example, citizens, farmers, local organizations, business entrepreneurs, and larger institutions.

Starting a new project is a process of constant learning and experimenting with what suits the project and its environment. Especially when projects are experimenting with innovative ideas, for example with practices of agroforestry, sharing knowledge and experiences can be beneficial. People engaging in niches are often sharing their knowledge at platforms, conferences, and local gatherings to learn from each other (de Graaf). Reaching out to these platforms in the orientation phase of de Wilde Landen can help to identify obstacles.

Learning from other people's similar projects and their vision means engaging with them. Visit other projects to share knowledge and experiences and learn from each other. Besides visits, fieldwork and excursions can also contribute to learning processes (de Graaf, Cipollone).

There are also many examples of rewilding and restoration projects happening all over the Netherlands and internationally. In this report, we have already started the process of consulting these projects for you by synthesising the tips given by many different experts and project leaders. You should continue this on your own by contacting and visiting similar projects to get more information on how to get a piece of land and what to do with it (Murphy).

We have compiled a list of relevant contacts and resources in Appendix A: Further Resources, which includes all those mentioned in this report and more that we came across as we did research. Stakeholders which can be identified directly in the Ijsselvallei are Staatsbosbeheer, Natuurmonumenten, GLK, agriculture cooperations and estate owners (de Ruyter).

Collaboration can also occur with people living nearby the destined area of DWL. The project of Brummen is cooperation with neighbours in the sense that they encourage them to also start diversifying their gardens. Overall, this benefits the landscape as there is more interaction between plants and organisms in the region (van Scheppingen). Small farmers can also be encouraged and engaged as they also influence the development of the landscape in the region. The project Brummen hired an environmental consultant to make an outline of all the inhabitants in the area so that the plan of the project could be adjusted to it when necessary. In addition, nature-inclusive agriculture is growing very big and can be stimulated to diversify the surrounding landscape (van Scheppingen).

In order to ensure the long-term success of your project, one technique that may help is to work on building trust. A project like DWL has to deal with a large network and partnerships. The quality of these partnerships is determined in part by the trust between them. Furthermore, if you do not have shared trust, it is not a partnership (Oakley). Engaging with each other is a process of constant learning and evolving. Working together and sharing principles can help. Such cooperation also takes time and time needs trust (Oakley, Cipollone). Collaborating with networks and partnerships can be a challenge. Especially nowadays with many governmental organizations, the many implications of bureaucracy loom large.

De Vries et al. (2019) have conducted research on the relationships between interpersonal and institutional trust in Drenthe, the Netherlands.

A program on nature conservation to protect biodiversity was situated in a large network of stakeholders.

De Vries et al. (2019) have proved a new approach to this program has resulted in more trust among people and institutions. This new approach focused more on networks instead of individual responsibilities by working on collaboration instead of control and delegated more responsibilities to farmers who are engaging on the ground. Interpersonal and institutional trust has developed over time by focusing more on relationships and collective action instead of working on administrative targets (de Vries et al., 2019).

Often there are social workers active in the region who have the same ideas in the area of social and nature inclusion in the region. Often these people have been running for a long time and are trusted and recognized by residents in the region. Working together with key figures can be very rewarding because often a lot has already been built with them (de Graaf, Matthijssen).

#### Tip summary box

- Engaging in niches is an ongoing process of learning and experimenting
- Identify knowledge platforms on specific topics (e.g. agroforestry)
- Plan field trips to other projects to exchange knowledge
- Collaborate with citizen neighbours, farmers, and institutions (e.g., Staatsbosbeheer)
- Put effort in building trust and acknowledge this takes time
- Meet social workers in the region

## People Plan

This section focuses on people you want to integrate into your project. It gives insights into how to integrate citizens into your process and how to deal with conflicts. Moreover, valid tips will be given on when to include whom.

### Citizen Participation

For citizen participation, we identified 3 main principles from literature (Freguin-Gresh et al., Schneller & van Buuren et al.): Transparency, Decentralisation & Participation, and Effectiveness.

### Transparency

When you start your project, it is very important to inform citizens around your area about who you are, and what your plans and aims are. This transparency is essential as the surrounding community may be against your project because the people do not understand what is happening. This unknowing leaves a lot of space for speculation and can lead to conflicts. <sup>3,5</sup> In some regions of the IJsselvallei it is mandatory to inform citizens or to let them participate in your decision-making process (de Ruyter; van Scheppingen; Oakley). Here we advise you to look at the legislation of the local municipality once you have a piece of land.

#### Tip summary box

- Be as transparent as possible regarding your goals and plans
- Check legislation from the municipality to see towards what stage you need to include participants

### Decentralisation and Participation

Before you start with your project, we advise you to plan, if, how, and to what extent you want to include citizens. For this purpose, you can look at Arnstein's ladder (see the conceptual framework in the methodology section) and decide on what level you want to include citizens (van Scheppingen; Mattijssen). There is no one-size-fits-all solution approach on when, how, and how much to involve citizens. (Mattijssen) However, some key things should be considered. If you have a very rigid plan that leaves no room for change, it's better to just inform and make the process transparent (lower rungs of Arnstein's ladder) (Mattijssen) However, there is still a risk that the surrounding communities will oppose your plans and stop the process. In one of the projects we surveyed, it happened that the residents of the surrounding areas were not satisfied with the project plans. They created a manifesto that 250 people signed. The project had to be stopped and completely unstructured (van Scheppingen). Because of this experience we strongly advise you to let the surrounding community participate in the decision-making process (Oakley; de Ruyter; van Scheppingen; Mattijssen; Murphy).

Here it is important that it is real participation (3 higher rungs of Arnstein's ladder). That means that participants have the power to change plans and participate in discussions and brainstorming. If citizens are invited to talk about their concerns and ideas but they actually do not have any power to impact the project goals, it will lead to frustration and conflicts. (Mattijssen). Dundreggan mentioned that ideally you should "avoid telling people what is best for them, but instead give them opportunities to be curious, get involved, ask questions, and see how things are working in practice." Additionally, it can be useful for you to integrate participants from the surroundings as they might help you in establishing the project and can spread more information and thus attract more people (Cipollone). Moreover, they might have useful insights about the area (de Graaf). This outreach can be done through community consultation events, surveys or running regular engagement activities and events (Murphy; Cipollone).

Once you have decided on a participation phase, it is important to look at the people around you to find out what their interests are (Mattijssen). You should also find out how citizens interact with the landscape and what they want for its/their future (Dundreggan). Questions you should ask yourself are (Mattijssen, Murphy):

- Why are the citizens living here?
- What motivates them?
- What is important to them?
- Are there local community action plan aims that you can help meet (e.g., employment, housing, recreation)?

Afterwards, you should think about whom and how many people to invite. For the first meeting, it could be nice not to invite too many people, as it gets more difficult to find common ground (van Scheppingen). Moreover, it is good to invite a wide variety of people (e.g., farmers, organizations, citizen initiatives, and families).

Additionally, there should be a space for citizens to discuss ideas and find common ground. The needs of farmers and birders may be different, but there are also common needs and ideas. Therefore, it is important to bring these people together so they can share their views and needs, and new ideas for the project can emerge (Mattijssen; Cipollone). Be aware that citizen participation can be quite time-consuming (van Scheppingen).

#### Tip summary box

- Make a plan on, if, how, and to what extent you want to include citizens
- When include make real participation
- Look at your surrounding community (Why are the citizens living here? What motivates them? What is important to them)
- Do not invite too many people
- Invite people a wide variety of people
- Leave space for the participant to discuss

#### Effectiveness

When involving citizens in the process (decision or fieldwork) you need to create incentives, otherwise, there is little motivation to show up and participate (Mattijssen). Therefore, it is important to be aware of the interests of citizens and find common interests and give them space to be on your land for it (e.g., when the school wants food forest or garden). Creating the space in a way that is right for the surrounding community is usually more important to the success of the project than implementing the best rewilding practices from a theoretical perspective.<sup>5</sup> In terms of housing, there may be a big difference in the amount of care and responsibility that people are willing to take depending on how long they live there. If it is their permanent home, they will care more than if they just go there for a week and then close the door (Mattijssen).



To achieve long-term citizen engagement, we advise you to consider the following points. First, make people feel ownership and responsibility for the area. This will automatically bind them to the project. Also, be consistent with your goals and show people that you believe in your project (Mattijssen, Cipollone). Additionally, it is important that you are reliable. This means that you stick to the decisions you make unless you have a good reason not to. If this is the case, it should be communicated to the community (Mattijssen). It is also wise to limit your dependence on funders or political parties for more freedom in decision-making. Furthermore, it is advisable to look at what citizen initiatives already exist in your surroundings (Mattijssen, Murphy). If you join them, you might already get a lot of support for your project. It is easier to work in an existing network than to build your own<sup>5</sup> (see Appendix A). Lastly, it is also good to have a long-term project leader who works locally. This person is known to people and deeper relationships can be built (Cipollone).

**Tip summary box**

- Need incentives to keep people motivated to show up
- Find common interests of citizens and integrate on land
- Make people feel responsible for area
- Be reliable
- Limit dependence on funders and political parties
- Connect yourself with already existing citizens' initiatives
- Long-term leader of the project

**Conflict resolution**

As already mentioned, *real* participation and transparency are key to counteract conflicts. Moreover, it is important to manage people's expectations. Although you want to sell the project, don't give people unrealistic dreams. You cannot predict what nature will do: how it will come back, when it will come back, and whether it will be profitable, so be wary of promising too much and then disappointing people (Cipollone).

It is therefore important to communicate expectations with the people involved in the project, especially with people participating and volunteers. Increasing biodiversity and practices of agroforestry can take a longer period of time to develop which also affects people's expectations (de Graaf).

However, conflict with the surrounding communities will likely emerge. These conflicts are nothing bad but should be seen as a learning field to get a deeper understanding of the surrounding (Mattijssen et al.). Moreover, it can be a starting point for finding creative solutions. To best deal with complaints, it is a good idea to have a conflict mitigation plan, where you think about possible conflicts beforehand and think about strategies for how you want to deal with them (Mattijssen; Cipollone). For example, in some parts of the IJsselvallei there are high populations of mosquitoes. If you raise the water level, neighbours may become concerned about mosquito numbers increasing. In this case, various measures can be taken to counteract the fear from the outset. You could, for example, allow people to monitor the mosquito numbers themselves by giving them traps to place near their homes and propose a possible mitigation plan if the numbers do increase. If numbers increase, you should stick to this mitigation plan. If numbers don't increase, local citizens will trust you because they were able to monitor the numbers themselves. This example also shows the importance of opening dialogue with local citizens, so that you can be aware of what worries them and what complaints they have – these may be totally different than you expect, and potentially easy to deal with (Mattijssen; van Scheppingen).

**Tip summary box**

- Manage people's expectations (do not promise unrealistic dreams)
- See conflict as a learning field and initiator for creative solutions
- Think about possible conflicts before
- Show people how rewilding can benefit them too

### Timeline

When making this people plan, make sure that you create a timeline for when to involve specific stakeholders. For example, it may be beneficial to involve surrounding landowners from the very beginning when you first acquire your land (Murphy, Mattijssen). It is also necessary to inform your neighbours at an early stage to prevent legal juridical procedures (De Ruyter). The landowners and neighbours can help you to develop your plan for the area, give you good ideas for your project and give you an honest insight into what is best for the local people (Murphy). Volunteers may be helpful only once you start working on the land (Cipollone). Think about where each stakeholder fits into the puzzle.

#### Tip summary box

- Think about when to include each stakeholders: landowners, municipality, volunteers, investors, partners, neighbours, visitors, etc.

## Information Distribution and Media Outreach

Info Distribution and Media outreach are essential parts of your project. First, they inform people about your project and thus make your processes transparent and second, they will attract people. There are different ways to do it:

- Door-to-door visits
- Hosting in-person events
- Local newspapers
- Sending letters and e-mails
- Using social media
- Using community or network groups
- Appeals and campaigns
- Consultations or surveys

The wider the range of media you use to reach people, the larger and more varied your audience will be (Murphy, Mattijssen). You can engage in different ways to meet different demographics and different age ranges (Murphy). When you go from door to door it will be beneficial especially

at the beginning as you create a deeper connection with people. Moreover, they can ask questions and you already get a feeling of what the people want in the area (Cipollone). For an example of how to reach out to the general population you can check [here](#) (Dundreggan).

In order for your media outreach to work, you first need a human network. Even if you have great social media content, people will not see it if it doesn't come to their attention. Use NGOs, organisations and people you know to reach a wider audience. Examples include nature organisations, farmer organisations, politicians, neighbourhood associations, municipalities, etc. (Mattijssen)

Finding the people who could benefit from your project can be difficult. Think creatively about who would like to help out on your land. For example, people with disabilities, people with burnout, or people with high levels of stress could benefit a lot from working outdoors on a piece of land. You could partner with psychiatric organisations, special needs centres/schools or businesses to offer these people the opportunity to help create your land. Win-win! (Erkens, Mattijssen). In addition, the more you integrate the wants and needs of your participants and the citizens in the surrounding area, the more they are likely to engage with your project. People who have helped in the design are also more likely to feel some sense of ownership and thus responsibility and commitment to the project (Erkens, Mattijssen).

When communicating with citizens, try to explain things in a way that they can relate to, like storytelling about the history and landscape (Michael McEvoy). Don't bombard them with information or tell things only from your point of view. Also bear in mind that citizens are more motivated by their daily experiences so you should try to emphasise the experience of and relationship to the landscape. For example, when talking about a key species you want to protect, do not explain this in terms of biodiversity or your project goals but rather how it's beautiful and why it is a part of the Dutch landscape and why we would want to keep it there (Mattijssen).

#### Tip summary box

- Use varied media to reach out to a more diverse audience
- Make sure you have a human network
- Find the people who would benefit from working on your land
- Engage people by explaining the project in a way that is interesting to them and by giving them a sense of responsibility over the project.

## Nature Plan

When you have gathered the right info on your land it is time to make a possible plan for your nature. You can make a plan for the future including a rough timeline with your steps to undertake and a risk analysis. An ecologist can also help with these decisions and can put more emphasis on the natural development instead of the economic development (Oakley).

### Possible Nature

With the information of the vegetation, soil, hydrology, surrounding land, history, and culture, it is time to make restoration goals with restoration targets and indicators of success (Prach et al.), and a design of the area. What you can make in the area depends mostly on these factors but there were a few tips and warnings gathered in the interviews. A flower-rich grassland might not appeal much to recreation, because it is not so visually diverse (Overbeek). However, Peter de Ruyter thinks it will be a good nature type because it will retain the water in the soil and is biodiverse (de Ruyter), and in WaardeVOL Brummen they also aim to make a "Blauw Grasland" or have their focus on orchids (van Scheppingen). Making the area a Natura 2000 site also proves difficult, because you can build almost nothing on the land after that (Erkens). Blue grassland might be a goal that is too ambitious though, because it can't be in a place where it floods (Ter Stege), and it is quite a rare nature type that is only attained by taking a large number of measures like withering, mowing and keeping the perfect water table, which you might not want to focus on for your area (Natura 2000). Ennerdale also made a valid point with having a focus on making a landscape more resilient for the future. They wish to have a diverse and native forest which can reduce the vulnerability for fluctuations in precipitation or tree disease (Oakley). Diversity and native species can be a smart plan to implement in your area as well. In the map that shows the IJsselvallei it can be seen that there are roughly four different areas that might entail different types of nature, check in which area you are and what this means for your nature (See Figure 8).

### Time Planning

It is not possible to give a concrete number on how long the restoration will take. It is highly dependent on the size of the area, the landscape you and the type of nature you want to integrate (Sapkota et al.). However, once you know all these parameters you can make a more detailed nature of time planning. Include in the planning for example when you want to start implementations on the soil, changes in hydrology, start planting, making the different nature zones, maintaining the area, etc. The time frame in which you can work is quite small because you have to take into account when birds are nesting, so you can start around August and in October the soil will be too wet to work with (Van Scheppingen). Next to that, do not put a strict timeline on your project, because the nature development or stakeholder agreement could take longer than expected (Oakley), Brummen had a setback of two years for example when the inhabitants did not agree with their plans.

### Risk Analysis

Before starting make a risk analysis. This entails that you should consider that you do not know exactly how nature will return or in what form (Cipollone). It might take longer or be more costly than expected and when these things occur it is good to have a plan b at hand. (Mattijssen)

#### Tip summary box

- See what nature is possible on your land
- Make a plan for the nature you want to create
- Make a time plan and a risk analysis

# Phase 3 Growing

Now that you have made a planning it is time to implement it and start working on the realisation of the project. Things become more concrete and busier. The first nature comes back, and more people will visit the area. This phase will take approximate 10-15 years. In this time, you should focus on the implementation of different rewilding techniques. This includes soil depletion techniques, hydrological changes, wildlife attraction, and zoning. Moreover, techniques to monitor and evaluate your area are essential to see how much nature comes back. On the social side you should start to look for volunteers that help you to carry out your project. Moreover, you can already start with planning and implementing housing project and with small education projects.

## Rewilding Techniques

Rewilding is about letting nature grow and take its course. In this technique there is a passive management intervention, and the ecological succession should do its own work. As a result, a balanced ecosystem can be developed, which can sustain itself in most ways (Gillson et al.). But before starting with rewilding techniques, it is necessary to start with depleting the soil and restoring the hydrology if needed (Pereira & Navarro). Assisted natural regeneration is a technique that involves leaving the land to become wild again on its own and helping it along where necessary.

For example, at the borders of natural areas, regeneration may occur on its own, but in areas further away, assistance may be needed in the form of planting trees, or scattering locally sourced, native seeds, regeneration there will happen much slower. Besides, if you want to grow a forest and there are too many grazers i.e., deer, you may also need to construct fences to keep them out in the early stages of forest growth. Fencing may have to be kept and maintained for 10 years. Rewilding is about putting faith in the land to heal itself and assist this where needed, because nature that is regenerate in a natural way are much more resilient (McEvoy).

### Soil depletion techniques

Farmland contains a high concentration of nutrients due to years of fertilisation. When transforming farmland into nature, one of the most important steps is the depletion of the soil to get rid of the big amount of nitrogen and phosphate (de Ruyter). At the Tondense Heide, which we visited, they mainly used mining out as a measure. This involves letting clover and grass grow and regularly removing the nutrient-rich vegetation by mowing and removing the cuttings. Clover binds huge amounts of nitrogen (N), and because of this, the concentration of nitrogen in the soil decreases. The cuttings are sold to farmers who can use them as feed or bedding. This method therefore requires regular mowing and removal of clippings, as well as regular spreading of clover seed. Such a method takes a long time - about 10 to 20 years. Another method, sodding, can be faster. This involves removing the upper nutrient-rich top layer, which usually involves the top 20-30 cm of the soil. This is a quick and effective method. When applying this method, you should take into account that the soil is suddenly a lot lower and this often affects the groundwater level as well (Ter Stege; Pape). After sodding, the ground will be bare, and the vegetation will grow quite fast in just a couple of years (Van Scheppingen). In case of sandy soil (higher ground) or in water streams you would need to remove  $\pm 80$  cm of the top layer to remove most nutrients.

When removing this much of the top soil layer, the difference would be too big and the natural water flow would be disturbed and the landscape changes too much, so in this case the mining method is more suitable (Ter Stege).

#### Hydrological changes

The groundwater level is hugely important for vegetation. The level varies by vegetation type, but it is important that it is no deeper than 80 to 100 centimetres below the surface level (Ruseckas et al.). In the case of nature, it is often beneficial to have a high groundwater level. If the groundwater level is too low, it can be raised by closing nearby ditches. As a result, these ditches no longer extract groundwater, and the water flows back to the land. In addition, the water level is also raised when the topsoil is removed. All in all, it is sometimes difficult to determine how hydrology works in an area. So, for this, it is useful to have an expert to look at it. If you just own a small piece of land, it is difficult to make major changes to the hydrology (Ter Stege). Moreover, if there are straight kennels in your land, it is important to make the water flow naturally again. This will restore the natural system even better.

Besides this, it is important check if there is water flowing out of an agricultural area with a high concentration of nitrogen and phosphate. In this case there should be taken measures to bypass this water, so the nitrogen-rich water is not entering the area (Van Scheppingen). when changing the water system there must be checked whether you need to get permit of the Waterschap Vallei en Veluwe. This can be checked [here](#).

#### Wildlife attraction

Biodiversity in flora and fauna is hugely important for a natural area (Hietala-Koivu et al.). For attracting wildlife, it is important that there is not too much disturbance. It is important that people only stay on the paths and prefer not to be in the area at night. Birds, for example, are hugely sensitive to disturbance. Nature photographers coming too close to nests or too many paths in the area, will bring the bird population down tremendously. Furthermore, it is important to find out what is a suitable habitat for the animals you want in the area and then create it (Ter Stege). You can get advice on this from an ecologist. In addition, it is always good to create areas with flowers that attract insects and especially wild bees and pollinators. You could also provide education on this, about why this is so important (Erkens). Besides this, grazers as sheep and cattle, could be used for shaping the area in a natural way and keeping it dynamic and open (Oakley).

## Zoning

In response to the disturbance caused by recreation and preserving biodiversity and valuable wildlife, consideration could be given to zoning the area. This could include dividing the area into different zones. An example could be a zone with high recreation, a zone with low recreation and a zone with untouched nature (Henkens, 2003) This is because through recreation you have edge effects and the disturbance from this is often further than expected (Ter Stege). Therefore, a design must be made of the area which will be divided into zones, with the zone with the highest nature value experiencing the least disturbance. Careful consideration will have to be given to where the paths will be put in and how many, and people should be allowed to go off these paths (Erkens).

The design of your area also has a lot of power to steer people's actions – you could make the “untouched nature” zone less accessible by placing natural obstacles such as strategic bodies of water or high grass, which people are less likely to walk through (Mattijssen; Oakley). Besides this, people naturally tend to stay on the paths and most of them do not go into the natural site because of ticks for example (Plum Village). Some types of land are also more resilient than others and or are more resilient at different periods of time. Inform yourself on vulnerabilities on your land and keep it protected – for example, if you have meadow birds visiting, it may be a good idea to restrict access during their nesting season (Mattijssen). It is also important and useful to place information boards in the area about how to avoid disturbance of the nature and animals (McEvoy).

The Duiventoren who have a campsite on their nature reserve, explained that it always remains a very tricky issue to have recreation without a damage to nature. Especially the young vegetation in the area is difficult to protect. Furthermore, it also determines what kind of visitors you attract.

If you attract people who are more in touch with nature, a so-called "conscious" visitor, there will also be less damage. This is also a good point to take into account and to think about. Moreover, it is always important to communicate well and provide information on what is and is not allowed in the area and what is harmful to nature (Overbeek).

### Tip Summary Box

- Assisted natural regeneration is the best technique for resilient nature
- Soil depletion is the first important measure to be taken
- The groundwater level should not be lower than 80-100 cm
- Create suitable habitats to attract wildlife
- Recreational zones could be appraised to avoid high disturbance of nature

## Collaboration

Collaboration in the Growing phase means getting people involved who can help you in the early stages of implementation of your Nature plan. In these steps, you will need some manpower to carry things out, but the project will probably not be very self-sufficient yet, so it is useful to find people who are engaged and enthusiastic for this project who can help you out. This can include volunteers, in the form of international youth, local citizens and students (Erasmus and Erasmus +), but also local citizens such as farmers, and mutual help from other local organisations. Rachel told us Ennerdale has around 20 local retired professionals that help weekly. If you want to keep people engaged in the long term, you should have constant leaders in your project who interact with people on the field over many years, providing some consistency (Cipollone; Mattijssen). You should also aim for an active presence on social media, with staff having regular contact with landowners and communities around you (Murphy).

You can attract certain kinds of 'conscious' visitors with your marketing. This could include volunteers for nature workshops and activities or visitors who want to camp in nature. In this way you ensure that the land is treated respectfully. However, be aware that there is a trade-off here with inclusivity, these people already nurture more of a connection with nature and have less to gain from your project (Overbeek).

Volunteers and young people can give life to your project, especially in more rural areas. They can also help spread your project's message amongst local people (Cipollone).

You can find volunteers on many different platforms – [couchsurfing](#), [WWOOFing](#), [Workaway](#), [European Solidarity Corps](#), [AIESEC](#), through [Erasmus/Erasmus plus programmes](#), or through Universities like the WUR and their alumni networks. (Plum Village, Rewilding Apennines) You can also try to reach out to more local volunteers by targeting retired professionals who may have a lot of knowledge and an intrinsic interest in nature restoration. These kinds of volunteers can be more consistent over the years (Oakley).

From the beginning of your project, and through all the restoration and rewilding steps, you can try to buy your supplies from local producers and try to contract local workers. This can include local farmers, builders, electricians, plumbers, and so on (McEvoy). You can also try to support locals whose values are in alignment with yours, this could be biodynamic or organic farmers, or businesses that aim to reduce their environmental footprint (Ter Stege).

#### Tip Summary Box

- Attract conscious visitors to protect nature
- Use volunteers for manpower and to raise awareness in the area
- Employ local people and buy your supplies from local businesses whenever possible to encourage partnerships, circularity and support the local economy

## Low Recreation and Education

Different activities can be organized for educational purpose. In addition, education can also create awareness and contribute towards the preservation of biodiversity. For example, de Veldschuur keeps beehives and bees which are being used to educate visitors and school children.

To increase the relevance and to embrace the uniqueness of projects, educational activities and workshops can be aligned with the local history, tradition and culture of the land (Erkens, Cipollone). By doing so, engagement with local people and business can be reached. For example, de Veldschuur works together with a local cheese factory and organizes workshops in collaboration with the factory (Erkens). Other examples of engaging with local products can be the making of apple cider (Cipollone) or harvesting 'forgotten' vegetables (Erkens). Instead of starting new ideas, aligning with the needs and demands of the local area can serve as income generation and also reduce financial risks.



Projects such as de Wilde Landen can strengthen environmental education by inviting nearby schools, both broadening and adjusting to existing curriculum. For example, 'kinderboekenweek' 2022 in the Netherlands has a theme this year "Gi-ga-groen", which is about animals and nature (Erkens). Trips to the area of de Wilde Landen can adjust their education to what is going on in society. Education through schools is very successful although not lucrative (Cipollone; Erkens).

#### Tip Summary Box

- Education raises awareness
- Educate youth & visitors
- Organize workshops which are aligned with the history, tradition, and culture of the region
- Identify societal demands on workshops and popular commodities (e.g. kombucha) to generate income
- Identify what is going on in society and be flexible to adjust to them (e.g. kinderboekenweek)

## Housing Planning

It is important to not make a huge investment to quickly, especially without a good plan (De Graaf). So when wanting to have a mini camping (on agricultural land) there are several general demands made such as: it must be empty during the winter months (1 November and 15 March), if you have houses for more than 10 people or want a mobile home there needs to be a permit, and you need an extinguishing water test (Van Scheppingen). However, the rules are a bit more complicated than the scope of this project allows. In article 8 lid 2a of 'de Wet op de Openluchtrecreatie' the full extension of the law can be checked (Murphy). This is especially important to inquire when having funding from the government.

#### Tip Summary Box

- Decide what kind of housing you would like to introduce and check if the legislation allows this

## Monitoring and Evaluating

During the development of a nature area, it is important to monitor and evaluate the progress.

Examples of measurements are vegetation studies (Ter Stege), deer grazing pressure, monitoring plots (Murphy), bird, bee, or butterfly counting etc. The goal is to evaluate the plan made in the observing phase and either continue the process or alternate some of the steps.

#### Tip Summary Box

- Evaluate your restoration goals by monitoring

# Phase 4: Thriving

In this last phase, you will inch closer towards your final goals. This phase will take the longest because it lasts as long as your project lasts. Maintenance and monitoring of nature will continue in this phase, and more focus can shift towards inclusivity of your workshops and education. This is also the time to work on becoming self-sufficient, although that might be a hurdle. This phase is in a nutshell the time to figuratively and literally reap the fruits you have sown.

## Maintenance

When the area has reached its desired state, it still needs to be maintained. Maintaining the area can be a lot of work, especially if there has been a major change to transform it into the desired nature type. The measurements you need to take and how much effort is required for this, depends on the nature type and how many different elements you have on the land (Ter Stege; Grunewald et al., 2014). In addition, there is often a difference between wild nature and aesthetic nature – if you want an aesthetic landscape, this can often involve a lot more maintenance. On the other hand, nature with a high ecological value is not always aesthetic (De Graaf). A good way to minimise management efforts is to encourage and support natural regeneration. Here, it is important to find out what nature belongs here and support natural regeneration when needed (Oakley). Fences can also be used around young trees and sowing certain seeds, for example, to get flowery patches (Murphy). In the case of having natural regeneration and letting nature grow and maintain itself, the focus is still on managing but with less intervention, in a way that the nature can grow on its own while being supported by appropriate measures (Oakley).

For most measures, it is important to monitor and to evaluate (see the monitoring and evaluating section). Monitoring pipes can be placed in the area to check water levels and it is useful to take vegetation recordings every now and then and check whether different habitats are still in place. All in all, there is often a lot to be done and it might be useful to use volunteers or DWL people (Ter Stege).

### Tip Summary Box

- Consider the aesthetic vs ecological value
- The maintenance of the area can be a lot of work
- assisted natural regeneration techniques are less work and come with a higher ecological value
- Having a high aesthetic value with many different elements often need a high maintenance level

## High Recreation

In this phase you can start up more intense recreation like workshops and education. Being of value for the surrounding area, however, also means paying attention to existing inequalities and processes of inclusion. These processes of inclusion should be beneficial for all parties involved. Projects such as de Wilde Landen can foster inclusion by engaging with people who are experiencing a burn out or have special needs. Local organizations who are specialized in supporting people with integration might look for locations which offer employment, something which also happens at de Veldschuur (Erkens). Employment can either be on a voluntary basis when people appreciate the support they receive or through available subsidies. Dundreggan also takes processes of inclusion and the accessibility of the region very serious. They organize conservation weeks and days and communicate the accessibility of the terrains very clearly towards people. It is therefore of utmost importance to think about wheelchair accessibility of the area. In addition, these weeks can also be organized for refugees and people who are homeless (Murphy).

To engage with people who are currently at the margin of environmental education, lack the opportunity to visit nature, or are less concerned with nature restoration you should go door to door and organise in person meetings, debates, and fairs. You can also provide spaces for people with different opinions to debate to target a more diverse range of people.

When gathering people's opinions through surveys, be aware that the responses you get may be biased. You will probably reach people who are already interested in this topic, and they may also give responses that they think you would want to hear (Cipollone). In order to minimise this, you could try to send the survey anonymously (not related to your project) but be aware that there will always be an element of bias.

On the long term, activities and workshops you could carry out may include workshops that connect to the culture and history of the land, workshops that educate people on nature, workshops that involve people in the rewilding process (i.e., planting trees), or workshops that reconnect people to nature (i.e., forest bathing, or philosophical talks on the human-nature relationship). The possibilities are almost endless! Michael McEvoy from Plum Village gave more specific ideas such as walking meditations, workshops or retreats focusing on Buddhist principles and the human-nature connection, and deep ecology retreats. Rewilding retreats where you rewild the people - in which you integrate traditions of ancestors, rituals from indigenous elders, and campfires (Cipollone). Such activities and workshops can alter the perception people have on nature as humans are part of nature and our involvement is inevitable. Therefore, a shift can be made in thinking away from a binary view of nature and humans by diving more deeply into the natural processes in which humans can play a symbiotic role (Murphy).

#### Tip Summary Box

- Pay attention to processes of inclusion and exclusion
- Identify the accessibility of your land
- Collaborate with organizations with people who want societal integration
- Go door to door, organize local
- Integrate workshops which educate on the possible symbioses between human and nature

#### Income Generation

Once your project is thriving, you may want to become completely self-sufficient. Many projects we spoke to receive either public funding or donations from the general public, which points to the fact that this may be very difficult to achieve, particularly if the project is small and does not have a big name to generate income like Plum Village (Cipollone). Almost all the projects we interviewed relied on government funding, grants, loans or donations to some extent. Be realistic, and make sure you have a strategy for alternative sources of funding if your preferred ones do not come through. This may include:

- Trusts and Foundations
- Corporate and individual donations
- Recreation
- Housing and accommodation

Usually, core activities like staff wages are the hardest to fund, since people are willing to donate money to plant trees or save species, but not for the background work (Murphy). Once your project is already running, it is of course easier to generate your own income through recreation, merchandising, workshops and activities (Murphy). You can use your marketing to your advantage by selling the experience of your piece of land, Plum Village markets their land as a space to practice mindfulness, for example (McEvoy). If your land is big enough and you have a forest, you can also get income from commercial operations from timber or harvesting, which is managed through forestry (Oakley). This may require a bigger piece of land, however, so that you can have an area dedicated to growing trees for timber. Here you have a trade-off between buying and maintaining a larger piece of land (which requires a larger initial investment) and having the ability to get income from things such as carbon offsetting and timber harvesting (Murphy; Oakley). You can see an example of a finance overview [here](#).

### Harvesting

If the land is large enough, one might choose to create a garden or even a piece of food forest. A tip from the Veldschuur is that you can grow forgotten vegetables, these could be sold and even education could be given about it (Erkens). In the case of a food forest, though, it is wise not to make it completely public, but to put a fence around it. In this case, it will not be too much disturbed and picked empty and you can better preserve it and harvest from it and even sell the harvest (De Graaf). In case of a food forest, it takes around 7 years till you have a good harvest which you can sell. Right now, eating from a food forest is still a niche and you can sell it high end to chefs. In the beginning of planting a food forest, when the crops are not ready for selling yet, you can plant herb layers. Herbs grow fast and these you can sell easily (De Graaf).

#### Tip Summary Box

- be prepared to apply external sources of funding in case you need it
- funding comes as a series of trade-offs, think carefully about what is appropriate:
- self-sufficiency vs having enough funding to fulfil your goals
- External funding vs complete control of the project

#### Tip Summary Box

- When having enough space, a vegetable garden or a food forest might be interesting
- The harvest could be sold and serve as an income
- education could be given on food forests or forgotten vegetables
- Fencing is probably necessary

# Conclusion & Discussion

## Conclusion

“We are in a state of triple emergency: wildlife emergency, climate emergency and social emergency,” this is how Michael McEvoy, who is in charge of the rewilding project in Plum Village, sees the current state of society. “We are feeling increasingly alienated from ourselves, from each other and from the outside world and nature.” He goes on to mention that it is crucial that we reconnect with our land, a practice that is present in all indigenous cultures. And it’s not just enlightened Buddhism talking - all of the experts we consulted made it clear that they feel that humans must be integrated into nature restoration. DWL can be an excellent step in tackling this state of triple emergency in a small and local way. Using the advice given by local and international projects, DWL can learn from others’ experiences and apply their top tips and avoid common pitfalls.

In order to discuss the conclusion of this report, we must go back to the research question:

*What are the steps in transforming an agricultural area into a human-inclusive flower-rich grassland in the IJsselvallei?*

In order to bring the concept of a human-inclusive natural area to life, our road map makes it clear that there are a few key things to watch out for. First, finding a piece of land is a priority for making your plan more specific, it will give you a clear environment to work in and limitations to what is possible which can help you find direction. Once you have this land, just wait. Let things grow on your land, see how well nature can regenerate herself – where she can manage on her own and where she needs a helping hand and how.

Survey everything – plants, soil, animals, hydrology, and watch it change! Look at the surrounding lands and how they impact your area - do they have nature present which can expand onto your land? Or is there an inflow of nutrient-rich water into your land from surrounding fields? Get an ecologist to help you figure all of this out. As one of the first big steps you should need to take depletion methods to get rid of the high amount of nutrients in the soil. When the nature is restored and recreation comes in, dividing the area in zones would be a good thing to do, so there is a place for undisturbed nature. Besides this, make sure you also have a stable source of funding, particularly in the beginning. Restoration is a long-term process, and you will need to make sure that you can keep it going before recreation makes it more lucrative. Government funding, donations, private investments and environmental grants are all options.

On the social side, make sure that you engage with people from the beginning. Make a clear decision about how participatory you want this process to be, bearing in mind that in the long term, people will be more engaged if they feel some control and responsibility towards the project. At the very least, you should inform people about who you are and what you are planning to do, but we would highly encourage thinking about local people’s needs and incorporating them into your plans. This may involve a certain transfer of power from you to the people and a sacrifice of some of your big ideas, but it will also make your life easier as you can get other people on board. The result of engaging with locals may include getting great ideas that you would not think of yourself and help in managing the land and turning your project into a reality. In order to reach these people, you need to speak their language - communicate to them in a way that interest them, focusing on their experiences with and relationship to the land. Reach out to local people, to volunteers and other people who could benefit from working outside to help with the maintenance of the land. Collaborate as much as possible with local people, farmers, landowners, organisations, municipalities and other similar projects. There is much to learn that can be applied to your project.

## Discussion

"We believe that the research question was answered comprehensively, providing a roadmap which includes steps from start to finish of the transformation of an agricultural area into a human-inclusive flower-rich grassland. This includes aspects from housing and legislation, to nature restoration techniques to reaching out to local people. However, this came at the cost of detail – not every section is complete to an equal level of depth. Due to the time limitation of 8 weeks, it was necessary to prioritise some key topics over others. Based on the topics that our commissioner suggested for us to explore, we chose topics that matched the expertise and areas of interest in our group. As such, we focused mainly on nature restoration techniques and the social angle of this project, excluding detailed advice on other topics, notably the legislative, institutional and policy context. These are important aspects in the acquisition of a piece of land and in deciding what is and isn't possible in DWL project. However, these areas are outside of our areas of interest and expertise, and we thought our efforts were better focused elsewhere. The policy context is also difficult to evaluate without a specific piece of land and would have been very time consuming. For example, the implementation of the housing legislation varies depending on the leniency of the municipality where you want to build. For future research, however, this is a crucial area to investigate, either in a separate report focusing on legislation, or a small analysis once a piece of land has been purchased, or by consulting experts.

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The main research method for this report was conducting semi-structured interviews. Although we believe that this research method was the most appropriate for the task for reasons discussed in the methodology, it also brought with it the main limitation of this project. This limitation was the time-consuming nature of conducting a rigorous interview procedure, including emailing, researching the background, preparing questions, interviewing, transcribing, coding and processing. All of these stages were carried out for a total of 12 interviews, and many more were contacted and researched. Time was therefore very limited for other aspects of the report, including literature review. The focus of the literature review was therefore limited to the general topic and on some themes that came up during the interviews. For future research, it may be beneficial to further explore the theory behind nature restoration processes in more detail, by conducting a more extensive literature review.

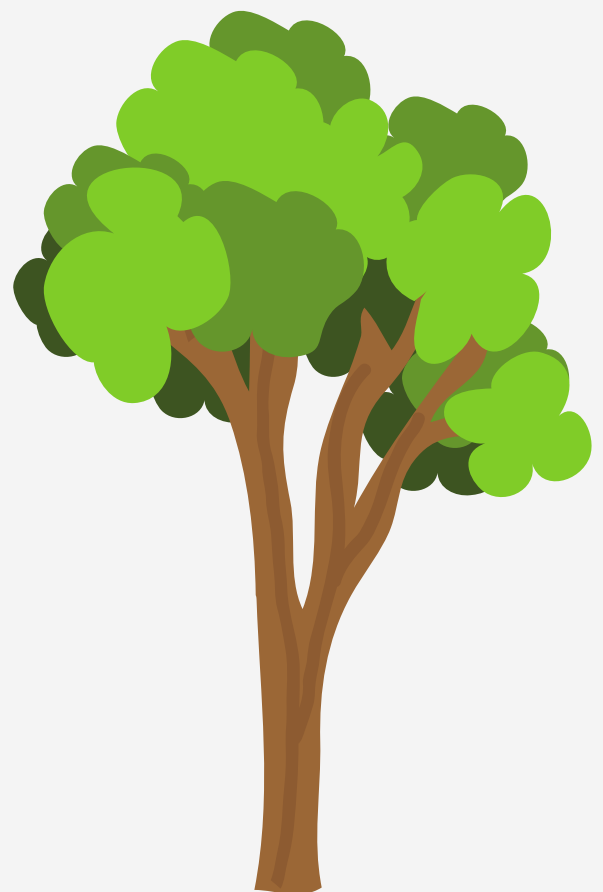
Another major limitation of this research method is due to the fact that every nature restoration project is embedded within a specific socioeconomic and biophysical context. Although the projects and experts interviewed can give us a lot of input and it is very useful to learn from their experience, it is also a certainty that not everything that works in other projects will work for the IJsselvallei. Therefore all of the advice needs to be critically analysed with this in mind and only applied if it also make sense in the context of DWL.



“In general, our report provides a good overview with practical suggestions. However, there is a lot of potential for further research on this project. We would suggest to our commissioner that she uses the roadmap as a starting point and follows along to make sure she does not miss any crucial steps. Then, for steps where she feels she would like more detail, she could commission further research focused on that specific topic, such as legislation or how to secure funding, which can yield more in-depth results. For some steps, the level of detail in this report may be sufficient but others may be very general. Once a piece of land has been purchased, another possible area for a future research project (such as ACT) would be to start engaging local people in the area in a participatory process or inform them about DWL through interviews.

Although many details are specific to the Netherlands and the IJsselvallei, the aim of our roadmap was to encompass all the steps that would be necessary for a people-inclusive nature restoration project from start to finish. As such, we cover many different areas, although not always in the same level of detail. The virtue of this is that it gives a very good overview, but this also means that the advice given is not always conclusive and sometimes gives many options for the commissioner, particularly in view of the fact that DWL is still in very early stages, so a lot of aspects have not been narrowed down yet. Putting our report into a wider context, we believe that the overall structure of our roadmap framework is applicable to many nature restoration projects. It is a skeleton composed of four phases with detailed steps in each phase, and this can be adjusted and fleshed out for other contexts. In the same way that the 12 steps to rewilding were a good basis for our own roadmap, we hope this can be useful for DWL and any other future nature restoration projects.

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Van Scheppingen, Maaïke (WaardeVOL Brummen). Interview. Conducted by Anouk von Meijefeldt and Joyce van der Sel, 5 Oct. 2022.

## Appendix A: Further Resources

We have compiled a list of relevant resources for you to look in the next stages of your project. Highlighted in green are the ones that we already contacted and that have given us much of the information for this report.

Similar Projects in the IJsselvallei:

- ☒ Brummen
- ☒ Tondense Heide
- ☒ Beekbergerwoud

Similar Projects in the Netherlands:

- ☒ De Veldschuur
- ☒ Duiventoren
- ☒ De Peel
- ☒ Mooi Binnenveld
- ☒ De Maashorst
- ☒ Millingerwaard
- ☒ Soerense Broek
- ☒ Torteltuif
- ☒ Ondergrond

Similar Projects internationally:

- ☒ Rewilding Britain
- ☒ Rewilding Europe (10 projects)
  - ☒ Rewilding Apennines
  - ☒ Dunsany Nature Reserve
- ☒ Alladale
- ☒ KNEPP
- ☒ Ennerdale
- ☒ Plum Village
- ☒ Embercombe
- ☒ Wild Nephin National Park
- ☒ Dundreggan Estate/ Trees for Life

Experts with relevant knowledge:

- ☒ Thomas Mattijssen, project leader and researcher for Wageningen University & Research
- ☒ Peter de Ruyter, head of landscape architectural firm, Bureau Peter de Ruyter
- ☒ Ellen ter Stege, ecologist working for Natuurmonumenten
- ☒ Ab van Dijk, project leader at Gelderland Landscapes and Castles, GLK

Institutions and organisations:

- ☒ ARK -
- ☒ ANV – Agrarische Natuurvereniging
- ☒ Staatsbosbeheer

## Appendix B: Interview results

### Sumarised Interview results

Here we present the general findings from each of the interviews conducted.

- **WaardeVOL Brummen**

Summary of project: The project is a collaboration between the waterboard, municipality and province where they work together with the citizens and companies to combat flooding, droughts, and biodiversity. An area of 140 hectares has been appointed as search area to create new nature, which eventually 112 ha need to become nature. We spoke with Maaïke van Scheppingen, who is the environment manager of the project. The topics we discussed where: citizen participation, legislation, nature development, the IJsselvallei and conflicts.

Interview format: Online

Summary of findings: The main findings we took from this where the importance to incorporate the local citizens with a bottom-up approach to avoid conflicts, the possibility to work with local farmers to create nature inclusive agriculture, including the participation ladder, and the importance of knowing your hydrology system.

- **De Duiventoren**

Summary Project: Size 6 ha, in Dorst (Breda), The Netherlands, since 1998. Project on former agricultural land which they transformed into a nature area with a nature campsite on it. Topics discussed: Nature restoration, first steps in transforming agricultural land into a nature area, timeline, maintenance, human-nature interaction, and zoning.

Interview format: Email Questionnaire

Summary Findings: collaborate with an organization like Brabants Landschap, restore nature from around 150 years ago, it took 6 years, communicate with neighbours, attracting conscious visitors will result in lower nature damage, and flower-rich grassland is maybe not the most attractive nature type for recreation.

- **De Veldschuur**

Summary of project: Size around 10 ha near Rouveen, the Netherlands, project started around 2005. Collaboration between Olde maten, Staatsbosbeheer and an Agrarische natuurvereniging. Peat area mainly managed by farmers, with a small property on which the Veldschuur is situated, where recreation and schooling mainly happens. Topics discussed: tourism engagement, nature maintenance, funding, stakeholder engagement.

Interview format: Online

Summary of findings:

De Veldschuur puts emphasis on how important history and culture is in engaging tourism and schooling. It is one of their main strengths. They organise historic workshops and grow forgotten vegetables and fruits. Their funding comes mainly from funds and renting out the Veldschuur for parties and meetings, but partly gets helped out by Staatsbosbeheer as well.

- **Dundreggan Estate, Scotland (Trees for Life)**

Summary of project: Purchased by Trees for Life in 2008, the Dundreggan estate comprises 4000 ha of land. After centuries of grazing by sheep, goats, cattle and deer, this goal of this project is to return the area to a wild Caledonian forest habitat with tree planting and animal reintroduction projects. Apart from rewilding of nature, Trees for Life also focuses on rewilding the people and reconnecting Scottish people with their Gaelic heritage through the Dundreggan Rewilding center.

Interview format: Email Questionnaire

Summary of findings: Trees for Life project is exemplary in their approach to rewilding, participatory process and community engagement. The main interview findings centred on how to engage citizens in all stages of a rewilding project, how to make your project more inclusive, specific rewilding techniques that are applicable to the Netherlands, and how to get started on a rewilding initiative by getting to know your land. The latter should be done through surveys (soil, vegetation, fungi, invertebrates), looking at the history of the land (old maps, place names, historical data) and exploring the needs of the local people.

- **Ennerdale**

Summary of project: 4.800 ha in Cumbria, England. Collaboration between four stakeholders: Forestry England, National Trust and United Utilities and Natural England. Has grazing sheep and deer and is rewilding with bigger herbivores. Topics discussed: Volunteer inclusion, nature development, finance and keeping stakeholders satisfied.

Interview format: Online

Summary of findings: By changing the course of their river, planting broadleaved trees, reducing sheep grazing and introducing big herbivores (Galloway cattle) they turned the area around from tree plantation to wild nature. They are very frequently visited by tourists, and those can enter anywhere in the area, but thanks to the dirt road (instead of concrete highway) and some impassable nature there are some untouched nature areas. They have volunteers and get most of their finances from grants.

- **Ondergrond**

Summary project: 15 small plots in Rotterdam, The Netherlands, since 2013. Cooperative developing small plots of food-forests in the city Rotterdam. Their goal: creating sustainable food production and creating awareness among city people. Topics discussed: organizational structure, zoning, harvesting, funding, timeline.

Interview format: Online

Summary findings: different kind of organizational structures, fencing against damage, timespan of 7 years till real harvest, how to create awareness, and ecological value is not always esthetic.

- **Plum Village**

Interview format: Online

- **Rewilding Apennines**

Summary project: Project in the Central Apennines of Italy that focuses on wildlife reintroduction (i.e. bears, otters, scavengers, raptors) particularly in ecological corridors, reducing human-animal conflict and community engagement. Established in 2004, Rewilding Apennines involves a large area of 2400 sq. km. The main restoration approach is to encourage natural processes and to help the environment become more resilient alongside sensibilisation of the local people to the importance of nature.

Interview format: Online

Summary findings: The interview focused on 1) important factors to consider when choosing a piece of land, 2) long-term community engagement and 3) Sources of funding. First, the advice for getting land was to focus on areas that either close to or connect important natural spaces, so that there is an opportunity for natural regeneration and expansion of existing nature. Second, there was a warning against fortress conservation, and the importance of engaging with your local community through workshops, activities, events, volunteers and bottom-up conversations. Suggestions included engaging people in work on the field or in workshops based on the history of the land, going door-to-door for higher inclusion, managing people's expectations and having a conflict mitigation plan, in case of misunderstandings. Finally, we were pointed in the direction of EU funding, grants like the Patagonia grant, carbon offsetting and partnering with local businesses as sources of income.

- **Thomas Mattijssen**

Expertise: Thomas is a project leader and researcher for Wageningen University & Research - green economy and land use. He has done several projects related to citizen participation. The topics discussed were: participation process, motivation to be involved, how to achieve social inclusion.

Interview format: In-person interview

Summary findings: There is no one-size-fits-all solution, but you need to look at what people are interested in, how to obtain long-term commitment, to think of which trade-off you want to make, and to think about the five principals of governance.

- **De Tondense Heide and Ellen ter Stege**

Summary of project: The Empense and Tondense started in 1929 as a 54 ha. Throughout the years it has grown to an area of 260 ha. It is a very special area with wet and dry heath, 'blauwgrasland', and bog. We had a tour with Ellen ter Stege, she is an ecologist working for Natuurmonumenten. The topics we discussed were: rewilding techniques, area management, and hydrology system.

Interview format: In person-interview

Summary of findings: Depleting the soil by mowing is a lengthy process, removing the topsoil is a good measure to deplete the soil for lower areas, how this hydrology systems work, and where to look for the history of the land and use that in you planning for the nature area.

- **Peter de Ruyter**

Interview format: Email Questionnaire

- **Ab van Dijk**

Expertise: Ab van Dijk is a project leader at Gelderland Landscapes and Castles (GLK). He has different projects in which he works on nature restoration and bringing back cultural

elements. Topics discussed: criterium for the land and soil, how to avoid too much disturbance from recreation, and which nature suites best in the IJsselvallei.

Interview format: Email Questionnaire

Summary findings: when having a land; it is important to do a Ecological System Analysis (LESA) to see which nature possibilities there are, in the IJsselvallei the soil is mostly clay or sand, and the larger the area the more rest for nature.

## Detailed interview results

### ☒ Brummen

Inclusion/ neighbours

☒ We would like the small farmers to stay in the area, because they are not like the ones in the Food valley. I have them stay in our area because they are influence on the landscape as well. (Brummen)

Allies IJsselvallei

☒ On the sideline we work with them (Agrarische natuur vereniging). They do a lot of the nature inclusive agriculture. We have some contacts with them, so not very close, but we are in touch with each other to inform what they are doing and we are doing. (Brummen)

Conflict

☒ Yeah, (...) a lot of the inhabitants weren't very happy. They made a kind of manifest, signed by 250 people. It was quite a setback. Um, and then they (previous team) decided to include the inhabitants more. (Brummen)

☒ In our area we have a lot of people who are afraid of the increase of midges in the area. I don't know if you are doing things with water, but in in our situation people are very afraid that, well there it's already a big problem in the area and they are afraid that it's going to increase because of our project. (Brummen)

☒ Yeah. We did some reports that we are now writing kind of how we see the problem with the midges because. Yes, it is a problem, but it it cannot be that if there is a slight increase it cannot be that we cannot do our project because of the midges. Yeah. So we have to take into consideration what kind of measures we can take without influencing our projects too much. But it's also like, yeah, it just has to happen. So we have to live with it. So it's a little bit, it's a little bit struggle to how to do things like this and. (Brummen)

☒ In the end, if we are going to have the "raad van staten", it's the last stop you can make as an inhabitant. (Brummen)

IJsselvallei

☒ Nature inclusive agriculture. That's something that's growing really big. Here (in IJsselvallei) it's only well stimulated, but considering all the nitrogen problems, it isn't about stimulating anymore. It's necessary. Yes, pressuring, but it is something that the Province of Gelderland is incorporating. We try to stimulate it. Obviously that are the farmers, they are talking to our farms. We also talked to. Yeah, it's more a "raakvlak".

☒ Brummen and Eerbeek is over here Yeah, and it's a cooperation between the province of Gelderland and the municipality of Brummen and the water board, and we also have the partner Natuurmonumenten. (Brummen)

## Buying piece of land

☒ We have about 112 hectares of yeah of agricultural area we would like to transform into nature, which has 20 hectares of forest. This all voluntary, so we hope we can achieve it because, well people have to sell the soil of the ground to us. (Brummen)

## Nature

☒ So we have to develop climate will boost the water system which is naturally so not straight kennels, but more flowing like this like they used to and with the use of the landscape so the lower parts put the water in the lower parts instead of the “dekzandruggen” We have many creeks which are just flowing through “dekzandruggen” which is not the natural flow system. Well this is in the Natura 2000, so we have to protect them, recover them and make them even better. (Brummen)

☒ Maybe the surroundings can be included as well that they can do things in their yard or you can even make it a little bit, but it's not the kind of, as they say in Dutch, a post stamp in the landscape you know more a broad thing and many people in this area are also looking at ohh maybe we will change our yard as well, so then you can have more gradual. And instead of forest and then it stops. (..) So it will be a little bit less and more just adding to the to the edges of the already accessing forest. (Brummen)

☒ Well, that's (a flower rich grassland) also what we are trying to do. We have “orchideeën” and “blauw grasland” those kinds of nature we are going to develop here. (Brummen)

☒ Yeah, there are still all kinds of research on the phosphate layer as well, how thick it is. And also we measured the groundwater quality. But there's also the only small part. We do all kinds of research also archeologically. But also explosives is also a question. (..) Well, it is situated near the IJssel and also the there's a train over here, so you always have to investigate if there are possibility of explosives in the area. (Brummen)

## First Steps for Nature:

☒ I also saw a question about soil. Well, I can answer that, but I have also a colleague who is doing the whole design part of the job. (Brummen)

☒ We made a sketch which includes all the people who are living there, all the inhabitants. We made a plan to how we would like to do it, and it's more or less like a first step. It's not the design is the next part. So it's more like where, where should we put this or where should we put that? (...) In this case Arcadis has made it (the map), so environmental consultancy

☒ While obviously then the board has to approve it (the sketch). Okay and then we take the next step to make a design. And we do that in all kinds of meetings. And then the next step is you will get a report of our design and then you go with the permits and then (...) the shovel in the ground. (Brummen)

☒ The time frame is really small because of mainly the birds and then you can start it, but maybe at the beginning of August, half July you can start and in October it's done already because it's getting too wet. So you have a very short time in which you have to do everything and if you have to do all these measures in one year or two years it's. It's quite, it's quite a challenge. (Brummen)

☒ They are also worried that a lot of agricultural water, so with a lot of nitrogen and phosphate, it's going through the nature area. So that's also a reason, it's not the main reason. There's also a reason to make a detour with water. So water is not flowing to because a lot of the measures we take it in natural areas is just remove the top layer to remove the phosphates because you would like to have plants. (Brummen)

☒ Just a couple of years (the soil will be bare), but I think if you look over here (point on the map) in 2018 they were already planning to get started when they stopped it and then they removed all of this as well. You can see that's already a growing quite fast. (Brummen)



- ☒ They (a consultancy firm) use a lot of images from World war two. All the logs, they read all the logs, from the fliers and the pilots and that is quite an extensive job. (Brummen)
- ☒ But also we have to do a lot of hydrological modelling. (Brummen)

#### Legislation

- ☒ It's also kind of obligatory to do something with participation if you are coming to get a permit already. It depends on the municipality or the government's organisation, the their own things. You have to show that you did some kind of participation. (Brummen)
- ☒ You have a website ruimtelijkeplannen.nl. OK, and then you can just go to spot and then you can put your cursor on it and then it will show you because I probably because the “bestemmingsplan” is mainly of the Municipality (Brummen)
- ☒ Via this website you can check whether you need to get a permit of Waterschap Vallei en Veluwe (<https://vallei-veluwe.vergunningen.info/>, in Dutch) (Brummen)

#### Citizen Participation

- ☒ Because all the areas influence each other (in the IJsselvallei near Brummen), mainly because we are taking a lot of higher logical measures, yeah. It's not possible to do so separately. First, we decided to keep it small because we were afraid that too many people would show up. And then you cannot make a design anymore here with 50 people, it's not possible. (Brummen)
- ☒ Yeah it (including people) takes a lot of time. (Brummen)
- ☒ I think it's mainly important to inform and to keep the surroundings updated to include them and also to make the kind of plan how you would like to include them in your plan, we have a “participatie ladder”, which means they are just going to inform them. Are they allowed to do brainstorm with you? Are they allowed to discuss things or advise or even put a figure out things you know those are things you have to take into consideration before you start talking with your neighbours or your surroundings. Because then you can manage expectations of that of people. (Brummen)
- ☒ So from my point of view. It's the best thing you can do, but you have to take into consideration beforehand how much (citizen participation). They can discuss with you more, yeah. Which sport of the ladder they are. (Brummen)

#### ☒ De Duiventoren

- Collaboration with Brabants Landschap (or another organization in case of DWL), they have knowledge and experience with these types of projects. They also gave a subsidy for the construction of the site.
- They went from agriculture to nature (3ha): they choose to bring back the nature from about 150 years ago (Brabants Landschap advised this)
- They did this 2 times (3ha) in collaboration with Brabants Landschap
- Go to neighbors with the design of the area and change it when needed
- ☒ The process of agricultural land into nature and making this into a camping site took 6 years.
- ☒ Against damaging of nature due to visitors: attract certain types of "conscious" visitors and communicate about the house rules.
- ☒ Especially the subject of "how do you ensure that nature is not damaged" is a tricky point. Unfortunately, it is unavoidable that especially the young plantings (20 years is still not a thick tree) are not destroyed. But at a campsite that is good to keep an eye on, people do not just enter the site. “

☒ “I think grassland appeals less to people, visually it is not diverse so I can imagine that its value is seen less. I think you have to think about that, especially if you want to do recreation in it.”

### ☒ De Veldschuur

- Try collaborating with parties in the neighbourhood. This will create greater support. (De Veldschuur)

#### **Financial Plan**

- If you are considering making the area a Natura 2000 site, you should be aware that you can build almost nothing on the land. (De Veldschuur)
- Make the place an official wedding location and rent out a space as a conference/meeting room. You can get a lot of income from this. (De Veldschuur)
- By partnering with Staatsbosbeheer, for example, you ensure that many costs are covered by them. (De Veldschuur) (more information? What costs and why?)
- Annual building inspections can add up in cost, take this into account. (De Veldschuur)
- Make the land attractive to bees and possibly put up a beehive. You can also combine this with an education about bees. This will increase the bee population and create awareness about the importance of bees. (De Veldschuur)

#### **Engaging and communicating**

- Look at the history and culture of the area, reflect this in your area and in any education and workshops. People often find this very interesting. (De Veldschuur) (but can be used for more )
- In case food will be grown on site, it would be nice to grow 'forgotten vegetables' and also use them in education lessons and sales. (De Veldschuur)
- People can visit the nature area , but they are not allowed to go off the paths so that they do not have too much impact on nature. (De Veldschuur)
- Doing nature education offers at schools is a great success. You don't get a lot of revenue from this, but it allows many children to experience nature. (De Veldschuur)
- If you want to offer workshops, it is nice to see if you can do anything in collaboration with something from the neighbourhood; for example, the cheese-making workshop by the local cheese factory. (De Veldschuur)
- You can offer that groups of people with disabilities or people with burnout can help on the land, as they value this very much. (De Veldschuur)
- Use social media and local newspapers to raise awareness of the project. (De Veldschuur)
- Engage people in the area by responding to needs and demands from the people regarding your project. (De Veldschuur)

### ☒ Dundreggan

### ☒ Ennerdale

#### Partnerships

☒ There's also deer in the valley as a wild grazer, and we keep control of the deer numbers because we've no natural predator. Um, so I've got the but the main grazing influences on that land are sheep and cattle.

☒ So that's National Trust. As one landowner, we also have a forestry, Forestry England. So they're a government department, but by far the biggest landowner in the valley.

☒ So they're the three main landowners and between those three, they own around 95% of that valley of the catchment in Ennerdale. So that lends itself quite nicely towards partnership working.

And then that last five percent is in land in private ownership between 2 local farmers. So that's not within our remit, but that land sits within the valley.

☒ And then our 4th partner is a government advisor, so Natural England, so they advise on the ecology and if we have designated land within the valley then there are key advisor for that. So my job really is to help coordinate that partnership for organisations. So really I've got four kind of line managers if you like. So keep keep everyone talking.

☒ But try and keep everyone happy and and then also I'm a link with a much wider range of stakeholders as well. Cause obviously as you know managing, looking after, nurturing land is not just about land ownership. You work with a network of stakeholders and also the local community. Local community has been a key part of my role.

## ☒ Ondergrond

- o Think carefully about which organisational structure suits you best. We are a cooperative. As a cooperative, you don't make a profit. The money that is earned is put into the cooperative itself, such as website, salaries and office.
- o When you form a cooperative, you suddenly become an organisation and then people expect more and different things from you. Also that everything is then well organised, while everything is actually still quite an experiment.
- o There is a fence around the food forests, so it is protected and we can decide when it opens and we have control over it. So it is often not publicly accessible, but you can see it through the fence.
- o Eventually we want to sell the crop. But in the meantime, you can already give education about it, for example. Besides, herb layers do grow very quickly, so you can sell these very quickly.
- o Volunteers are in demand, so if you want to help, you are welcome in the food forest.
- o It is advisable to have someone local to guide you and give advice. They know the local climate well
- o Through courses and tours, we show what a food forest is and hope to create awareness among city people.
- o We are a kind of window to the countryside. And with this, we show people that there is also another form of agriculture.
- o It takes about 7 years before you have a really good harvest.
- o Right now, eating from a food forest is still a niche and you can sell it high end to chefs.
- o Don't make huge investments too quickly and don't borrow too much money, especially without a good plan. You can get totally bogged down in this and end up going bankrupt.
- o Try to set something up with a nice group and go through the benefits of cooperative, foundation and association.
- o People often like a raked garden, even though this is often not the best ecologically. Sometimes a high ecological value is a mess and not aesthetic.
- o Tell the story and the idea behind it when you present it.
- o You sometimes have to choose whether the social or the ecological is more important and gets priority.
- o When you buy a piece of land, you have to relate to the social community and also the ecological community.
- o You actually really want to achieve something ecologically and then get people excited about that and not the other way around.
- o Try to gather knowledge and immerse yourself in it and get advice. Above all, visit locations. There are also various knowledge platforms where you can share and find information.

☒ Plum Village

☒ Rewilding Apennines

- o Choosing a piece of land
  - ☒ Choose an area where some nature is already present and there is potential for expansion
  - ☒ Areas that are next to natural spaces are better since nature can expand into your area, avoid natural 'islands'
  - ☒ Ecological corridors are a good idea (connecting pieces of nature, different rivers)
    - o Map the land- Monitor potential areas to see what kind of wildlife is around and pick areas that already have I.e. boar population, stork nests, eagle house etc.
- o Engaging with local people
  - ☒ Having a local initiative with a local name helps I.e. in the local language (dutch)
  - ☒ Have **long-term project** leaders who work in the field – long-term engagement is important so that people believe in your project
  - ☒ Use volunteers to reach local people too (Erasmus students/Erasmus plus)
    - o Make the conversation bottom-up – people can have good ideas about what to do in the area that you can use in your project
    - o Wildlife watching experiences, information boards
- o Possible sources of conflict
  - ☒ A feeling of lack of engagement from local people – giving a lot more than you receive, because people have very little financial incentive to get involved in these kinds of projects
  - ☒ Manage people's expectations – although you want to sell the project, don't give people unrealistic dreams, you cannot predict what nature will do – how it will come back, when it will come back and whether it will be profitable, so be wary of promising too much and then disappointing people
    - o Be prepared for conflicts and have a mitigation plan so that you can have an idea of how to solve issues before they even arise, work proactively. ("Don't avoid conflict", Thomas Mattijssen see it as a tool to improve your practice)
- ☒ Engaging the local community
  - o Provide spaces for people to debate on key issues – debates are a positive situation because people have a way to discuss their opinions and learn
  - o Field work is a great way to engage with locals i.e. farmers
  - o Find ways to explain this in their language – tell stories, maybe find a community liaison officer
- ☒ Activities
  - o Link up with local businesses to do workshops
  - o Use the history and tradition of the land to do workshops that are specific to this area I.e. traditional apple cider making
  - o Go to speak to local schools, education
- o Funding
  - ☒ Patagonia grant
  - ☒ Rewilding Europe Capital (REC) loans
  - ☒ crowdfunding
  - ☒ Apply for European subsidies
  - ☒ Carbon offsetting can be profitable but you need a big piece of land and it can also be green washing – make sure the company asking is also doing other things to reduce their environmental impact I.e. encouraging train travel and so on
    - o Partner with local businesses and do workshops and activities together, wildlife tourism agencies also an option
    - o More well-known, large-scale organisations receive more funding than the smaller, "purer" projects

- o Inclusion
  - Go door to door in the local community to get a wider range of people
  - Respectful volunteers who stay in the local area are good for local opinion and can reach more participants i.e. if they go to a local restaurant or pub and explain their project to people
  - o Surveys can be biased, try to minimise this
    - ⊗ People may give the kind of answers they think you would want
  - o You always tend to reach the same kinds of people who are already interested in your project (not so much farmers, hunters, etc.)
- o General tips
  - ⊗ Don't be afraid to make mistakes because you don't have all the information, just go for it and you will learn as you go, if you have good intentions, it will probably help
  - o Stay away from fortress conservation – conservation needs some social aspect and people management, don't conserve the area in isolation, otherwise you risk retaliatory killings or conflict or criticism from locals. Locals usually already face a lot of their own problems i.e. rural communities threatened by globalisation, land abandonment, urbanisation, rivalries between villages, communities are weakened.

#### ⊗ Thomas Mattijssen

- ⊗ **Active citizenship** – groups of citizens who self organise and come together under a common activity objective and work towards it. This happens on a voluntary basis without pay.(Different from participation and volunteering)
- ⊗
- ⊗ **Participatory process** you need to make a clear distinction if you are only going to inform the people or have them participate. If you don't have a set fast plan and are willing to budge there is room for participation.
  - ⊗ There is no one-size-fits-all solution to when and how to involve citizens, need to look at who people are and what interests they have.
  - ⊗ There is a risk with only inviting people once you already have objectives and aims – is it real participation or is it tokenism (you already know what you want to do and you only want people to agree with you)? If you really want to invite citizens, you have to cross a bridge towards them, they are not necessarily motivated by the same things as you
  - ⊗ Should be as transparent as possible – for some people, the landscape outside of their window is going to change so the least you can do is inform – have an article in the newspaper, local television or a talk at an event, to tell people who you are and what you want to do. At least people will know about it and not feel taken by surprise
  - ⊗ Think hard about what level of participatory process you want on Arnstein's ladder – if you want participation then you need to think about the legitimacy of your governance\*
- o Involving people in fieldwork is a good idea, but Lidewei should be aware that the citizens could possibly be motivated by very different things, you need to find some sort of common interest and give them space. i.e. if the school wants a public food garden to teach children about food, make space for that on your land. In some ways, making the space right for the real surrounding community can be more

important than making it objectively the best rewilding or human-nature connection project from a theoretical perspective.

□ In terms of housing, there may be a big difference in the amount of care and responsibility that people are willing to take depending on how long they live there for. If it's their permanent home they will care more than if they just go there for a week and then close the door.

□ **Attracting people who are nature conscious and inclusivity**

o Depends on how you advertise it, if you go for i.e. cabins in the woods, you really attract some kinds of people who already care about the forest.

o The trade off between inclusivity and attracting people who will not 'destroy' nature really depends on the resilience of your land. Some types of nature are more resilient than others and can take more interference (in general grassland is quite resilient, if you step on a flower it will grow back)

⊗ Can check for specific periods like meadow birds who nest in your grassland, and keep interactions lower during the nesting season

o If you open up your area to the general public, be aware that some people may treat it disrespectfully i.e. let their dogs loose, there could be consequences to the wildlife

o If you use public money it may be difficult not to open it up to the general public – there are different subsidy schemes, some only require you to open up footpaths, not necessarily access to the whole area

o The design of the space steers peoples' actions - If the area is big enough, you could divide it into several zones - i.e. one for the nature + rewilding and one for the educational part. You can make the wild area more inaccessible through natural obstacles like strategic bodies of water or high grass that people are less likely to walk through. In parks, people concentrate around the parking spots, restaurants, etc.

o In terms of inclusivity, it's about finding the right connections. i.e. some psychiatric patients were looking to connect with nature and a project about nature creation had to reach them. This requires a lot of effort in translating your story and goal into something they can relate to – don't just talk about rewilding but about mental/physical health and the landscape

o Inclusivity is also not necessarily the end goal, think about what level is appropriate. People living ten kilometers away in a city may not be that affected by not being included.

o Long term commitment

⊗ If participants feel ownership, connection and responsibility to the area then it works

⊗ Be consistent with your goals and your project, show people you believe in it

⊗ Be reliable, make decisions and stick to them, unless you have a very good reason not to, in which case you should communicate this well

⊗ Try to limit dependency on funding (i.e. Depending on one kind of funding which gets cut) or political parties

o Often people just want to try something new and forget about all the citizen initiatives that already exist, try to be a part of that and to stick with your project

- Quite a strong grassroots movement in the IJsselvallei already related to nature and agriculture (usually more landscape conservation, not so much rewilding), collaborate with them! Examples:
  - Markovosselse heide
  - Stichting IJsselhoeve
  - ANV – look for farmers associations, especially for grasslands and meadows because many farmers will have experience with handling similar types of nature. Some farmers manage land that is owned by nature associations
    - You could have a sort of rental arrangement where farmers help you shape/maintain of your land. You can think of win-win situations such as farmers being able to graze their cows more widely or something like that.
    - Depending on objectives you could try to collab with organic or biodynamic or extensive farmers and by doing so you also allow a type of farming that you like to expand more.
  - ⊠ Workgroup De Spaanse Ruiter (this is probably not the right name lol)
    - ⊠ You could do something like organising for this workgroup to come and work on the piece of land once per year and so they start to recognise it and see the changes.
- Being a person involved in nature often means dealing with people more often than dealing with nature – telling people to keep dogs on leashes, discussing with authorities and policy makers, who are also people and also applying for subsidies and so on
- ⊠ Think about your goals and how willing you are to deviate from them, this is a series of tradeoffs.
  - For example if you want to make your area a natura 2000 area, there are quite strict policy regulations about this naturalisation, so a participative process may be less possible, there's less room for discussion. (Funding vs. Participatory process)
  - Another tradeoff concerns cutting down on your ambitions versus gathering more support from the surrounding area, more participation, closer bonds with the people. If your neighbors take you to court because you don't have a good relationship this can really slow down your process by many years.
  - What is your strategy for dealing with complaints? If you start working your machinery at 5 a.m. and people complain, what do you do? Or I.e. people complain about you raising the waterlevel and increasing mosquitoes – you could have a solution of participatory monitoring where people have traps and they can check if the numbers of mosquitoes are increasing or not
- It's important to note that citizens are much more motivated by their daily experiences, so make it a story that they can relate to. Don't bombard them with knowledge.
  - In your talks with local people, shift the emphasis to the experience of and relationship with the landscape – don't talk about a special species that you want to keep because it fits with policy/your own goals, but rather talk

about how it is beautiful and why it's part of the Dutch landscape and why farmers would want to keep it on their land

- o They care more about their daily relationship with the land so they might actually like the farmer and seeing the cows there.
- o Mattijssen has seen both cases of citizens being very happy with new nature and also very strong opposition, where they teamed up with the farmer because they want to keep the landscape as it is with cows and crops
- o Questions to ask yourself
  - ☒ Why are the citizens living here?
  - ☒ What motivates them? What is important to them?
  - ☒ Some citizens will never be interested, so it's also about choosing who to invite and why and how to get them on the table
- ☒ Remember that you cannot predict nature or what impact there will be in the future – whether it will recover, in what way it will recover and how fast or what the side effects will be I.e. mosquito numbers increase, which could be annoying for neighbors
- ☒ Mosaic governance and multi-level/polycentric governance papers have more detail about different levels and layers of responsibility – initiatives at different scales have different levels of citizen participation
  
- o **Human connection** You cannot just send the letter to everybody or write an article and and a local newspaper. In general you need 'voelsprietten'. You need to know people who know people. This might be a person, NGO, person from a local nature or farmers association, neighbourhood association or maybe a politician etc.
  
- Five principals of being legitimate, accepted as governor of the space\*:
  - ☒ Equity and Fairness – stereotypical people showing up to such rewilding nature type projects may be white, highly-educated, middle-aged or retired men (Just because other people don't show up doesn't mean they don't have a stake or an opinion, that's why you may want to target them)
  - ☒ Decentralisation and participation in decision making – if you actually decide to invite people, make sure it's real participation and there is actually something to talk about, not just tokenism where you want people to *feel* as if they have a voice but they actually don't because you already made the decisions. There must be some transfer of power! Otherwise, just don't make this a participatory process to avoid frustration. There should be a deliberation and access to information, not just voting – discussion between different members and a space to disagree.
  - ☒ Transparency and Accountability – Sometimes people are against an issue just because they don't understand it, don't feel included or don't feel heard.
  - ☒ Effectiveness – People need to have some incentive to participate, otherwise even if you try to include them they will not be motivated. If people don't see the value they will not show up or spend time on this anymore.
  - ☒ Policy, legal and institutional Framework





























☒ De Tondense Heide

☒ Peter de Ruyter

☒ Ab van Dijk

- For nature development, we often commission a Landscape Ecological System Analysis (LESA). Such a study looks at the intersection of soil, water, F&F and human actions to determine the most optimal nature possible at that specific site.
- In my opinion, recreational areas have different surface areas. The larger the area the more rest for nature.
- In the IJsselvallei, that will mostly come down to clay and or sand.

## Appendix C: Coding system for interviews

- ▼ ●  **Code System**
- ▼ ●  Network
  -  Neighbors
  -  Allies
  -  Conflicts
- ▼ ●  Finances
  -  Cost
  -  Income
  -  Province
  -  European
- ▼ ●  IJsselvallei
  -  Community
  -  Nature
- ▼ ●  Legislation
  -  Gemeente
  -  Province
  -  European
- ▼ ●  Human involvement
  -  Volunteers
  -  Citizen participation
  -  Inclusion
  -  Motivation
- ▼ ●  Nature
  -  Management
  -  Development
  -  Origin

# Appendix D: Arnstein's Ladder and the Five Principles of Legitimate Governance

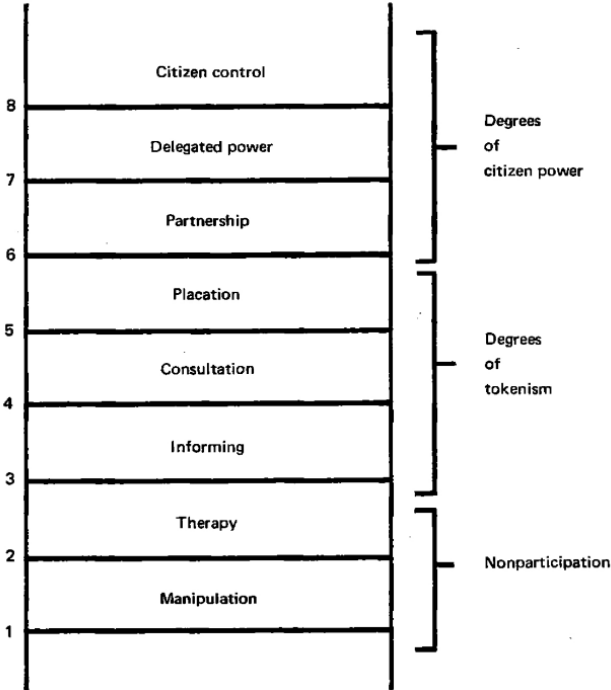


FIGURE 1: FIGURE 1: LADDER OF CITIZEN PARTICIPATION BY SHERRY ARNSTEIN. THE LADDER CONSISTS OF EIGHT STEPS THAT DESCRIBE THE DEGREE OF PARTICIPATION. THE LOWER STEPS DO NOT INCLUDE ANY PARTICIPATION WHEREAS THE HIGHER STEPS HAVE A HIGH DEGREE OF PARTICIPATION

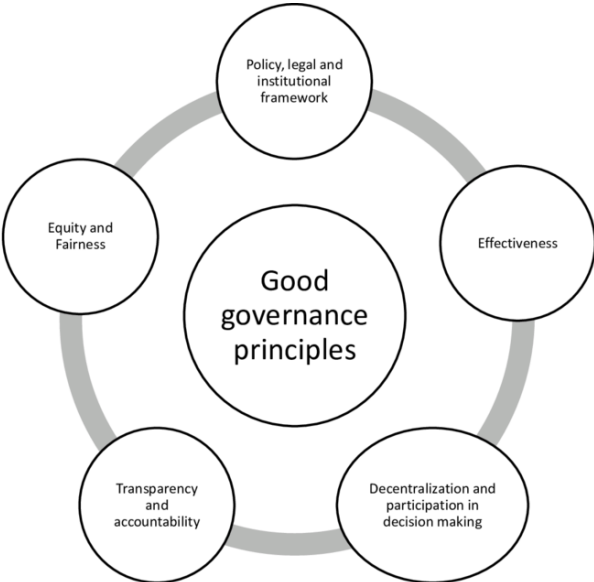


FIGURE 2: PRINCIPLES OF LEGITIMATE GOVERNANCE

## Appendix E: Detailed Stakeholder Analysis

1. **Lidewej Bosman**: the founder of DWL, Lidewej therefore has a very strong interest and also high power on its future development. She ultimately makes the decisions for the direction of the project.
2. **De Wilde Landen advisory committee** (Anneke van Mispelaar, Roel During, Frans Holleman, Arjaan Pellis, Shavonne Korlaar and Sharona Ceha): they have a high interest and moderately high power since they can advise Lidewej on the direction DWL should take. Note – Shavonne Korlaar is also the leader of the IJsselvallei masterplan for the Veluwe Alliantie
3. **De Veluwe Alliantie** (commissioner of the IJsselvallei masterplan): The Veluwe Alliantie is a voluntary network collaboration of stakeholders in the Veluwe who are also interested in what goes on in the general area of the IJsselvallei since part of it overlaps with the Veluwe massif. The IJsselvallei masterplan aims to address several goals including climate adaptation and mitigation, improving the quality of air, soil and water, development of agriculture, development of tourism and quality of life through local initiatives. They have high power in the future of the region and moderately high interest as DWL project would help fulfill some of their objectives in the region. More info on <https://www.veluweop1.nl/organisatie-veluwe-op-1/>
  - a. Members include:
    - i. Willem Bijleveld – Independent chairman
    - ii. Danny Huizer, region Stedendriehoek / Clean Tech Region / alderman Apeldoorn
    - iii. Luc Berris, Landowners Consultation Veluwe / Natuurmonumenten, provincial ambassador Gelderland and Utrecht
    - iv. Martin Bes, Koninklijke Horeca Nederland / entrepreneur
    - v. Wim Oosterwijk, FoodValley region / alderman Barneveld
    - vi. Peter Leonhart, ANWB
    - vii. Henk van Beuzekom, LTO Netherlands
    - viii. Peter van 't Hoog, Province of Gelderland / Commissioner
    - ix. Kees Rutten, Consultation Veluwe Attractions / director Leisurelands
    - x. Rianne Roeters, Landowners Consultation Veluwe / Staatsbosbeheer, regional manager Veluwe / Achterhoek
    - xi. Ronald van Veen, North Veluwe region / Alderman Ermelo
    - xii. Ronald ter Hoeven, South Veluwe region / Alderman Rheden
    - xiii. Joline de Weerd, IVN, Regional Director Gelderland, Overijssel and Flevoland
    - xiv. Sander Wurfbain, Landowners Consultation Veluwe / director Gelders Private Landowners
    - xv. René Zweers, Recron / entrepreneur
4. **Peter de Ruyter** (creator of the IJsselvallei masterplan, commissioned by the Veluwe Alliantie): Peter is a landscape architect focusing on social and environmental challenges and increasing the resilience and sustainability of our landscapes. He has focused on the IJsselvallei region in his IJsselvallei masterplan and so has a high interest and low power.
5. **Citizens** of the IJsselvallei area (potential users of the natural area): the citizens of the region are involved in DWL since they are the target group. Some citizens may have a very high interest in DWL and a moderate degree of power – although they cannot make top-down decisions, part of the idea of DWL is to focus on community-based conservation and there is a focus on citizen involvement in the design of the project as well.
6. **Children** of the area: minors living in the IJsselvallei region may have a high interest in DWL as they would reap many of the benefits of spending time in nature and receiving environmental education. Nevertheless, they have low power since their voices are difficult to include in the project design.
7. **Farmers** in the IJsselvallei (land that has potential for transformation): Farmers in the IJsselvallei region may have a moderate interest and moderate power in DWL. Since they would own the land to be transformed, the project relies on their willingness to sell their land and transition into other work. They could potentially also be involved in the future development of their land and possess in-depth knowledge of their soil and plots.

8. Relevant **municipalities**: Municipalities of the region have relatively high power and relatively low interest in DWL. This is because they have guidelines and legislation as to what can happen in the region, but are not particularly interested in the development of DWL.
9. Potential **Investors**: examples of potential investors include future house owners/renters on this land or participants in activities or public/private investors in the project. They have a relatively high degree of power and moderately high interest since they would be providing some of the funding for DWL to get it off the grounds and make it become a reality in the first place and later on, provide funding for its continued sustenance.
10. **Wageningen University and Research**: the WUR has carried out research for DWL in the past and continues to do so through student and faculty work. Their interest in DWL is quite high as it aligns with the values and interests of the university, however power is low as they are not involved in the actual implementation and decision-making of the project, only in advising what directions could be most effective from a scientific or social standpoint.
11. **Rijkswaterstaat Environment** (Part of the ministry of Infrastructure and the Environment): the Rijkswaterstaat is the executive of policies and regulations relating to the environment and is thus also responsible for performing various knowledge and implementation tasks with respect to the environment. They may have a low interest in DWL since the scope of it is quite small but moderate power since their work affects the overall development of the environment in the Netherlands as well as the regulations in land use.
12. **Agrarische Natuurvereniging (ANV)** – a partnership of farmers who aim to stimulate and implement agricultural nature management. In combination, these partnerships manage around 55% of Dutch agricultural areas. Management includes things such as promoting and implementing environmental measures, influencing policy, managing the landscape like field margins, hedge rows, meadow birds and canals, contributions to research, etc. The local ANV in the IJsselvallei has a moderate interest and moderate power because they can provide knowledge and support for the project, depending on whether it aligns with their objectives and principles. See local ANV: <https://veluweijsselzoom.nl/> and <https://www.ijsselvalleiboerteneetbewust.nl/>

## Appendix F: Example Email Questionnaire from Trees for Life project

### Interview Questions Trees for Life

#### Information about our project De Wilde Landen (DWL):

DWL project aims to transform a plot of agricultural land into a flower-rich grassland in the Netherlands. The Netherlands is quite densely populated, and more and more natural areas are being replaced for housing or to grow food. Moreover, more and more people move into cities which makes them disconnect from nature. Our project's long-term goal is therefore to transform more areas into nature and use them to reconnect people to nature through e.g., workshops and housing on this area. In addition, we really want to include the community and surrounding landowners, and take the history of the land into consideration to make the project as inclusive and long-lived as possible. Our project has similar goals to yours but is still at the initial stages and would be starting with a much smaller piece of land (at least 3 hectares, possibly larger). Regarding rewilding and citizen involvement, we see a lot of overlap with your project, and really like your approach, so we would really appreciate an insight into your experiences in this field and your opinion on what could be relevant for a project like ours. We have prepared a list of questions for you below, but feel free to diverge from them.

#### About Rewilding:

- ☒ How did you get started?
  - ☒ What were the first steps you took when turning Dundreggan into a natural area?
  - ☒ How did you find out about appropriate land restoration techniques?
  - ☒ How did you make it specific for your context? (Scottish highlands)
- ☒ Are there any techniques that you use that could be applicable to a rewilding project in a different context such as the Netherlands? If so, what?
- ☒ How much management is needed on your land?
- ☒ How do you monitor/measure the process?
- ☒ How important is land use in the surrounding area for the estate?
- ☒ What would you have liked to know/do before starting?
- ☒ What would be your top tips for other rewilding/human-nature connection projects?  
What about the most important things to avoid?

#### About Citizen Involvement:

- At what stage did you start to include citizens in your project?
- ☒ How do you reach out/get people interested? (For the Dundreggan Estate and also Affric Highlands project)
  - ☒ Were there any conflicts of interest? How do you deal with them?
  - ☒ How do you make your project inclusive to people from different backgrounds?
  - ☒ How do you engage people long-term?
- ☒ Who has the most power of all stakeholders in your projects/organisation?
- ☒ How much influence do citizens/landowners/other stakeholders actually have on the projects?
- ☒ How did you connect with other projects in the area/similar projects?

#### About the Human-Nature Connection

- ☒ On your website, you talk about reconnecting the people to nature and their Gaelic heritage, what specific workshops or other activities do you carry out in order to achieve this?
- ☒ To what extent is human involvement possible before 'damaging' nature, in your opinion?

#### About Finances:

- ☒ What are the most lucrative sources of income for the Dundreggan estate?
- ☒ What are your biggest costs?
- ☒ How did you get your project started initially? With what income did you buy the land and start transforming it?

## Appendix G: Our team



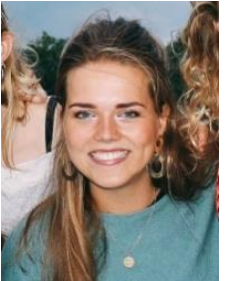
Anouk has a background in ecology and restoring agriculture into nature. She is a member in our project and her strengths are being the teamplayer and the resource investigator. She is good at summarizing the conclusion from a discussion and keeping track of time.



Frederique has a background in international development. She has a specific interest in how knowledge is constituted within society. She contributes to the team by being critical, creative, and reflective.



Ivet has a background in environmental sciences and takes on the manager role in our project. Her strengths include her interpersonal skills, her ability to make decisions that are inclusive and her ability to see the bigger picture. She contributes to the team with her knowledge on environmental problems and with managing and giving direction to the team.



Jitske has a background in ecology. As a member of the team her strengths are being a team player and applying her ecological knowledge. She is really motivated on working on strengthening the human-nature connection and she has a positive attitude.



Joyce has a background in human animal relations. She is secretary of the group who make minutes and handles contact with the commissioner. She is critical of the decisions made, gives organisational structure and is task-focused.



Kimberly has a background in nature-inclusive agriculture and environmental education. She has the role of the controller who checks on the finances and deadlines of our project. To her strengths she counts networking, organizing tasks, keeping an overview of what is still to do, asking critical questions, and including people in the group work.