

DOES THE WIND BLOW HARDER CLOSE TO THE BORDER?

Examining cross-border effects of wind energy development on the Dutch-German border in the context of community acceptance



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Colophon

Front image:	Protest at windfarm plan site (Van Raaij, 2024)
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When you read this, it means I finished my thesis! Which also means the end of being a student and studying at Radboud University. During my six years at this university, I had the opportunity to represent students on the program committee, served on several committees at the study association Mundus and contributed to welcoming international students to the faculty as a working student. With the highlight of studying a semester in Joensuu, Finland. Now, with this thesis, this fantastic period of my life has come to an end. First, I would like to thank my supervisor, Mark Wiering, for his support and good guidance. Without his help, the ideas floating in my head would not have ended up on paper so well. I would also like to thank Henk-Jan Kooij, who inspired me to research this problem. Despite not being my supervisor, he made time to brainstorm with me and put me in touch with the municipality of Berkelland, from which several interviews were conducted.

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I hope you will enjoy reading this thesis and learn a little bit more about sustainable energy development and the complexity of developing in a border area.

Kind regards,

Silke Mooiweer

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Abstract

In this thesis, it will be explored how wind energy development along the Dutch-German border affects local communities, with a specific focus on community acceptance. While wind energy is a crucial part of the European Union's strategy to become climate-neutral, its implementation, especially in sensitive areas like national borders, can lead to social tensions. Recent policy changes in Germany have made it easier to develop wind farms, often right along the Dutch border. This raises concerns for Dutch residents who live nearby but have little to no say in the planning process across the border.

The central research question that is addressed is: *'What are the key factors influencing Dutch community acceptance of wind energy projects on the German side of the Dutch-German border?'*. To answer this, qualitative research was conducted, including 19 interviews with residents, policymakers, and experts from four cross-border case studies.

The theoretical basis of the study is the Social Acceptance Theory by Wüstenhagen et al. (2007), with an emphasis on community acceptance. This framework was expanded with insights from Klok et al. (2023) and added a new 'border dimension' to reflect the unique challenges of cross-border planning. This analysis focuses on four key dimensions: context (such as local identity and national policy differences), process (participation, fairness, and trust), impact (how the turbines affect the landscape and local quality of life), and border (the role of cooperation and legal inconsistencies between the two countries).

The findings show that Dutch community acceptance is often lower when there is limited involvement in the planning process, when impacts are visible but benefits (like financial compensation) do not cross the border, and when there is little trust in foreign authorities. Cultural differences and mismatched procedures between Germany and the Netherlands also play a role. At the same time, cases with good communication and cooperation between municipalities show more understanding and community acceptance.

This research contributes to both the academic debate on social acceptance and the practical conversation about how to make energy transitions more fair, especially in border regions. Better coordination, clearer communication, and more inclusive participation could help increase local support for wind energy, even when it is being developed just across the border.

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1. Introduction

1.1. Introduction

The transition to renewable energy is a key pillar of European climate policy, with wind energy playing a crucial role in achieving carbon neutrality. One problem that often occurs these days when it comes to wind farms is social acceptance, society's acceptance of a wind farm. Previous research has shown that there is often great resistance from society to wind farms (Wüstenhagen et al, 2007). Social acceptance is a problem, but looking at it in the context of two different countries, it gets a bit more complicated. On the border between the Netherlands and Germany, more and more plans to develop wind farms are emerging. The German government has significantly scaled down the rules around wind farm permitting, making it possible to apply for wind farm permits in quite a few more areas (Tiemersma, 2024). Many of these previously protected areas are located along Germany's borders, including along the Dutch border. As a result, plans for wind farms on the German side of the border are skyrocketing, and the Dutch residents living at the border are at a loss (L1 Nieuws, 2025; Gunnewiek, 2025). What are their rights? Do they have participation rights? Or, extreme, how can we ensure that these turbines do not come here at all?

This thesis will examine how community acceptance around wind farms on the border manifests itself and what is (not) being done to optimise this community acceptance on both sides of the border.

1.2. Research Aim and Questions

As read in the introduction, problems that have arisen in recent times in the border region cannot be denied. This research aims to identify these problems by looking at the difference in the two countries' policies and looking closely at how this manifests itself in the local context around the border. By analysing policies, talking to residents and experts in the field and reading local news articles, the aim is to shed light on the now chaotic situation.

To conduct this research, it is important to create a research question. It should cover every aspect of the problem and clarify the desired objective at the end of the research. The research question created for this thesis is as follows:

What are the key factors influencing the Dutch community acceptance of wind energy projects on the German side of the Dutch-German border?

This question covered several aspects, and to make it a little more researchable, it is necessary to draw up several sub-questions. This keeps the research more manageable and allows for a more targeted investigation of certain topics. The following sub-questions will be addressed in this thesis:

1. *What is the institutional en local context of wind energy development in Germany?*
2. *To what extent do the government and developers try to create a process to include all the inhabitants that want to be included?*
3. *What has been done in each case to minimise the impact of the wind farm on each side of the border?*

4. *What are the opportunities for a better community acceptance for a project in a border region?*

These sub-questions will help answer the main question.

1.3. Relevance

1.3.1. Scientific Relevance

The European Union (EU) aims to be energy-neutral by 2050 (European Parliament, 2021). To achieve this goal, they are focusing a considerable amount of attention on the growing role of renewable energy sources, such as wind energy. Due to this growth of wind energy development, there is an increasing focus within spatial planning and environmental policy on Social Acceptance. Studies such as Wüstenhagen et al. (2007) reveal that several indicators are important in accepting a wind farm. The construction of a wind farm is interdisciplinary. It is an intersection of policies such as energy policy, governance and socio-spatial dynamics coming together. As a result, it ties in with the various issues within spatial planning.

Although social acceptance of wind energy has been widely researched, the focus of the studies is often on the national context or specific local cases. In countries such as the United States (Petrova, 2013), Australia (Gross, 2007), but also the Netherlands (Klusgens et al., 2019) and Germany (Flachsbarth et al., 2021), research has already been conducted on different cases in these countries. Few studies focus on border regions, where two governance systems and policy cultures converge. There is a clear lack of comparative, transnational insights into a problem that is increasingly evident in current policies.

There are many theories explaining social acceptance, but as described above mainly focus on the national context or specific case (Laes et al., 2014). Where the Dutch government focuses on the adoption of transition governance. Germany focuses on the development and diffusion of renewable energy sources through feed-in tariffs. By focusing on explanatory factors such as spatial equity, participation, and trust in institutions in this study, this research will contribute to theory development around the transnational context of wind energy development.

This research will help planners to better understand how spatial policies can help create local support for wind energy development. The study shows how planning functions across borders in a Europe without hard borders, but with different forms of governance.

1.3.2. Societal Relevance

As explained before, the EU have set goals for climate-neutrality in 2050, wind turbines will play a crucial role in reaching this goal. The Dutch and German governments have both set targets for wind energy expansion. In border regions, such as those between the Netherlands and Germany, different national policy frameworks, spatial plans and social attitudes converge, creating unique challenges.

In border areas, tensions regularly arise around the siting of wind turbines. Differences in laws and regulations, distance standards, and public participation procedures can lead to unequal relations and feelings of injustice on both sides of the border. For instance, it happens that wind turbines are placed directly on the border side of one country, affecting residents in the

neighbouring country, who have little or no say in these decisions. This asymmetry leads to social opposition and can put pressure on cross-border cooperation.

This research focuses on the social dynamics surrounding wind energy development on the German side of the border. By interviewing local stakeholders, policymakers and legal frameworks on the Dutch side of the border, this research offers insights into how cross-border differences are perceived and how they affect cooperation or resistance. In doing so, it contributes to a better understanding of the social aspect of cross-border energy development.

1.3.3. Conclusion

By bridging the gap between theoretical models of social acceptance and practical challenges in cross-border energy governance, this study contributes both academically and societally to the field of renewable energy transition. Its findings will provide valuable insights for policymakers, developers, and local communities seeking to navigate the complexities of wind energy development in shared geographical areas. Furthermore, by incorporating comparative insights from other transnational energy projects, this research will offer evidence-based recommendations for improving wind energy acceptance in border regions. As the urgency of climate change accelerates, these insights are critical for ensuring that the transition to renewable energy is both effective and socially inclusive.

1.4. Reading Guide

This thesis is structured into several sections. Firstly, it commences with the above chapter, including an introduction, research questions and relevance (Chapter 1). A theoretical framework and the associated conceptual model are then expounded upon (Chapter 2). The methodology employed for the research and the specific target group for the study are elucidated in Chapter 3. The next chapter explains relevant background knowledge on policy and cultural differences (Chapter 4). The findings from interviews are discussed and analysed in Chapter 5. Chapter 6 subsequently presents the derived conclusions, followed by a comprehensive discussion (Chapter 7).

2. Theoretical Framework

2.1. Literature review

This section will explain the different literature relevant to this study. First, the concept of acceptance will be explained more clearly, as well as the deeper meaning behind this. Next, the concept of Not In My Back Yard (NIMBY) and what it means in the context of wind energy development will be discussed. This will be followed by research to explain why a case in the planning phase of a wind project is the most relevant for this study. This will be expanded with an explanation of environmental justice and its relation to cross-border projects. Finally, the theory, which will be the foundation for this thesis, namely the social acceptance theory of Wüstenhagen (2007) and its extension by Klok et al. (2023), will be examined.

2.1.1. Understanding acceptance

Acceptance is quite an easy word; most people will understand the meaning behind it. However, if you read more into the definition of acceptance, there is a deeper layer to it. The dictionary (Cambridge Dictionary, 2025) defines acceptance as:

'General agreement that something is satisfactory or right'

This description covers only a part of the meaning. Reading the work of De Bakker (2001) about the acceptance of policy gives a new insight into the meaning of a general agreement. This research is about the regulation of seasonal work in asparagus cultivation in the southeastern Netherlands. Not directly related to wind farms, however, a link between the two subjects can be found. Dissatisfaction with policy and examination of what it would take for it to be accepted.

Acceptance is not just one element; it has different layers to it. In the case of de Bakker, cognitive, normative and conative acceptance. Cognitive acceptance is formed by the necessary orientation and knowledge regarding an object of acceptance, including the social expectations of other actors. Normative acceptance refers to the nature of the involvement of stakeholders concerning an opinion, proposal or action. Consent can be based on some summary considerations, but can also be the outcome of an in-depth reflection. Finally, the conative dimension refers to the aspiration, in practice, to act according to what is accepted. Some people will support the building of wind turbines if it is not in their direct environment, better known as the NIMBY effect (see 2.1.2).

Despite this research, it remains difficult to measure and determine acceptance. While data can provide a lot of knowledge and background information, it rarely, if ever, gives a definitive answer as to what people will ultimately do. It is therefore about the 'acceptability' and the potential for consent that policies must meet, or in other words, where enough people agree with them to go ahead with them. This background knowledge gives a base for understanding the meaning of acceptance in this thesis; the ultimate goal of acceptance is not to get acceptance from every single inhabitant. The goal of acceptance is the achieve acceptance of the greatest number of people in the area around the wind turbine plans, including the Dutch side of the border.

2.1.2. Not In My Back Yard (NIMBY)

As mentioned in the introduction, wind parks often face strong local resistance. A term frequently used to explain this opposition is the NIMBY phenomenon (Not In My Back Yard). Dear (1992)

defines NIMBYism as the protectionist attitudes and oppositional tactics adopted by community groups facing an unwelcome development in their neighbourhood.

Research has been done to discover which indicators play a significant role in NIMBY responses to wind farms. Visual aesthetics, place attachment, identity, turbine noise, and environmental factors (such as bird mortality) have become central arguments for opposition (Wolsink, 2007; Pedersen and Waye, 2007; Devine-Wright, 2005; Kunz et al., 2007). In the case of wind farm development along a country's border, research has not been done. However, it can be said that most of the indicators become more difficult. It is close to your 'backyard' but in a different country, which makes the possibilities for resistance slimmer. The reasons for opposition towards a wind farm are the same as in their own country, but the decision-making process takes place in another country. When communities feel excluded from the planning process or suspect that economic interests are prioritised over community well-being, resistance intensifies.

Although the NIMBY framework is widely used by planners, authorities, and scholars to explain resistance (Wolsink, 2007), it has been criticised for oversimplifying the multi-faceted nature of opposition (Warren & McFadyen, 2009). Opposition to wind farms is not solely driven by self-interest but also by concerns about fairness in decision-making (Gross, 2007) and trust in developers and policymakers (Bell et al., 2013).

2.1.3. Environmental justice

Environmental justice (see Figure 2) provides a valuable framework to analyse the equity of wind energy projects, especially in border regions such as the Dutch-German border. Within this region, wind farms are being developed to promote energy transition, but these projects also raise issues around burden-benefit sharing, participation in decision-making and recognition of local interests (Jenkins et al., 2015).

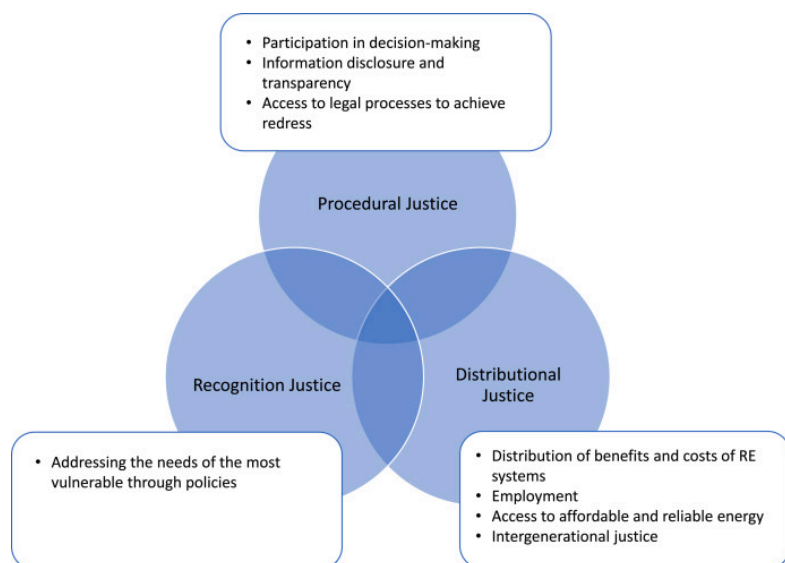


Figure 2 - Environmental Justice (Apergi et al., 2023)

The three dimensions of environmental justice - distributive, procedural and recognition justice - are directly relevant to wind energy in the border region. Distributive justice plays a role in who benefits from wind energy and who bears the negative consequences, such as noise pollution and landscape change (Sovacool & Dworkin, 2015). Turbines are often placed in rural areas, while the energy generated is consumed elsewhere, causing tensions between local communities and policymakers. The border brings an extra dimension to this because all the energy will be consumed in Germany, and on the Dutch part, they must deal with the negative consequences. The Dutch do not benefit from the wind farm; however, research from Cowell et al. (2011) shows that an increased flow of community benefits will improve community

acceptance. Procedural justice refers to the extent to which residents have a say in decision-making processes. This is especially complex in border regions, as regulations and participation procedures differ between the Netherlands and Germany (Aitken, 2010). Recognition justice emphasises the need to recognise cultural and social differences when implementing wind energy projects (Walker, 2012). Although the inhabitants in border regions live relatively close to each other, there is a significant difference in culture. This makes understanding the inhabitants and government on the other side even harder.

While environmental justice helps to identify inequalities in wind energy development, this theory alone is not enough. First, it often ignores the complex interactions between market mechanisms and policy processes that affect wind farm development. The energy market is nationally defined, and differences in subsidies and regulations between the Netherlands and Germany lead to asymmetries in wind energy development (Wolsink, 2018). In addition, environmental justice does not provide a comprehensive understanding of the sociocultural perceptions of wind energy, which can vary widely between local communities and are influenced by factors such as trust in government and market players (Bell et al., 2013).

To better understand the acceptance of wind energy in the border region, it is necessary to combine environmental justice with other theoretical frameworks. Environmental Justice will therefore be integrated into the conceptual model in combination with other theories.

2.1.4. Social Acceptance Theory

A theory that aligns well with the research is the social acceptance theory proposed by Wüstenhagen et al. (2007), which is grounded in Ajzen's (1991) theory of planned behaviour. This theory explores the factors that influence individuals' behaviours and the ultimate actions they take. Building on this framework, Wüstenhagen et al. (2007) developed the social acceptance theory, intending to foster social acceptance of renewable energy projects, such as wind farms. As depicted in Figure 3, three key factors play a critical role in this process.

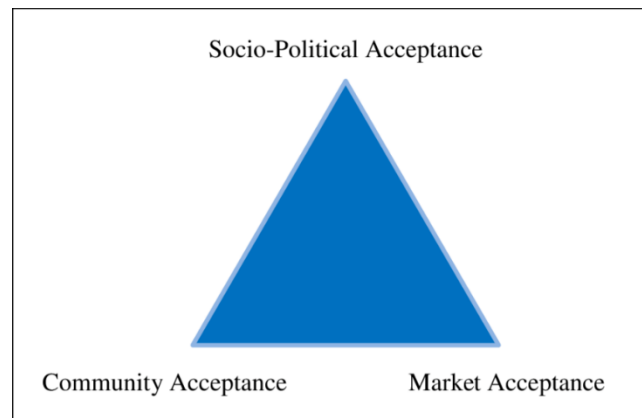


Figure 3 - The triangle of social acceptance of renewable energy innovation (Wüstenhagen et al., 2007)

The first form of acceptance identified in the theory is market acceptance. This refers to the endorsement of technology by key market actors, including investors, energy suppliers, energy consumers, and project developers (Wüstenhagen et al., 2007). However, within the scope of this thesis, market acceptance is of lesser relevance, as the industry actively supports the expansion of wind farms. Consequently, it no longer plays a significant role in the broader discourse on social acceptance.

Socio-political acceptance represents the broadest dimension of acceptance, encompassing the endorsement of technologies and policies by the general public, regulatory bodies, key stakeholders, and policymakers. This acceptance is reflected in public support for technological developments. Given the political objective of achieving energy neutrality by 2050, it is crucial to contribute to sustainable energy transitions. While there is consensus in both countries on the

necessity of action, divergent discourses on renewable energy shape national approaches. This divergence renders the border region a particularly compelling research area, as it constitutes a point of convergence between two distinct policy frameworks.

Several indicators demonstrate that public acceptance of renewable energy technologies and policies is high in many countries. This is shown in opinion polls where a broad majority of people tend to agree with the idea of public support for renewables, even in countries where the government does relatively little to support them.

Community acceptance refers to the specific acceptance of siting decisions and renewable energy projects by local stakeholders, particularly residents and local authorities. In this form of acceptance, NIMBY is also an interesting factor to be considered. It was chosen to investigate this form of acceptance further because of the local context of the different. This does not mean that the other factors are not important for social acceptance, because everything must be accepted before there will be an overall social acceptance. However, to delineate the research, it was chosen to focus on community acceptance.

In the study by Klok et al. (2023), community acceptance was operationalised further into different dimensions and factors (Figure 4). Herein, there is specifically looked at the factors that are important to residents for accepting a wind farm.

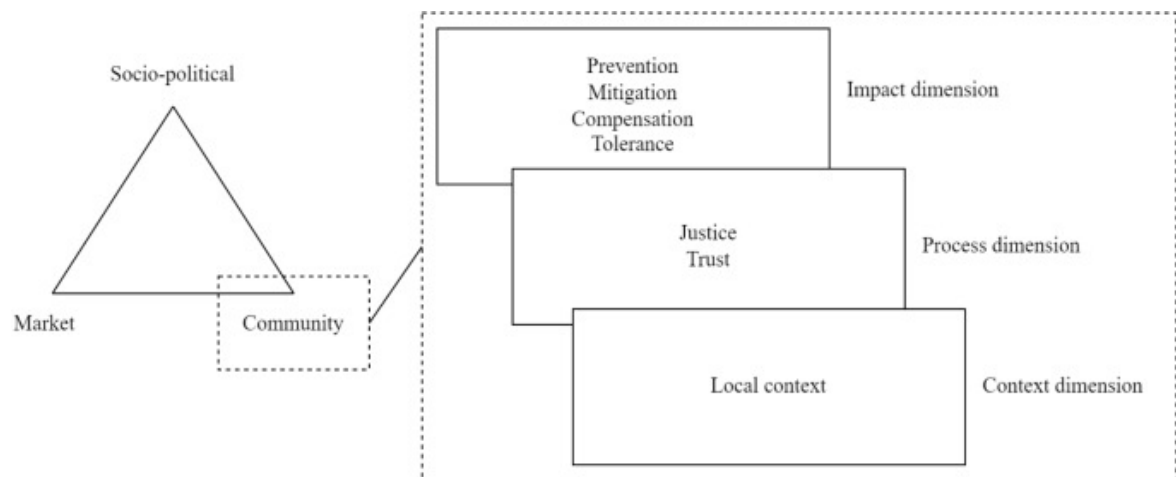


Figure 4 - Community acceptance framework in the context of social acceptance (Klok et al., 2023)

As can be seen in Figure 2, there are three dimensions where the community acceptance is divided. Context, process and impact dimension. The impact dimension encompasses all aspects related to the physical presence of the turbine within its surrounding environment. It pertains to the tangible effects that the turbine exerts on the natural and built landscape. The context dimension, on the other hand, refers to the social characteristics of the environment in which the turbine is situated, including the socio-economic, cultural, and political factors that may influence the project's reception. Finally, the process dimension serves as an intermediary between the impact and context dimensions. It involves the processes through which the project's effects are managed and interpreted by the local community, shaping their perceptions and responses to the turbine's installation and operation. These dimensions will be explained further, and the importance of cross-border wind farms will be defined in the operationalisation.

2.2. Operationalisation of theoretical concepts

In chapter 2.1, all the different research and theories that can be used in this thesis are mentioned, some more important than others. The basis for this thesis will be the theory of social acceptance from Wüstenhagen et al. (2007), specifically community acceptance and the view on that from Klok et al. (2023). However, the dimensions mentioned by Klok et al. could be more operationalised for qualitative research, as is this thesis, and are the other theories and literature used to elaborate these dimensions and factors to describe the community acceptance in the border region.

As a new dimension, the **border dimension** is added to the model. Factors such as the history of *cooperation* in the area and on what subjects they are currently working together will be studied. Also, the differences between the countries concerning *culture* on distinct topics will be discovered.

In the model of Klok et al. (2023), the **context dimension** only exists in the local context. This will be important in the case of the border since there will be looked at specific cases. The *local context* keeps up all the pertinent characteristics that influence how the nearby community, through the improvement handle, reacts to the (mis-)management of extended impacts. In this setting, connection and personality play a critical part, as do people's conceptions of sustainable energy and climate change. Whereas the pertinence of the measurement is obvious, it is troublesome to capture components or pointers. For illustration, an above-median instruction level can be a solid community asset to assemble resistance. In a comparative sense, community cohesion and social systems can have either a positive or negative effect on a project's chance of success.

However, since the border experiences influence from the state government, it is also important to look at the *country's context*. If, for example, the discourse of sustainability in a country is different, it will have an impact on the context of the conceptions of sustainability. Also, the different policies and working of the government are studied.

The **process dimension** suggests that compelling endeavours within procedural justice increase the perceived justice and produce belief among local stakeholders. This dimension is split up into justice and trust.

Justice is in the case of cross-border cooperation quite interesting. Since both countries have their own policies on the procedure for building a wind farm, it is important to look at the differences and similarities between the policies. In the case of participation, it must be carefully mapped out what the rights of residents on both sides of the border are. In this process, the residents of an area must feel heard to accept the wind farm, but, as explained in Chapter 1.4, most of the time this is not the case. Justice can be divided into three parts: procedural, distributive and recognition. These concepts of justice are explained in Chapter 2.1.3. about environmental justice and are added as the key concepts of justice in the operationalisation.

Trust can be increased due to involvement in site selection, general participation, process transparency and good communication (Aitken, 2009). In the case of the border region, this can cause problems. A project developer is probably not obligated to include the residents close to a wind farm on the other side of the border; however, to create trust, this could be an important

indicator. With good communication, the role of a language barrier can be important. Not everyone will speak each other's language, and English as a leading language can cause trust issues.

The **impact dimension** can be divided into four indicators, namely: prevention, mitigation, compensation and tolerance. This dimension aims to minimise the impact on the surrounding area so that residents are more likely to accept the project. *Prevention* means making the appearance of the wind turbines in the landscape as unobtrusive as possible. For example, instead of randomly placing them, put them in a straight line or following a natural curve from a river. This makes the landscape calmer to watch. More indicators that can help with the acceptance of prevention are mentioned in the operationalisation. As in the context of the border region, the indicators are the same; however, it is important to look at the role the people on the other side of the border play in having a say in choosing these prevention options.

Mitigation is connected to prevention because it tries to minimise its intrusiveness in its environment by making changes to the project or its surroundings. The role of the border is here the same, it depends on how big the say is of the citizens on the other side of the border.

Compensation for impacts with community benefits does not affect the project per se, but can be leveraged to make the net impact of the entire development more acceptable. For example, the option for local ownership, tax benefits, financial compensation, local infrastructure and public facilities. This is one of the most interesting indicators in the case of a border region. Most of these indicators are not directly effective on the other side of the border. If a wind farm is built in Germany, the citizens of the Netherlands who are also affected by the wind farm will not get compensation or tax benefits because they are two separate systems. It will be interesting to research what the possibilities are if compensation on the other side of the border is included.

The last indicator is *tolerance*. Impacts that were or might not be anticipated, mitigated or compensated ought to be endured by the local community. This seems to happen when community individuals who do not bolster the venture still acknowledge it due to its need for battling climate change, or for reasons of (future) energy security. This is the same for both sides of the border; however, it can differ if the other three indicators above are not the same for both sides.

These were all the dimensions and indicators that could influence the acceptance of a wind farm and the correlation to the cross-border case. These indicators can be expanded due to new insights from more literature or during the investigation into a specific case. These dimensions are elaborated in Table 1 with indicators that can influence social acceptance. The indicators and dimensions from the base for the research will be explained in the next chapter.

Table 1- Indicators and dimensions of community acceptance

Concept	Dimension	Indicators - Community acceptance
Border		<i>Cross-border cooperation history</i>
		<i>Modern cross-border cooperation</i>
Context	Local	Place attachment
		Place identity

		Individual factors (level of education etc.)
		Knowledge
		Conceptions of environment
		Community cohesion
	<i>Country</i>	<i>Political background</i>
		<i>Kind of policy</i>
Process	Justice	Involvement in local policies
		Procedural justice
		Distributive justice
		Recognitive justice
	Trust	Involvement in site selection
		Process transparency
		Quality of communication
		<i>Language barrier</i>
Impact	Prevention	Visual disturbance
		Landscape mismatch
		Wildlife disturbance
		High construction costs
		Noise nuisance
	Mitigation	Reduce a project's intrusiveness
	Compensation	Community benefits
		Local ownership
	Tolerance	Energy security
		Fighting climate change

2.3. Conceptual framework

Before the theory and the operationalisation of the concepts were described. In the context of the theory, the operationalisation of a conceptual framework has been made (Figure 5). Since the research is building on an existing theory but adapting it along the way, the framework will probably change during the thesis process.

The framework is built on already existing literature and what the expectations are of the research. In the first half of the framework, the factors influencing the three dimensions can be seen. As said before in the operationalisation, these factors are a combination of influencing factors from different theories and literature explained in the literature review. The three dimensions, context, process, and impact, will lead to the community acceptance of a wind farm in a border region. These dimensions are further placed in the broader schema of social acceptance in total.

This conceptual framework can be seen as the hypothesis on the process of acceptance of wind farm works, but it must be specified in the outcomes of the research at the end of the thesis.

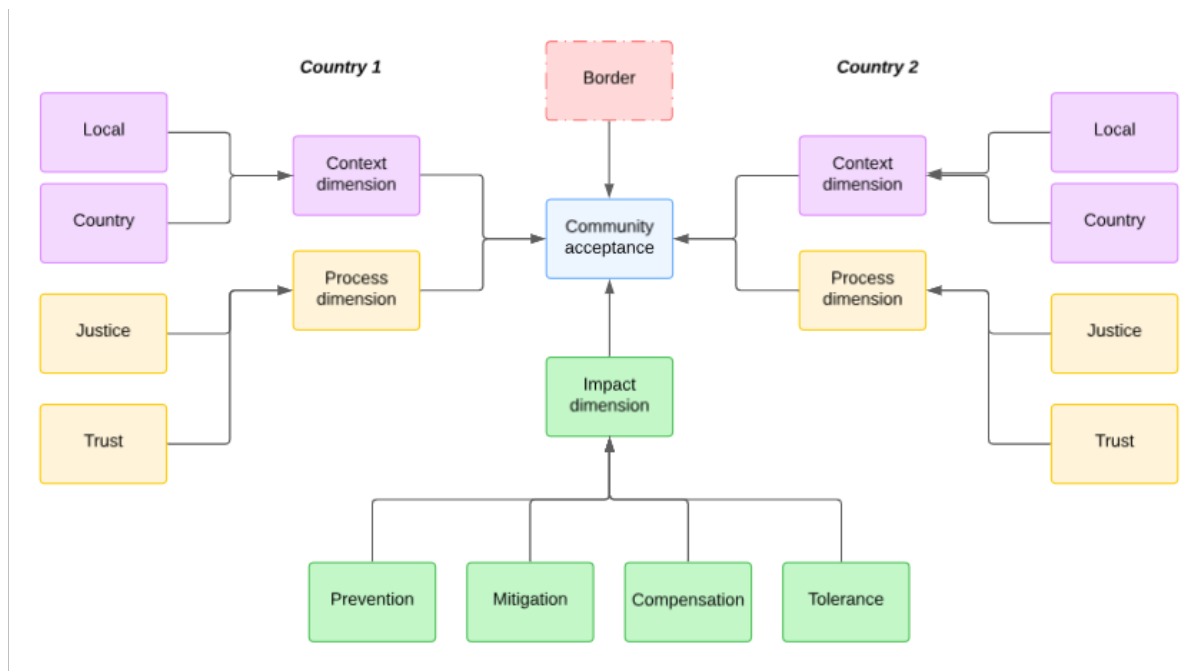


Figure 5 - Conceptual model

Expectations of the model

The border is a new indicator added to the model. However, there is little scientific work written about, making it difficult to predict what the impact will be. However, it does appear that if there is good communication, fewer problems will arise (Hospers, 2022). In other words, when there is good cooperation between municipalities on both sides of the border, this will have a positive impact on community acceptance of wind energy.

Context predictions are divided into local and country. For local, as with the border, the connection between the two areas will be considered. It is therefore expected that if they have a good bond, it will have a positive impact on acceptance. The country aspect is also a new component in the model. Consequently, there is little literature to find what the impact of this is. It is expected that the Netherlands and Germany differ so much in terms of governance that this will have a negative influence on the acceptance of a wind farm.

The next component of the model is process, which is again divided into justice and trust. For trust, three factors can come into play. The first is the process; the expectation is that if proper and timely information about the process is provided, residents will feel heard, and it will have a positive impact on acceptance. For distributive justice, the benefits and burdens should be shared fairly. The expectation of a development in a border area is that, in these cases, the benefits will lie with the German residents and the burdens mainly with the Dutch residents. These benefits will mainly consist of financial benefits and being able to use the power. The burdens will mainly consist of noise nuisance, shadow flicker, and landscape pollution. These burdens are not bound by the border, but the ratio is skewed. For a project, it is important for acceptance that residents feel recognised. For this case study, it is expected that residents do not feel recognised and cognitive justice is low, which will reduce acceptance. Also, trust in

the government where the competent authority is important; it is therefore expected because the competent authority is on the other side of the border, the trust will be lower.

The impact of the project on both sides of the border will be present in all cases. It is therefore expected that if the German government takes measures to reduce this impact (prevention and mitigation), this will have a positive influence on acceptance. The presence of compensation will also have a positive impact on acceptance.

3. Methodology

3.1. Research strategy

3.1.1. Reflection upon Research Philosophies

The research philosophy can be described as what the researcher believes or sees as reality and guides their decisions in conducting research (Guba & Lincoln, 1994). It is important to critically define the research paradigm or philosophy, as this creates support for the accountability of the methods and approaches used by the researcher (Tekin & Kotaman, 2013). The research philosophies that fit this research are post-positivism. Creswell and Creswell (2018) state that “The knowledge that develops through a postpositivist lens is based on careful observation and measurement of the objective reality that exists 'out there' in the world” (p. 55). With post-positivistic research, an already existing theory is used; however, there is always a possibility that the theory can be proven false. In this case, the theory of Social Acceptance (Wüstenhagen et al., 2007) is used in the setting of acceptance with an extra factor, the border. Social Acceptance in both countries, the Netherlands (e.g. Kluskens et al., 2019) and Germany (e.g. Flachsbarth et al., 2021), has been researched; however, no research has been done in the case of a border region, which might falsify parts of the created model.

Research philosophies can be divided into three dimensions: ontology, epistemology and methodology of research. The basic nature of reality and existence inside the study is referred to as the ontology of the investigation. In the field of study, it establishes what is deemed real or knowable. This influences the researcher's viewpoint on the existence of entities, their relationships, and the structure of information about them. The ontology for post-positivism is labelled as critical realism because of the pose of advocates that claim almost all reality must be subjected to the largest conceivable basic examination to encourage securing reality as closely as possible (but never perfectly).

Modified objectivism serves as the foundation for epistemology in post-positivist research. This implies that even while there is an objective world, our perception of it is constantly limited by human limitations. Although researchers recognise that their findings are influenced by biases, theoretical presumptions, and methodological limitations, knowledge is created through critical inquiry, falsification, and empirical observation. This research will make use of different methods (interviews, literature review) to explain a phenomenon (community acceptance of wind energy).

3.1.2. Research area

The research area of this thesis, as explained before, is the Dutch-German border area. Looking into different cases of wind energy projects around the border, a selection has been made (see Figure 6). Four focus areas for research have been chosen, these are (from north to south):

- Border area Hardenberg and Wielen/Itterbeck (Ger);
- Border area Losser (NL) and Bad Bentheim (Ger);
- Border area Winterswijk/Berkelland (NL) and Vreden, Südlohn and Borken (Ger);
- Border area Berg & Dal/Gennep (NL) and Kranenburg/Kleve (Ger), later called the Reichswald case.

For all of these focus areas, there are (multiple) plans for wind energy on the German side (and in some cases also the Dutch side), which makes them researchable for this thesis. Each specific case will be explained in the chapter on results.

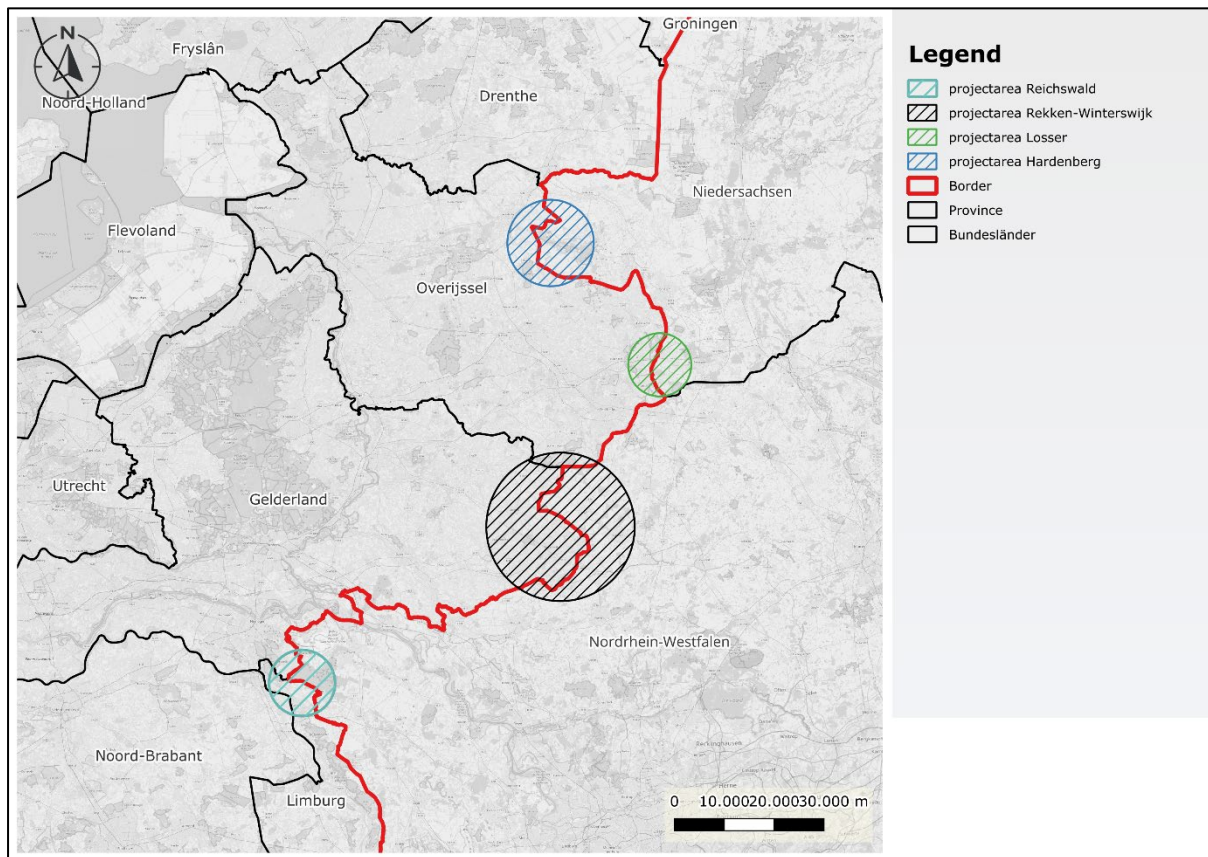


Figure 6 - Map of the project areas (own-work)

3.2. Research Methods

3.2.1. Data collection

Literature review

In addition to choosing a mixed method, quantitative, or qualitative approach, the proposal or study designer must evaluate the literature on the subject (Creswell and Creswell, 2018). In preparation for this research, extensive literature has been done to narrow down the subject. The most significant literature and theories are described in chapter two, resulting in a conceptual model to study in this research.

To answer the first research question, a literature review of policies in Germany (and the Netherlands and Europe) has been done. These policies have been split up into the following sections:

- European policies;
- The national policy on wind farm siting and sustainability;
- Border-crossing policies were made between Germany and the Netherlands.

Based on the interviews, more important policies were discovered and added to the background chapter on policies and the differences between the two countries.

Interviews

The main part of this research will consist of interviews. These interviews will be semi-structured. Semi-structured interviews have a few advantages compared to structured interviews, in particular concerning the flexibility of both the questionnaire and the interviewee (Kakilla, 2021; Rabionet, 2011). This allows for "open reactions, rather than positive or negative brief answers" (Oana-Ramona and Iulia, 2017). The open responses allow the interviewee to ask follow-up questions for further in-depth investigation, to affirm a certain articulation, or to examine certain subjects in more detail (Barclay, 2018). Even though semi-structured interviews are extraordinary for recovering subjective information, they are less fit for assembled interviews and when interviewees with limited information approximately the subject (Kakilla, 2021). The interviews will essentially be conducted through an online program like Microsoft Teams and can be face-to-face if time and area permit.

For the sake of having a pleasant streaming semi-structured interview, there is a requirement for an interview guide. An interview guide can be seen as a hold for the questionnaire. The interview guide offers the interviewer the most focus he/she need to inquire the interviewee, to cover everything to address the most relevant research topic and the sub-questions as thoroughly as possible. An interview guide has got to accommodate a few necessities to urge the most excellent outcomes about, for example, that questions ought to be straightforward, one address at a time and as it were inquire for the supposition of the interviewee (so not on the sake of a bunch) (Boezeman & Donkers, 2017; Harvard College, n.d.; Van Thiel, 2014; p. 94-96). Two interview guides were prepared for this study, one for employees of the municipality and the other for residents of the area. These are attached in the appendix (9.1 and 9.2). However, not every interview fell within these two categories; the interview guide that fit best was chosen and based on the specific interview, questions were omitted/added if the interview allowed it.

The interviews are conducted in Dutch since this is the first language of (most of) the interviewees. The transcripts from the interviews are also in Dutch, and a translation of the quotes in English will be used in the thesis. As a result, some quotes may be worded slightly differently, for the reason that there was not always a good translation for them in English.

Most of the interviewees were found via newspapers on the internet, where they were interviewed. During the interviews, the snowball effect was used, and I got in contact with more interesting people to interview. In Table 2, an overview of the interviews held can be found. During the interviews, the interviewees were asked whether they agreed to the use of their names. Most of the interviewees consented to the use of their names; those who did not are anonymised.

Table 2 - Overview of interviews

Date	Who?	Case	Relation to the case
1-4-25	John Tampoebolon	Reichswald	Chairman Gegenwind Reichswald
1-4-25	STER (Stichting Toerisme en Recreatie Berg en Dal)	Reichswald	Part of the Taskforce representing tourism in the area

4-4-25	Lies ter Haar	Losser	Burger Forum (Political party in the municipal council)
4-4-25	Jan Nijhuis	Losser	Stichting Tegenwind Noord-Oost Twente (STNOT) (Foundation against wind energy development)
8-4-25	Karin Pierik	Winterswijk/ Rekken	Resident Winterswijk
9-4-25	Werner ten Kate	Hardenberg	Alderman Hardenberg
10-4-25	Inge Waarlo	Winterswijk/Rekken	Municipality employee Berkelland
10-4-25	Rob Peperzak	Reichswald	Alderman Gennep
11-4-25	Dietrich Cerff	Reichswald	Chairman NABU-Naturschutzstation Niederrhein
11-4-25	Resident Van-Zelderheide	Reichswald	Resident Van-Zelderheide
17-4-25	Gert Hans	Winterswijk/Rekken	Municipality employee Berkelland
18-4-25	Kristel Wolterink	Winterswijk/Rekken	Municipality employee Winterswijk
23-4-25	Bouke Vogelaar	Hardenberg	Municipality employee Hardenberg
23-4-25	Paula Castien	Reichswald	Resident Groesbeek and part of Taskforce
23-4-25	Erik Weijers (en Rob Onderstal)	Reichswald	Alderman Berg en Dal (and policy officer)
1-5-25	Henny Brinkhof (en Dick Visser)	Reichswald	Werkgroep Milieu Groesbeek (working group to fight climate change)
18-6-25	Employee municipality Losser	Losser	Employee sustainable energy municipality Losser

To support the interviews in the specific cases, there were some more general interviews/conversations with people from the field. For instance, I talked to Martin Unfried about the research he is doing/has done in Limburg on the effects of (sustainable) energy development in the border region, for instance. There was also an interview with the EUREGIO Rhine-Waal. This was predominantly about the Reichswald case, but much of the information was also applicable to the other cases. Among other things, the cultural differences between the Netherlands and Germany were discussed. The EUREGIO (Gronau) was not open to an interview because no one there was actively working on the subject. However, they did send information that was used. Below is the summary of the conversation held and the interview (Table 3).

Table 3 - Overview of supporting interviews

Date	Who?	Relation to the subject
1-4-25	Martin Unfried	Researcher
29-4-25	EUREGIO Rijn-Waal	Umbrella cooperation border region

3.2.2. Data analysis

Interviews

The interviews will be analysed in the software Atlas.Ti, a specialised program for analysing and processing qualitative data. The analysis was done by coding the transcripts, comparing the codes and finding a correlation to the conceptual model. According to Williams & Moser (2019), the optimal coding process consists of three steps. Open coding is the first step, where distinct themes and concepts are identified. Second, axial coding narrows the amount of broad(er) codes back to a lower number with more specific codes. The last step is called selective coding, where the axial codes are grouped into bigger themes. After analysing in Atlas.Ti, the results of the interviews were incorporated into the results, and the interrelationships between the components of the conceptual model were also examined. These were included and further explained in the next chapter, the results.

3.3. Validity and Reliability of the Research

When conducting research, it is important to make sure that the research has significant validity and reliability (Van Thiel, 2014). Creswell and Creswell (2018) define qualitative validity as “one of the strengths of qualitative research and is based on determining whether the findings are accurate from the standpoint of the researcher, the participant, or the readers of an account” (p. 314). Using multiple methods forms, a triangulation of different data sources will be used to increase the validity of the research (Van Thiel, 2014). It must be certain that the theoretical framework is based on existing theories. This way, it can be shown beforehand whether this effect is there, and then only what the extent is in this case study. In this case, an existing theory will be used, only it will be adapted to this case as the research progresses. As a result, the internal validity will be high at the beginning of the study, but as the study progresses, it will have to be proven through good research that the adjustments to the theory are correct to continue to guarantee internal validity.

As for reliability, divides can be made, the consistency and accuracy of research. The consistency in this research is sufficient since, in every case, the same questions were asked. However, since the local context is different in each case, the answers given differ between the different cases. The phrasing of questions is also important here. The interviewee needs to ask good, clear questions that match your theoretical framework and are not too vague. This way, you will get the answers you want. Feedback from experienced researchers increases the chances that these are the right research methods for this study.

4. Background information

In conducting the various interviews, certain government layers and policies often emerged that require some background knowledge. The most important ones are explained below. It is divided into Germany and the Netherlands, and the different regions.

Structure of government

In both countries, the structure of the different layers of government is different. As you can see in Table 4, the German government is made up of one or two more layers. The powers of a government are also distributed differently. For example, a German municipality has far fewer responsibilities than a Dutch municipality. There is also another difference between the two federal states with which the Netherlands borders. North Rhine-Westphalia, for instance, has an extra administrative layer, namely the *Regierungsbezirke* between the Federal State and the *Kreis*. A *Kreis* is a group of municipalities that make decisions together. Lower Saxony has a layer between the *Kreis* and municipalities, the *Samtgemeinde*, a collective of municipalities working together.

Table 4 - Government Structure

North Rhine-Westphalia	Lower Saxony	Netherlands
Federal Level	Federal Level	State
Federal State (<i>Bundesländer</i>)	Federal State (<i>Bundesländer</i>)	Province (<i>Provincie</i>)
Governmental Districts (<i>Regierungsbezirke</i>)		
Rural Districts (<i>Kreis</i>)	Rural Districts (<i>Kreis</i>)	Municipalities (<i>Gemeente</i>)
Municipalities (<i>Gemeinde</i>)	Collective municipalities (<i>Samtgemeinde</i>)	
		Municipalities (<i>Gemeinde</i>)

Differences in spatial planning terms

Concepts in spatial planning vary from country to country. In the diagram below, the main concepts in Table 5 have been translated as best as possible into a kind of similar concept in each language. Even though most terms have a translation, what is meant varies.

An example is an Environmental Impact Assessment (EIA). In both the Netherlands and Germany, an IEA must be carried out for a 'large' wind farm. However, the term 'large' is very different in both countries. In the Netherlands, a wind farm is considered large if more than 3 turbines are installed; an IEA is therefore required. In Germany, an IEA is only required for 20 turbines.

Table 5 - Spatial planning terms

English	Dutch	German
Zoning plan	Bestemmingsplan	Bebauungsplan
Land-use plan	Structuurvisie	Flächennutzungsplan
Environmental Impact Assessment (EIA)	Milieu Effect Rapportage (MER)	Umweltverträglichkeitsprüfung (UVP)
Spatial planning plans	Ruimtelijke plannen	Raumordnungspläne
Public participation	Inspraak	Öffentlichkeitsbeteiligung
Submit an opinion / View	Zienswijzen	Stellungnahme

Complaint	Beroep	Klage
Building permit	Bouwvergunning	Baugenehmigung

4.1. Policy

The main policies of the different levels of government are explained below. Germany is divided into national and state. The Netherlands is divided into national and provincial. Also added are European policies and cross-border treaties that affect wind farm development in border regions.

4.1.1. European policy

The European Union (EU) aims to reduce greenhouse gas emissions by 55% by 2030 and be climate-neutral by 2050 (European Parliament, 2021). EU countries still rely heavily on the use of natural gas (*Regulation - 2022/2577 - EN - EUR-LEX*, 2022). Following the Russian Federation's war of aggression against Ukraine and restrictions on natural gas supplies that came with it, the EU saw this as a threat to member states' security of supply. For this reason, the temporary EU Emergency Regulation establishing a framework to accelerate the deployment of renewable energy was created in late 2022. It aims at speeding up and simplifying authorisation procedures for renewable energy generation and the associated easing of energy grids.

The EU has more policies for renewable energy development, such as the Renewable Energy Directive (RED), but they are not directly applicable to this case study.

4.1.2. German Policy

Germany is a leader in Europe in terms of installed capacity of onshore wind and solar power. Renewable electricity has been the primary focus of the “Energiewende”, the German term for the energy transition that has become a movement (Chranioti et al., 2022). However, it turned out that after the war between Russia and Ukraine broke out, Germany was not as independent of Russian gas after all as they would like. Renewable energy is cited as the “highest public interest” and rapid expansion is a “matter of national security”.

After the EU announced loosening measures, Germany itself changed its policy and made the loosening measures possible for German developers. This set of new measures was announced on the 6th of April in 2022 and is called the ‘Easter package’. The German government's ambition is for electricity supply to be based almost entirely on renewables by 2035 (Hausding, 2022). By 2030, this number should already be at 80% (Bundesministerium für Wirtschaft und Energie, 2022). By accelerating the expansion of renewables and electrification, Germany aims to rapidly reduce its dependence on imports of fossil fuels, especially natural gas. This development is seen as the biggest energy market reform in years (Hausding, 2022). To achieve this, many new areas are being made available for the expansion of photovoltaics, municipalities are becoming more involved than before in onshore wind and photovoltaics, and more and more low-wind sites are being developed (Bundesministerium für Wirtschaft und Energie, 2022). Landscape protection areas can also be included in the search for areas for wind energy development (Die Bundesregierung, 2023a).

With the Planning Acceleration Package II (“Summer Package”), the Federal Government is now consistently pursuing this course (Presse- und Informationsamt der Bundesregierung, 2022). On

15 June 2022, with the first part of the package, the government set the course to substantially accelerate the expansion of onshore wind energy and achieve the 2% target for the designation of areas for onshore wind energy. In 2022, it was 0.5 per cent; the intermediate target is 1.4 per cent by the end of 2026 (Chranioti et al., 2022). The second part of the package, adopted by the cabinet on 6 July 2022, introduces effective acceleration measures with positive effects on accelerated infrastructure development and spatial planning procedures as a whole (Presse- und Informationsamt der Bundesregierung, 2022). By eliminating duplicate assessments in planning and by linking spatial planning and approval procedures more closely, the lead time of spatial planning procedures (in future: spatial impact assessment), including the time-consuming preparation phase, is significantly reduced from seven to two years.

The distance standard may be determined by the States themselves. However, the national government has indicated that a minimum distance of 1,000 metres from a turbine may be included in the state policy. If they do not meet their area target, the state-specific distance rules no longer apply (Die Bundesregierung, 2023b). However, failure to meet the area targets on certain dates will affect the planning of the federal states in the future.

Procedure

Besides the differences in laws and regulations between the two countries, there are also differences between the public participation options available in both countries (Deutsch-Niederländische Raumordnungskommission et al., 2016). In various sources made available from the different governments, it is summarised what the options are for citizens to be able to object to German plans. The main points are listed below.

- The competent authority for a wind energy project depends on the project. This can be the municipality, Kreis or region that issues the permits for it;
- The German competent authority is obliged to include, from relevant documents, at least a generally understandable and non-technical Dutch-language description of the environmental effects;
- Anyone may submit a view on a project in Germany. However, not everyone is an affected stakeholder. Only when your interests are impacted are you an affected stakeholder. So, if a person lives 100 km away from the wind farm, the view cannot be about noise pollution, for example.

4.1.3. Border-crossing policies

Treaty of Meppen

The Treaty of Meppen was concluded in 1824 by the Kingdom of the Netherlands and the then Kingdom of Hanover (Grens-Tractaat van Meppen). This treaty established, among other things, that it is forbidden to build within a zone 376 metres from the Dutch-German land border (Gemeente Hardenberg, n.d.). This prohibition applies to both sides of the border.

In 1975, agreements were made on how to deal with the current treaty, as the original treaty was only about building houses. The Dutch and German governments agreed to build within the zone unless one of the governments objected. Active action must therefore be taken to mark the effect of the treaty. However, invoking the treaty is only possible when a building permit is applied for; this is not yet possible when designating a search area or changing a zoning plan. In the case of

windfarms (German wind farms close to the Dutch border), the Dutch government (a province) would have to actively object to the German government (German State) when a building application is made to build a wind turbine within the zone of 376 metres from the border.

The decisions from the treaty date back as far as 1824, which is a very long time ago. As a result, there is a fuss about whether this treaty is still up to date. The former border between the two kingdoms almost corresponds to the current border between the German state of Lower Saxony (Niedersachsen) and the Netherlands (Groningen, Drenthe, Overijssel). In 1960, the Netherlands and Germany redefined the borders between the two countries by concluding a Border Treaty. This stipulated that the treaties of Meppen, Aachen (relevant for Limburg) and Kleve (relevant to Gelderland) would continue to apply (Provinciale Staten Limburg, 2025). This means that the provinces of Groningen, Drenthe and Overijssel do fall within the scope of the Meppen Boundary Treaty, but Gelderland and Limburg do not.

Treaty of Aarhus

To work properly with each other at the European level, everyone must have the right to access certain information. In environmental matters, the Aarhus Treaty was created for this purpose in 1998 (European Union, 2025). In both the Netherlands and Germany, this law has been implemented in national legislation. Despite the European Union's loosening of the law, the Aarhus Convention remains in place according to Regulation (EU) 2022/2577 rule 20 (European Union, 2022).

The Aarhus Treaty regulates that the public (individuals and associations representing them) have the right to access environmental information and participate in decision-making on environmental matters. The Aarhus Treaty also regulates access to justice when public authorities fail to comply with these rights and environmental legislation.

Treaty of Espoo

The Espoo Convention (1991) deals with EIA in a transboundary context. For significant environmental impacts across borders, authorities and residents in the neighbouring country should be involved in an EIA in the same way as in their own country. Conversely, an administrative body in the Netherlands can also be informed by another country about potentially significant environmental effects in the Netherlands.

4.2. Background information on the border region

Cultural differences

Even though Germany and the Netherlands are close to each other, there are some differences in culture that are also noticeable when it comes to wind turbine plans (Schmidt, 2021). For instance, hierarchy appears to be very important in Germany, while in the Netherlands, this is much less of an issue.

This can be explained historically. For instance, the more relaxed manners in the Netherlands, the flat organisational structures and the quest for consensus can be explained by a phenomenon called 'egalitarianism'. The premise that all people are equal. However, the situation on the German side is different; here, the nobility had much more influence. There was no egalitarianism; the population was, by necessity, authority loyal. Following the principle *Cuius regio, eius religio* ('whose region, his religion'), the local princes also determined the religion of

their subjects. In the Netherlands, the nobility played a less prominent role. Thus, a culture emerged early on with a low power distance on the Dutch side and with a relatively high power distance on the German side.

This can still be seen in today's politics. A German resident is much more likely to agree with a decision the government makes than a Dutch resident. The latter will oppose it much faster as it concerns like-minded people.

5. Results

5.1. Case one: Hardenberg

5.1.1. Information about the case

Along the eastern border of the municipality of Hardenberg, there are plans to construct wind turbines in the adjacent German municipalities of Wielen, Wilsum, and Itterbeck. These fall under the joint municipal partnership (Samtgemeinde) of Uelsen. The developments involve three separate projects, which are outlined below.

Itterbeck and Wielen

Two areas in the municipalities of Wielen and Itterbeck are designated for wind energy development (Figure 7):

- Six wind turbines are planned along the eastern border, near Klosterhaar and Bilderberg (Teilbereiche Nord, Süd and West);
- An additional eight turbines are proposed 3.3 kilometres further east (Teilbereich Ost).

In 2023, the Samtgemeinde Uelsen requested input from the municipality of Hardenberg regarding key concerns, particularly for the environmental impact assessment (EIA). The building plans and the proposed zoning changes, including the EIA, were available for public consultation from 31 March to 30 April 2025. During this period, residents of Hardenberg also had the opportunity to submit their views.

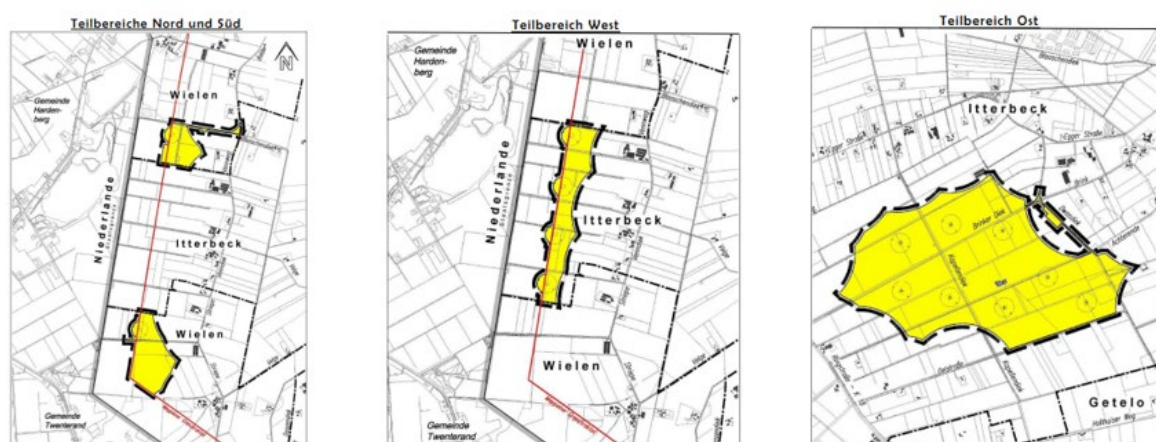


Figure 7 - Maps of projects in Itterbeck and Wielen (Samtgemeinde Uelsen, n.d.)

Windpark Wielener Naturstrom GbR

The developer Wielener Naturstrom GbR aims to construct wind turbines on both sides of the L43 road in Wielen (Figure 8). The Wielen municipal council and the Uelsen association have expressed support for wind energy generation at this location and have requested the initiation of spatial planning procedures. An independent agency is currently assessing the feasibility of building turbines in this predominantly agricultural and forested area. If deemed viable, residents in Hardenberg living near the site will also be involved in the process.

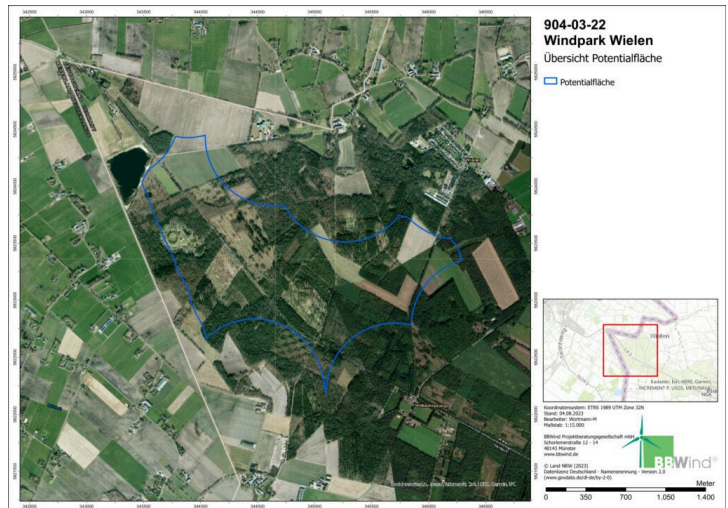


Figure 8 - Map of the project area Windfarm Wielen (blue line) (Naturstrom Wielen, n.d.)

Windpark Wilsum



Figure 9 - Map of project area Wilsum (Raiffeisenwindpark Wilsum, 2025)

Raiffeisenwindpark Wilsum Projekterungs GmbH has proposed the construction of ten wind turbines in Wilsum, approximately one kilometre east of the Dutch villages of Radewijk and Achterin (Figure 9). The draft amendment to the zoning plan was open for public consultation in April 2025, allowing residents of Hardenberg to submit their responses as well.

5.1.2. Conducted interviews

Two interviews were conducted for this case study. It emerged that no residents were actively involved in the plans. Attempts were made to contact residents in the area, but without result. Considering the other cases where interviews with residents were conducted, that perspective was adequately represented.

Table 6 - Interviews Hardenberg

Date	Who?	Relation to the case
9-4-25	Werner ten Kate	Alderman Hardenberg
23-4-25	Bouke Vogelaar	Municipality employee Hardenberg

Two interviews were conducted for this case study. It emerged that no residents were actively involved in the plans. Attempts were made to contact residents in the area, but without result. Considering the other cases where interviews with residents were conducted, that perspective was adequately represented.

5.1.3. Context dimension

To fully understand the entire process, it is essential to have sufficient **knowledge** of the subject matter. In the municipality of Hardenberg, for instance, Bouke has experience in both advising on wind projects and now also understands the policy side through his current role at the municipality. However, even with his extensive experience, it remains difficult to fully grasp the process. According to him, *“The biggest problem lies in the literal words you have to use for a zoning plan, for example, it is slightly different in Germany.”*

Werner studied geodesy, majoring in planning legal data. He has worked at the land registry and has long been active in politics in various municipalities. His current portfolio includes the energy transition, in which he already has experience from his position as programme manager for energy in the province of Drenthe.

Despite the many plans, the issue does not seem to resonate strongly with residents, at least not to the extent that an action group has been formed. Werner explained, *“This could be because the parks are a bit further from the border and are located in an area where not many people live.”* Regarding the plans in Wielen, however, he did expect some turmoil, as *“it was planned in a nature reserve.”*

As explained earlier, no residents were interviewed for this case study. As a result, topics such as **place attachment** and **place identity** were not addressed during the interviews.

At the **country level**, Bouke sees potential for developing national or European policies to better coordinate cross-border projects. These could help align planning and expectations between neighbouring countries. However, such coordination also comes with challenges. As Bouke notes, *“That would be very nice. But the tricky thing is, you have to define that for every development you are going to operate in the border area. And then, again, it becomes a lot of extra regulation.”*

An example of existing efforts at the country level is the Treaty of Meppen, which was discussed in the background chapter and also plays a role in this case study. However, Bouke mainly sees the downsides of the Treaty’s current use. He explains, *“We found something we once agreed on. Which we might use as an opposition, say, as if to prevent something. Which will not necessarily promote dialogue. Then one of the parties can say, okay, we will put it 376 meters away from the border and then suddenly it is fine, while that actually, of course, still has cross-border effects.”*

5.1.4. Process dimension

The municipality of Hardenberg has designated its search areas for wind energy, showing that the local government is not opposed to wind development. However, the current search areas under discussion fall under the jurisdiction of the province of Overijssel, which is the competent authority. As a result, residents have not been fully involved in the selection of these locations. **Involvement in local policies** was approached differently when the municipality worked on its search areas; in that case, there was a deliberate attempt to adopt more bottom-up strategies, following strong resistance to earlier top-down decision-making.

Procedural justice has been reasonably well maintained throughout the planning and consultation phases. Germany provides updates when developments arise and when public

consultation periods are open, and the municipality of Hardenberg relays this information to its residents via its website. In return, Hardenberg notifies the German municipality of Uelsen when they intend to submit an official view and sends it by post, as part of the formal procedure. As Bouke explains, *“It is a bit out of politeness that you inform each other a bit before the whole official procedure.”* There are clear differences in national approaches as well. According to Werner, wind energy development in the Netherlands is a highly political issue, unlike in Germany, where it follows a more technical and regulated route. *“With us, it is a whole political discussion. Everyone has an opinion on it, and the siting of wind turbines is part of the debate in the municipal and provincial councils. The Germans do it very differently, having established rules together about where wind can and cannot go.”*

Distributive justice plays a key role in this case study, as wind energy developments are planned on both sides of the Dutch-German border. This creates a situation where the burdens—such as noise, visual disturbance, or environmental impact—are not only felt on one side. Concerns have been raised about the cumulative impact of wind turbines in the border area. The municipality of Hardenberg emphasises the need for a fair distribution of both the burdens and the benefits of wind energy projects. Their view is that residents from both countries should be able to claim compensation for any negative effects. Werner points out that the German system already ensures financial benefits for municipalities hosting turbines: *“For the local municipality, it is arranged that if there are wind turbines, part of the proceeds will go to the local municipality. And those can be quite substantial amounts that are a very big source of revenue for those small municipalities.”*

In terms of **recognitive justice**, maintaining good contact with the municipality of Uelsen helps strengthen mutual respect and recognition across the border. However, it is acknowledged that residents—on both sides—can feel frustrated about the limited control they have over the projects and the extent to which they are kept informed. Bouke notes that this issue is not exclusive to international cooperation. Even in projects that take place solely within the Netherlands, residents often do not feel recognised by the government in their interests, regardless of whether the responsible authority is local, provincial, or national.

Involvement in site selection plays a critical role in this cross-border wind energy case. As mentioned earlier, plans for wind turbines exist on both sides of the border. However, the planning processes remain largely independent, and the visual or environmental impacts are often only considered up to the national boundary. This leaves residents in the border area feeling surrounded by turbines, experiencing the cumulative effects without integrated spatial planning. The two municipalities do not jointly determine where wind farms will be located; instead, each follows its procedures. As Werner explains, *“They do take into account that, but that is still according to an existing set of rules. Which does create a bit of a blind spot for the part that is on the other side of the border.”*

Despite these limitations, **process transparency** is relatively strong. Information is generally well shared between the municipalities. The municipality of Hardenberg receives updates from Uelsen and publishes relevant information about each project on its website. Likewise, the German municipality makes information available for residents on its local site. Still, Werner

acknowledges that keeping information flowing is not always smooth: *“But that is not because they do not want to, but that is because they sometimes forget again.”*

The quality of communication between the municipalities is comparatively good when viewed alongside other cross-border cases. Periodic consultations and consistent contact via email and phone contribute positively to the working relationship. However, communication with residents remains more challenging. It is often unclear who is responsible for this task, leading to delays and confusion. As a result, residents may receive updates later than intended. Furthermore, how information is shared—and where residents can turn with questions or concerns—is crucial. Bouke points out, *“You should not be very super positive about that (the turbines) or anything, but grant some insight. It is built, you can do your reports there.”*

Finally, the **language barrier** remains a practical obstacle in cross-border cooperation. Bouke admits that he does not speak German well himself. Nonetheless, with the help of online translation tools, he is usually able to manage communication, and his German colleagues are often able to understand some Dutch. These workarounds help bridge the language gap, even if the interaction is not always seamless.

5.1.5. Impact dimension

Prevention of negative effects was not a major topic during the interviews, and no concrete measures to reduce impact were mentioned. However, it was noted in one of the later conversations that, where possible, they prefer to adopt the strictest standard from either country, to ensure a fair balance of impact on both sides of the border. An EIA is also being conducted, in which the broader consequences for the environment are being studied. As Bouke stated, *“Whether there will be a completely unliveable situation on the Dutch side, no, if it is good enough for the German residents, it could also be good enough for the Dutch residents.”*

Compensation plays a more visible role in this case, especially in the Wielen-Itterbeck project. A neighbour scheme (*buren-regeling*) has been set up, which defines several zones around the wind farm within which residents are entitled to compensation. Werner pointed out, however, that such schemes are not mandatory in Germany. Instead, a portion of the wind farm’s revenue goes directly to the municipality, which can then reinvest it into the community. This kind of financial return is not the case for Dutch municipalities or their residents. Nevertheless, Werner believes the scheme has a positive effect: *“Surely, you look at such a thing differently if every time it goes round, you will get something from it than if those proceeds only go to the owner of that mill.”*

Bouke is more sceptical about the real effect of compensation. In his view, it is unlikely to win over the strongest opponents, though it may positively influence people who were already neutral. *“I always think it's the biggest opponents that you won't win with it anyway, or so I say so. It's more people who were already fairly neutral who might then be a bit more positive about it. So, on average, it will help a bit.”*

Regarding **tolerance**, there is no major issue to report. Staff members in both municipalities have a generally positive attitude towards wind energy, provided that certain conditions are respected, particularly equal treatment across the border and consideration of cumulative effects in the region.

5.1.6. Border dimension

As indicated earlier, there are periodic consultations between the Dutch and German municipalities. In these talks, only wind issues are discussed; there are no other relevant topics in the border area at the moment. Werner also indicates that cooperation with other Dutch municipalities is much stronger than cooperation with German municipalities. It is also often difficult because of the different layers, with which layer of government to cooperate then. Nevertheless, Werner does notice that things are improving: *contacts do get a bit better again, you know, so what help do you have to invest in relationships with the Germans? Just also in personal relationships, and going there once in a while.*

5.2. Case two: Losser

5.2.1. Information about the case

In the municipality of Losser, they face two wind farms on the border. Wind farm de Lutte (half in the Netherlands and half in Germany) and wind farm Fürstliche Tannen.

Wind farm De Lutte has three to four turbines planned in the Netherlands and two on the German side of the border (Figure 10). Due to the different procedures, there are different wind farms; however, the EIA has been merged. The province of Overijssel has put a stop to all wind farms in border areas and will also not cooperate with the wind farms in Germany that are close to the border. As a result, the project is (temporarily) at a standstill. The Dutch part is located on a service area and the German part on an industrial estate along the motorway.

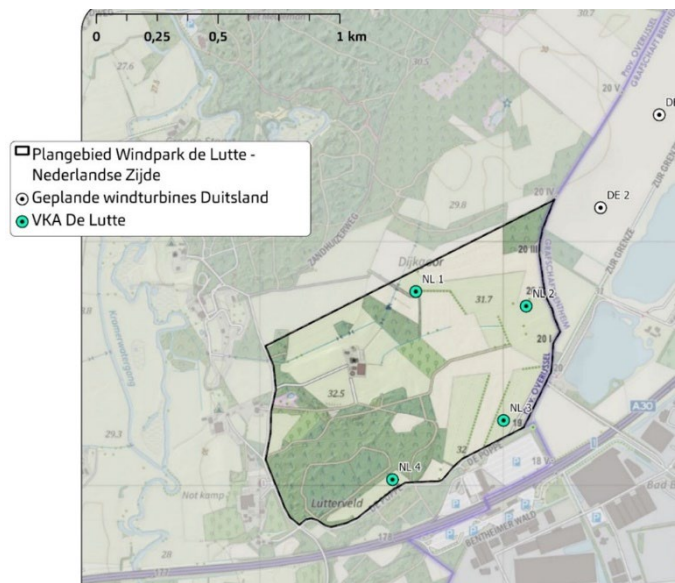


Figure 10 - Map of project area windfarm De Lutte (and German turbines) (Windpark de Lutte, 2025)



Figure 11 - Project area windfarm Fürstliche Tannen (Stadt Bad Bentheim, 2023)

Fürstliche Tannen consists of six wind turbines close to the Dutch border, near the restaurant Aarnink (Figure 11). This wind farm is planned in a piece of forest close to the border. This land belongs to the Graftschaft Bad Bentheim, which has permitted building the turbines. There are many protests against the construction of this park, partly because it is located in the forest. Lies indicate that not so long ago, a wind turbine caught fire just across the border near Losser, so they are afraid that if this were to happen to a wind turbine in a forest area, it will be impossible to put out

and the whole forest will catch fire. There are also protests on the German side against turbines in forests, so the foundation ‘*Gegen Windräder im Wald*’¹ has been set up.

5.2.2. Conducted interviews

For this case, three interviews were conducted. In Table 7, the interviews can be seen.

Table 7 - Interviews Losser

Date	Who?	Relation to the case
4-4-25	Lies ter Haar	Burger Forum (Political party in the municipal council)
4-4-25	Jan Nijhuis	Stichting Tegenwind Noord-Oost Twente (STNOT) (Foundation against wind energy development)
18-6-25	Municipality employee	A municipality employee regarding sustainable energy development

5.2.3. Context dimension

For this case study, interviews were conducted with Jan Nijhuis, Lies de Haar, and an employee of the municipality of Losser. Both Jan and Lies grew up in the border region and are actively involved in protests against German wind turbine plans. Jan has lived in de Lutte all his life and feels deeply at home there. During the conversation with Jan, a strong sense of frustration was apparent, especially regarding the proximity of the turbines: *“Why do the turbines have to be placed so close to him?”* Lies has been active in politics since 2004 and serves as a councillor for the ‘Burger Forum’. From this position, she is particularly concerned about the wind turbines in Germany, Fürstliche Tannen. The municipal employee brings 20 years of experience in sustainable energy development and is involved in the development of a wind farm in De Lutte.

Because of their **active engagement** in the plans, both Jan and Lies have gained significant knowledge about the intricacies of wind farm development over the years. Jan works in customs, a profession with virtually no overlap with wind energy issues in the area. Deeply **involved in the community**, Jan founded the Tegenwind Noordoost Twente foundation about six years ago. Since then, 28 organisations have joined the foundation, all actively opposing various wind energy projects in Overijssel. Jan is also connected with other action groups in Winterswijk and elsewhere.

During the interviews, participants were asked about their personal views and those of the municipality on **climate change**. The municipality of Losser is actively pursuing sustainability and has launched several projects, including wind energy plans. However, Jan does not see the urgency for sustainability efforts. As he put it, *“My position is very simple. There is climate change, but there is no climate crisis. Some people want to instigate the climate crisis, but that is wrong, so it is just climate change.”*

The country issues play a major role as well, especially concerning the Treaty of Meppen. At the de Lutte wind farm, development has even been halted until there is greater clarity about how the treaty applies. Jan himself does not see the need to change the treaty and expects that resolving the issue could take years. The municipal employee also mentioned the treaty, noting that while

¹ <https://www.gegen-windraeder-im-wald.de/>

the competent authority can invoke it, he does not expect this to happen. He explained, *“If only the Dutch side were to build wind turbines in that treaty zone, Germany could object. By appealing based on that treaty and vice versa, of course. But given that wind turbines will end up in the treaty zone here on both sides, both the Netherlands and Germany have already indicated, we are not going to invoke that treaty.”* He also pointed out that the issue has since become national and that a higher-level solution is being sought to remove ambiguity about wind energy development regarding the treaty.

5.2.4. Process dimension

Justice is a key theme in **local involvement** and fairness in wind energy projects. Lies notes that opinions among residents vary, but once concrete plans emerge, opposition increases.

Views on **procedural justice** differ. Jan feels the process is poorly managed, with minimal resident involvement. In the German part of the De Lutte project, he says inhabitants were not properly included, and the translation of documents is lacking. Still, he filed several objections and acknowledged that residents are now informed when they can respond.

In contrast, the municipal employee describes good cooperation with Germany, citing regular contact and a strong German desire for joint implementation. However, differing procedures and electricity exchange restrictions complicate cooperation. A major procedural difference is in handling objections: in Germany, residents must prove their claims, often funding their research. In the Netherlands, residents may raise concerns freely, and the project developer bears the research burden. This makes objections in Germany less likely and the procedure faster.

For **distributive justice**, Jan sees an unequal distribution of benefits and burdens. He claims the developer only focuses on profit, with significant financial gain limited to promoters and landowners: *“It is only about money, money, money.”*

Recognitive justice is also lacking. Jan’s Dutch foundation cannot file objections in Germany without assistance from a German organisation. Though they hired a lawyer, the costs of €250/hour pose a financial burden. Lies adds that residents must be well-informed before feeling unrecognised and encourages people to base their judgment on broader information, not a single source.

Trust plays a major role in involvement and communication. Residents were not included in site selection on either side of the border. Jan notes that involvement only began after locations were chosen and feels earlier inclusion would have made the process fairer. Lies shares that the Fürstliche Tannen site was chosen due to the Count of Bentheim owning nearby forest, ensuring it would not be visible from his castle. The municipal employee calls this a classic case of NIMBY: resistance only arises when plans affect people’s direct surroundings. He adds that there is a perception that Germany deliberately places turbines near the Dutch border. However, he explains that location selection is difficult in both countries due to space limits, noise restrictions, and minimum distance requirements.

Regarding **process transparency**, Lies emphasises that residents are impacted and deserve a chance to respond. She criticises Germany’s handling of this and raised the issue with Bad Bentheim, which was then covered in the Losser municipal magazine, though the outcome remains unclear. Jan also experienced a lack of transparency. When requesting documents, he

got contradictory responses from the province of Overijssel and Bad Bentheim. He became frustrated after discovering an official had lied. Meanwhile, the municipal employee highlights that communication is open: meetings are held, and documents are publicly accessible via the municipal website.

Communication quality is also debated. Jan finds it difficult for residents to make contact with Germany. Lies, however, maintains contacts with the German group *Gegen Wind im Wald* (GWW) and the newspaper *Grafschafter Nachrichten*, which keep her updated. She criticises the poor communication and says it undermines good neighbourliness.

The municipal employee claims good contact exists with the German side, with regular consultations via email and phone. He underlines that clear resident communication is essential to project success: *"We have noticed that communication is extremely important. There are many misconceptions. When we respond jointly, questions are answered from four perspectives, resulting in a complete answer. Different answers cause confusion and concern, something to avoid in such projects."*

As for the **language barrier**, Lies and Jan report no issues speaking German. Jan says he learned the language growing up watching German TV. Lies notes that technical subjects can be difficult to understand precisely. The municipal employee explains that communication is conducted in a mix of Dutch, German, and English, which works well in practice.

5.2.5. Impact dimension

Jan and Lies both strongly oppose the placement of wind turbines near De Lutte and in the Fürstliche Tannen area. **Prevention** is a central concern for both, particularly in terms of environmental and health impacts. Lies expressed worry about the turbines being located in forested areas, fearing for nature and safety, especially with increasing periods of drought. She referred to a recent incident where a wind turbine near Losser caught fire, suggesting that such an event in a forest could have serious consequences. Additionally, she pointed to the proximity of nature reserves such as Oelemars and Zandbergen, and nearby Natura 2000 sites. Lies even expressed surprise that *"the boundary of the Natura 2000 area has even been moved up to make it possible. Then you also think, yes, how is it possible? I mean, the area is still there as it always was, but then they said, well, slide that a little less northwards and then that project fits in."*

Jan's concerns were more focused on human health and quality of life. He emphasised the extreme height of the turbines, the potential noise issues, and the possible emission of toxic substances. He is particularly alarmed by the effects of low-frequency noise, arguing that too little research has been done on this phenomenon. He advocates for a minimum distance standard of four times the turbine's tip height from residences, citing Denmark as an example.

A municipal official, however, takes a different view, stating that no additional measures are needed as long as the turbines meet existing legal requirements. In his words: *"Look, wind turbines have to meet certain requirements, and these are defined in laws and regulations. And if it complies, then it gets permits, and it may be built. And if it does not comply, then it does not get permits and may not be built."* From his perspective, following regulations is sufficient to mitigate any negative effects.

When it comes to **compensation**, there is uncertainty about how benefits will be distributed. Lies had heard that compensation is intended, but it is unclear what form this will take or whether Dutch residents will be included. Nevertheless, she believes it could positively influence public acceptance. She also suggested that it would be beneficial if residents could directly use the generated electricity, for instance by laying a cable across the border. Jan, however, clarified that this is legally not possible. He recounted how a provincial official in Overijssel initially stated it would happen but later reversed the claim, admitting that cross-border electricity cables are not allowed. Lies also mentioned that wind turbines in Germany help lower electricity prices. If such a benefit could be realised in the Netherlands, it might help address the ongoing issue of high energy costs.

The municipal employee emphasised that residents typically only support wind projects if they see a financial benefit, but stressed the economic limits of such arrangements: *"The margins on these types of wind projects are generally not huge. It is not like in the past that these kinds of wind projects made lots of money. So the moment that huge fees are paid to residents... yes, then the wind farm runs at a loss and then, and then it just does not get there."*

Regarding **local ownership**, Jan noted that it is not possible in Germany for surrounding communities to own part of the turbines - the developer and landowner retain full ownership. The municipal employee confirmed this, adding that in the current situation, Dutch residents owning part of a German wind farm is legally and practically too complex.

5.2.6. Border dimension

Cooperation across the border does happen, according to Lies. She understands that there is good contact with Germany on topics such as safety. But when it comes to wind turbines, they are not quite on the same page, and it is difficult to cooperate. Jan also says that cooperation with Bad Bentheim is very poor; he feels he is not recognised. Lies also adds that all projects in border areas often encounter problems, even when there are plans on a municipal border.

5.3. Case three: Winterswijk and Rekken

5.3.1. Information about the case

At the border of the Dutch municipality of Winterswijk, there are plans to construct wind turbines in the neighbouring German municipalities of Südlohn and Rhede. These plans include the installation of 12 wind turbines, situated close to the Dutch hamlets of Ratum, Kotten, and 't Woold (Figure 13).

Along the border of the municipality of Berkelland, similar plans exist for wind turbines near the Dutch village of Rekken. These turbines are planned within a designated search area in Wennewick and Crosewick-Nord (Germany), as illustrated in Figure 12. There are two other search areas in the German municipality of Vreden. However, because those are located further from the Dutch border, they are not included in the scope of this thesis.



Figure 12 - Map of cases near Rekken (It.Nrw & Nordrhein-Westfalen, 2025)

For this research, the areas of Winterswijk and Rekken (Berkelland) are treated as one combined case. This is due to the close cooperation between both Dutch municipalities and the fact that they share a border with the German municipality of Vreden. Nevertheless, the wind energy projects near each border section are separate and distinct, as described above.



Figure 13 - Maps of project areas near Winterswijk (Winterswijk (2025a), Winterswijk (2025b))

5.3.2. Conducted interviews

Several people were interviewed for this case study. The table below shows these and when they took place.

Table 8 - Interviews Rekken/Winterswijk

Date	Who?	Relation to the case
8-4-25	Karin Pierik	Resident Winterswijk
10-4-25	Inge Waarlo	Municipality employee Berkelland
16-4-25	Gert Hans	Municipality employee Berkelland
17-4-25	Kristel Wolterink	Municipality employee Winterswijk
18-4-25	Johan Voortman	Resident Rekken (Berkelland)

5.3.3. Context dimension

Place attachment emerges strongly among locals. Johan Voortman, who grew up in Rekken, “feels very much at home,” has been deeply involved in the community, participating in the local football club and playing an active role in the village cooperative. As he puts it: “Whoever is farther away from a wind turbine will care less, right? The closer you are, the more it matters.” Karin, from Winterswijk, similarly feels rooted in the border region, arguing that the landscape—with its quiet nature, simplicity, and fewer external stimuli—offers a kind of peace that urban environments lack.

In Rekken, Gert Hans, a senior advisor for physical living environment, is professionally involved in wind energy planning. He works closely with Inge Waarlo, the area contact person, who acts as liaison between the municipality and residents through the village cooperative. Johan is both a resident and a cooperative member, deeply engaged with the turbine issue. He admits that being immersed in the topic makes him notice turbines constantly: wind direction, noise, motion, and operation. In his words, “for five or six days a week, it’s on my mind.” Over in Winterswijk, Karin Pierick has been dedicating herself full-time for 1.5 years to opposing border wind turbines.

Knowledge about the issue varies depending on involvement: in Rekken, people in key roles (Gert, Inge) are highly informed and motivated, while in Winterswijk, Karin represents deep community engagement.

The conception of the environment also differs. The municipality of Eibergen designated its search area (Search Area K) for wind energy, while Winterswijk is openly opposed. Johan acknowledges that turbines may not look appealing, “*a bit of horizon pollution*”, but accepts that some new energy infrastructure will be necessary in the future.

Community cohesion shows interesting dynamics. In Rekken, there is a sense of acceptance rooted in local culture and respect for authority. Inge observes that, although wind turbines serve as a “common enemy” that unites several local groups, there are two distinct activist groups with different approaches: one cooperative-oriented group aims for process and relationship building, while a more hard-line group sees research requirements as superficial. This diversity highlights new connections but does not unify the entire village. Inge notes, “*There is some shared purpose, a joint struggle, but even in that struggle, there are different tactics.*” She believes the cooperative approach fosters better relationships than divisive tactics. In Winterswijk, Karin describes a positive, closely knit neighbourhood engaging actively with local politics and enjoying a friendly, welcoming atmosphere.

At the **Country** and European levels, regulatory frameworks play key roles. Gert Hans points out that while European legislation sets general frameworks, “*national legislation is different everywhere,*” and translating EU rules into national law often introduces complications. At the national level, Jan Voortman emphasises that there are strict regulations requiring turbines to be built at a defined distance from the border, referencing both the Espoo Convention and the Meppen Treaty. Karin confirms: “*Several provinces, including Overijssel, have called for a halt in German wind projects until the Meppen Treaty is properly applied.*”

She explains that since German reunification in the 1990s, the treaty has applied to the entire border, from Groningen to Limburg. According to Karin, the Netherlands is reluctant to invoke it but cannot ignore it—it is a binding agreement between the Kingdom and the Federal Republic of Germany. She adds that they have sought help from Members of the European Parliament, and believe it is now up to Den Haag and Berlin to resolve this impasse. Until then, she supports pressing Germany to suspend planning under the Meppen Treaty until clearer guidelines are agreed upon at the national level. However, as explained in the background chapter, the Treaty of Meppen does not apply here.

5.3.4. Process dimension

Involvement in local policies plays a major role in the construction of new wind turbines in the German municipality of Vreden, near the Dutch border. This has caused concern among residents of Rekken (Berkelland) and Winterswijk. Although these turbines are built on German soil, their effects, such as noise pollution and changes to the landscape, are also felt in the Netherlands. Yet, residents feel they are barely heard or involved, raising questions of different forms of justice.

Who decides what happens where? People in Rekken note that decisions in Germany directly impact their surroundings, without them having any say. One resident comments: “*They call it an*

‘Überwinning’, extra wind energy that Vreden does not need. They do it purely for Germany, to meet requirements, get subsidies, and earn extra income.” In Winterswijk, a similar concern arises: *“Germany has even imposed a moratorium on new wind turbines due to uncontrolled proliferation.”* Still, Vreden seems to rush through permits before stricter rules are enforced.

Procedural justice plays a big role in the complexity of cross-border governance. Residents find it difficult to understand the different legal systems and procedures. Gert Hans notes: *“Every area works differently. The extra layers of government make it hard to follow.”*

Efforts have been made to include Dutch residents. Inge Waarlo explains that Vreden provided Dutch translations and interpreters at meetings. Dutch citizens could submit input during the preparatory phase, although the formal German procedure had not yet begun. *“Dutch people already find our procedures complicated, let alone the German system,”* she says.

Still, many feel participation is limited. Johan Voortman points out: *“We can ask for good information, but we cannot change German law. We did not vote in Germany.”* Legal barriers also exist: a foundation was set up in Rekken to take legal steps, but it was not recognised in Germany because such foundations must exist for at least three years. *“You find out too late”,* Johan adds.

Distributive justice is another concern. Residents feel they bear the burdens, such as reduced property value, while the financial benefits go to the German municipality. *“The value of your house decreases, but there is no compensation,”* Johan says. In Germany, there is no system like the Dutch *‘planschade’*. German border residents are also sceptical: *“You want to be a good neighbour, but you are robbing yourself if you accept it.”*

Recognitive justice concerns whether people feel taken seriously. Many believe decisions have already been made. At one meeting, Dutch visitors frequently interrupted German speakers. *“The Germans felt: let the Dutch be quiet so the speaker can talk,”* says Gert Hans. He notes cultural differences, Dutch people tend to speak up quickly, while Germans are more inclined to listen first.

Inge Waarlo adds: *“We have been informed, but we do not feel truly heard. We cannot participate in the German democratic process while our environment is changing.”* In Winterswijk, exclusion is felt even more strongly since permits are already being processed. Karin from Winterswijk says: *“We are not allowed to speak in Germany because we are not citizens there. Germans can speak at our council meetings.”*

People recognise legal differences, but many feel equality before the law does not equal justice. As Gert Hans says, *“You can be taken seriously without getting your way. But not being taken seriously feels like being rejected.”*

On **process transparency**, residents in Rekken see clear cultural differences. *“In the Netherlands, formal steps are seen as important and cause unrest. In Germany, it is just a formality,”* Gert Hans explains. He believes German citizens are more obedient toward their local government, while Dutch citizens immediately form opinions, making processes more complex.

Inge Waarlo observes that Germany does not proactively share documents, although they are accessible. *“When asked, they reply quickly. But they are not used to proactively sharing like we are.”* She gives an example where only after a resident spotted something did the issue get

attention in Berkelland. *“Nothing was actively shared. Not always out of reluctance, just different expectations.”*

Johan Voortman notes that an information evening was only organised after long urging, six months into the process. Only then were Berkelland and Winterswijk informed. Johan adds that Münster’s regional plans were approved earlier, but feedback is slow: *“I have been looking for answers for weeks, and only yesterday I got something.”*

In Winterswijk, transparency problems are even worse. Karin says: *“Germany did not inform us; we had to find everything ourselves. I spoke regularly at council meetings to push for action.”* Eventually, Winterswijk appointed a contact person, and cooperation improved. However, she says, *“We only see what the German municipality publishes, which is very limited. We also ask North Rhine-Westphalia for information, but they do not release much, especially now that legal procedures are ongoing.”* Winterswijk, Gelderland province, and nature associations have all hired lawyers. Karin says, *“Germany understandably does not want to share much. Still, we need more openness.”*

On **communication** in Rekken, Gert Hans says: *“We are informed by our mayor in Vreden. When we ask questions, we usually get answers quickly.”* Annual joint council meetings between the municipalities also discuss this issue. Inge Waarlo confirms that German officials are friendly and responsive. Yet Johan Voortman finds it hard for citizens to reach officials in Vreden, Ahaus, or Münster: *“We are barely heard. We depend on municipalities. Each time, we only get a piece of the story.”* Johan also describes frequent contact between Gelderland province, the Winterswijk working group, nature organisations, and local care centres, but says the process remains difficult. In Winterswijk, Karin set up a working group and maintains contact with the municipality, the province, the national government, and other border groups. This highlights the importance of good communication.

Regarding the language barrier, Rekken residents note that Germany provides official documents in both German and Dutch, something that is legally required. Dutch write in Dutch, Germans reply in German, and translation is used when needed. Bilingual meetings can be slow, as every question and answer must be translated. Inge says technical vocabulary often sounds like *“abracadabra,”* even to officials, especially since planning procedures differ between countries.

Johan Voortman notes that translation apps like CoPilot help. Initially, all documents were carefully translated. Now, some letters are sent only in Dutch, which Johan finds acceptable: *“Both sides are affected and should be able to manage.”*

In Winterswijk, the language barrier is a bigger problem. Karin says: *“If wind turbines are built so close to the Dutch border, Germany must provide all information in two languages. That has not happened. We only get German. It is very hard to follow the rules in both countries.”* Despite pointing out this legal obligation, Karin says many German authorities, especially in North Rhine-Westphalia or Düsseldorf, continue to communicate only in German. *“We translate our messages to German using DeepL, but Germany does not do the same. They only reply in German.”*

5.3.5. Impact dimension

Plans to build wind turbines near the Dutch-German border are raising serious concerns in Dutch villages like Rekken and Winterswijk. In Germany, turbines must be placed at least 500 meters from residential buildings; this rule only applies on the German side. Dutch residents living just across the border often experience the impact, as turbines are strategically placed where no German homes fall within the radius.

“Germany does take the 500-meter rule into account,” explains Inge Waarlo, *“but they place turbines right up to the border, where there are only Dutch houses.”* In contrast, Dutch regulations require turbines to be placed at least twice their tip height away from buildings, often more than 500 meters. *“Germany ignores that,”* adds Johan Voortman. *“They get the benefits; we deal with the burden.”* **Preventing** such cross-border effects lies at the heart of local resistance.

In Winterswijk, this situation feels especially unjust. The area is a nationally protected landscape where turbines over 25 meters are prohibited. Just across the border, however, turbines of up to 250 meters are being planned. *“We live in a unique piece of nature,”* says Karin, *“and now they’re putting massive turbines right next to it.”* This stark contrast creates a landscape mismatch that clashes with the Dutch environment.

Residents are frustrated not only by **visual intrusion** but also by a lack of consultation. *“If you want to build something in your backyard, you talk to your neighbours,”* Karin adds. *“Germany did not do that. They just moved forward with their plans.”*

Environmental concerns also play a role. The turbine sites border Natura 2000 areas, protected under EU law. Germany has recently relaxed environmental regulations to speed up the energy transition, even in areas once off-limits. *“These nature reserves are now being used for wind projects,”* says Johan. Dutch law remains stricter: from 2024 onward, placing turbines in areas rich in protected species is prohibited. *“Birds will either flee or die,”* warns Karin. *“That is illegal here. But Germany says: ‘We do not have that law.’ That is the conflict.”*

Residents also report growing concern about **noise and vibration**, made worse by the lack of a clear Dutch standard for turbine noise. *“What if our future rules are stricter than Germany’s?”* asks Gert Hans. *“Then we will face an entirely new problem.”* This legal uncertainty adds to people’s unease.

While most locals support renewable energy in principle, they advocate for a more equitable approach. Moving turbines farther from the Dutch border would reduce negative impacts and preserve future opportunities for housing or recreation. *“If they were placed just 500 meters to a kilometre back, we would be fine,”* says Johan.

Compensation is another source of resentment. Dutch residents suspect municipalities may be quietly supporting projects due to financial incentives. In Germany, compensation is formalised: residents within a certain radius may receive a share of the revenue. *“Farmers can get up to €60,000 a year per turbine,”* says Johan. *“And neighbours might get something too—but only in Germany.”*

Some Dutch residents were even approached by German investors offering cash. *“They came to their doors,”* recalls Inge. *“It felt like a bribe for them. Most people refused. It went against*

everything they were fighting for.” While some German citizens see wind turbines as a financial opportunity, Dutch residents often see no clear benefits.

The lack of **local ownership** and participation adds to the frustration. Dutch residents have no say in the planning, even though they feel the effects just as much. *“We are governed by decisions we did not make,”* one resident says. The result is a growing sense of exclusion.

Ultimately, it is not just the turbines, but the way the process has been handled that causes the most anger. *“We are not against wind energy,”* says Inge. *“But this does not feel fair.”* The breakdown of cross-border dialogue, consultation, and coordination has led to a deep erosion of trust and tolerance.

5.3.6. Border dimension

Cross-border cooperation is inherently complex, whether at the national, provincial, or municipal level. As Gert Hans notes, *“Whenever you are dealing with a border, whether national or local, it is always a tricky area. Even at the national level, you will never get it completely smooth.”*

Despite these challenges, many Dutch-German collaborations thrive. Inge Waarlo mentions joint tourism initiatives, led in part by her colleague. The Euregio Council, a regional partnership of municipalities, focuses on shared concerns like tourism, energy, and employment. *“In Rekken, we have the flower parade,”* Inge says. *“Every two or three years, it also goes through the German town of Vreden, which even provides subsidies because it passes through their city centre.”*

For local governments, cooperation requires a careful balance. *“As a resident, you play a different role than as a government,”* Inge says. *“We deal with Vreden on many topics, not just wind turbines. You want to remain diplomatic to avoid harming other collaborations. But our mayor will speak up if needed, he will make a call or send a message if something is unacceptable.”*

Karin stresses respectful conduct. *“We should not escalate tensions. We are neighbours. In Germany, hierarchy matters more; they do not appreciate interruptions or anger. If you behave respectfully, you will get further.”*

In Rekken, cooperation predates the wind energy debate. *“Even small things, like fire services, show this,”* one resident says. *“Sometimes the fire brigade from Vreden arrives faster than from Eibergen.”*

These examples illustrate that successful cross-border cooperation is built on trust, diplomacy, and the practical value of good neighbourliness.

5.4. Case four: Reichswald

5.4.1. Information about the case

The last case is the wind turbine plans in the Reichswald in the German municipality of Kranenburg and bordering the Dutch municipalities of Berg and Dal, Gennep and Mook and Middelaar. In 2015, the first plans for turbines in the Reichswald were announced; at the time, they involved 11 turbines. After much protest (example Figure 14), these plans eventually did not go ahead because not enough research had been done on the nature of the area.



Figure 14 - Protest sticker on mailbox

During the initial period of protests against the wind farm, the *Gegenwind* Taskforce was set up. In this task force, the various stakeholders united in the process against trying to prevent the turbines from coming into the Reichswald forest. It has been reintroduced now that the plans are back in planning and the various stakeholders are active again.

In 2024, there was talk that the Reichswald could be declared a nature park in the state of North Rhine-Westphalia. With the arrival of a nature park, it would no longer be possible to develop a wind farm in the Reichswald. A small majority voted against the nature park at the time. The interviews revealed a lot of disbelief about the outcome of this referendum. Many 'nonsense' arguments were used by the opponents of the nature park to create a majority. According to some of the interviewees, double interests played a big role here. One of the reasons for being against that was put forward was that it would be bad for water extraction in the area, where it was claimed that a nature park would be bad for water quality. The argument that you would no longer be allowed to walk your dog or that there should be no more farms around the nature park was also often mentioned. There was therefore speculation that the people putting forward these arguments have a double interest and are financially involved in the wind farm; this is hard to prove.

At this time (2025), the Regional plan in which the wind farm sites have been drawn is before the Dusseldorf Regional Council for review. This is also the competent authority that has to decide whether the wind farm will go ahead or not. The municipality of Kranenburg and Kreis Kleve do not influence this. The municipality of Kranenburg is in favour of the coming of the wind farm, and they also benefit financially because they get a certain amount of money per turbine that will be placed there. Kleve Kreis says it is against the plans.

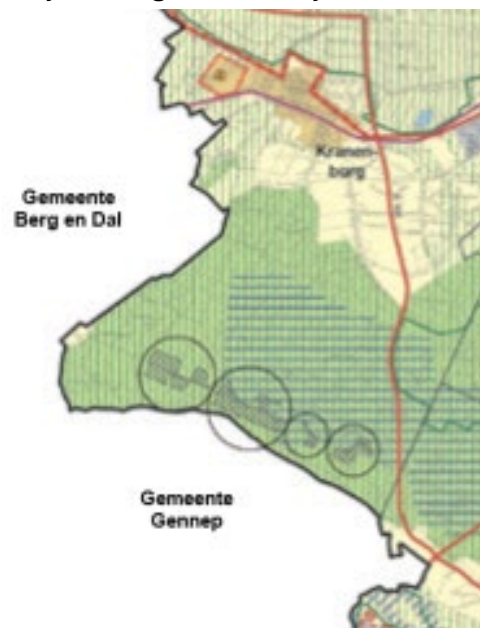


Figure 15 - Map of project area Reichswald

The most recent map of the area where the turbines will be located is shown in Figure 15. These are concentrated around Kartenspielerweg in the Reichswald forest.

5.4.2. Conducted interviews

Below is a summary of the interviews conducted for this case study. These are significantly more than for the other cases. This is because this is the longest-running case, which therefore also involves many people who can be interviewed. Almost all interviewees are also members of the task force and are regularly interviewed by the media.

Table 9 - Interviews Reichswald

Date	Who?	Relation to the case
1-4-25	John Tampoebolon	Chairman Gegenwind Reichswald
1-4-25	STER (Stichting Toerisme en Recreatie Berg en Dal)	Part of the Taskforce representing tourism in the area
10-4-25	Rob Peperzak	Alderman Gennep
11-4-25	Dietrich Cerff	Chairman NABU-Naturschutzstation Niederrhein
11-4-25	Resident Van-Zelderheide	Resident of a town close to the project location
23-4-25	Paula Castien	Resident Groesbeek and part of Taskforce
23-4-25	Erik Weijers (en Rob Onderstal)	Alderman Berg en Dal (and policy officer)
1-5-25	Henny Brinkhof (en Dick Visser)	Werkgroep Milieu Groesbeek (working group to fight climate change)

5.4.3. Context dimension

Local perspectives on wind energy development in the Dutch-German border region are shaped by strong emotional connections to place, environmental concerns, and a growing sense of community involvement. These perspectives go beyond simple opposition and reflect deeper values tied to identity, landscape, and social responsibility.

Attachment to the landscape plays a major role in how residents respond to wind energy plans. For many, the idea of towering turbines threatens not just the view but their sense of belonging. As one resident explained, *“I would not live here if they built huge turbines nearby. I live in a beautiful area, and I want to keep it that way.”* This sentiment is echoed by local officials who emphasise the economic and cultural importance of the natural landscape. *“We have half a million overnight stays each year. The landscape is our product. You cannot destroy that with wind turbines,”* the STER stressed, highlighting tourism as a key reason to preserve scenic value.

Individual backgrounds also influence engagement. Some residents have developed considerable expertise, driven by personal motivation. *“I spend 20 hours a week on this, all voluntary,”* said one active local. *“I am a massage therapist by profession, but I got involved out of curiosity after an information evening that just did not sit right.”*

Environmental consciousness is common among residents, though it comes with nuance. While many support the transition to renewable energy, they also recognise the importance of reducing consumption. One resident reflected, *“I think sustainable energy is essential, but we*

also need to reduce how much we use. It is not just about producing more.” Another added, “We have solar panels and an electric car, but then you read about how those batteries are made, and you realise it is not that simple.”

Municipal positions vary. In Gennep, the terrain is considered unsuitable for wind turbines, so the municipality has opted to invest in a nearby energy park across the border that includes wind, solar, and biogas. *“We are not against wind energy,” an official clarified, “but in our region, it just does not fit.”*

Community organisation around the issue has been strong. A cross-border task force was formed in 2016 and includes residents, municipalities, and environmental groups. *“When the plans came up again, we organised an information night with a lawyer to mobilise people,”* one resident explained. For others, this collaboration has grown into something more: *“The Dutch are direct, the Germans are precise. If you combine those strengths, you can build something effective.”*

Despite this cooperation, not everyone feels equally involved. As one couple noted, *“We do not have kids or connections in the neighbourhood council, so we are less engaged.”*

Cross-border coordination also remains a challenge. Gennep officials criticised the lack of German participation, referring to the Espoo Convention: *“Germany should have involved neighbouring countries in these plans. They did not.”*

Together, these place-based perspectives reveal a complex picture—one that blends emotional, ecological, and political dimensions of living with and responding to energy transitions.

5.4.4. Process dimension

Discussions around wind energy in the Dutch-German border region reveal significant justice concerns, particularly regarding procedural, distributive, and recognitive fairness.

Procedural justice issues are prominent, with many Dutch stakeholders expressing frustration over how decision-making processes are handled in Germany. Residents and municipalities feel excluded or poorly informed. *“They never contacted us to ask for input,”* one official from Berg en Dal said. In a previous case, the Netherlands was not informed at all—a key reason for opposition. Although communication has slightly improved, there are still complaints about rushed procedures. German authorities have shortened consultation periods and relaxed setback regulations to speed up wind development. *“Last time we had all the time in the world to respond; now it feels like we are being steamrolled,”* a Dutch representative noted.

Cross-border coordination is further complicated by uneven legal awareness. Many residents wrongly believe they have no rights across the border, but activists highlight that Dutch citizens can submit objections to German regional plans, even referencing the Espoo and Aarhus Conventions. *“Even my friends from Utrecht who visit the area regularly wrote formal objections,”* one organiser said. However, language barriers and legal complexity remain challenges, especially for local communities navigating German procedures.

Distributive justice concerns focus on the unequal spread of costs and benefits. Dutch municipalities like Gennep and Berg en Dal argue they bear the burdens—visual impact, potential tourism losses, and environmental risks—while German municipalities, like

Kranenburg, reap the financial rewards. *“We get the disadvantages, they get the profits,”* said one Dutch official. Residents worry that individual landowners benefit from subsidies while surrounding communities are left with the consequences.

This sense of imbalance is intensified by a lack of energy-sharing options. *“We cannot even connect to their grid—it is against EU rules,”* one policymaker complained. The situation is further exacerbated by fears that large-scale wind turbines threaten local ecosystems, water supplies, and the quality of life in nearby towns.

Recognitive justice—the recognition of different perspectives and values—is also lacking. Many Dutch actors feel their concerns are not acknowledged by German authorities. Even respected NGOs like NABU were left out of formal consultation processes. *“Even NABU was not notified about the building permit—how can that be?”* one activist asked. Residents also report that public comment periods often fall during holidays, raising suspicions of strategic timing.

Moreover, Dutch citizens express frustration over being misrepresented. *“It felt like a Trump-style campaign,”* one said, referring to misinformation and fake news that circulated during earlier debates. While most stakeholders support climate action, they emphasise the need for fair, inclusive, and transparent governance. *“It is not that we are against renewables—far from it. But the way it is being done makes people feel powerless,”* another noted.

Trust plays a central role in shaping public perceptions and institutional relationships. This trust is influenced by several interrelated factors, including perceived fairness in site selection, the transparency of planning procedures, the quality of intergovernmental and civic communication, and the management of linguistic diversity in participatory settings.

Involvement in site selection is the first factor that directly impacts trust. One Dutch stakeholder observed that spatial imbalances in turbine distribution are evident across the border: *“In the west of the Netherlands, there are quite a lot of wind turbines, but in the east, there are fewer. In North Rhine-Westphalia, you see high concentrations in areas like Paderborn, and also here in Kreis Kleve, which is one of the regions with the highest number of turbines.”* These spatial disparities are particularly salient because German regions with dense turbine development often border Dutch municipalities with far fewer installations. As the same respondent pointed out, *“You also see large differences within the Netherlands itself.”* Such asymmetries may contribute to a sense of procedural injustice and thereby erode trust in the overall decision-making process.

Process transparency also emerged as a key determinant of trust. While Dutch officials expressed confidence in their communication practices—*“I think that people who are interested get the impression that we, as a municipality, are doing everything we can”*—concerns were raised about the lack of openness on the German side. In particular, some Dutch stakeholders noted that during the first round of public consultation, no information was shared across the border. *“They did not inform us at all,”* one Dutch official stated. *“I sent a letter with examples of how other municipalities handle this, like Winterswijk, which posted everything online and allowed citizens to submit their views.”* Unequal standards of transparency and public involvement may therefore contribute to cross-border distrust and perceived asymmetry in procedural fairness.

The **quality of communication** between actors was also cited as a critical factor in establishing mutual trust. Dutch participants noted that within their joint task force, *“we all operate at the same level, whether we are municipalities, developers, or citizen groups.”* However, they also described significant institutional and cultural differences in administrative structures. One Dutch official explained: *“In the Netherlands, you have three levels: municipality, province, and national government. In Germany, there are more layers—municipality, Kreis, and region.”* Furthermore, the perception that *“Germans only speak with their equals”* suggests a hierarchical communication culture that can complicate horizontal cooperation. Dutch municipalities expressed a desire to bridge this gap: *“We want to bring their level down to ours—come here to Groesbeek, Bredeweg, and see the impact yourselves.”*

Finally, the language barrier plays a substantial role in shaping trust at both the civic and institutional levels. Dutch municipalities often translate documents into German to be taken seriously: *“You do not want to give them any reason to say, ‘That is Dutch, we will ignore it.’”* Yet for many Dutch residents, public events in Germany remain inaccessible. *“I went to one of those meetings,”* one resident recalled, *“but everything was only in German. I had things to say, but did not know how to express them. It was frustrating.”* Another simply stopped attending: *“I thought, I will try to contribute in other ways.”* Even professionals find the technical language difficult: *“The jargon is hard for us, but also for businesses.”* While informal exchanges across dialects may be possible in local border villages, formal governance still requires a high proficiency in German. As one regional actor concluded, *“It is shameful. In the Euregio, the agreement is that everyone can speak their language. That would allow people to express themselves better. But it does not happen, and I find that surprising.”*

5.4.5. Impact dimension

Visual disturbance is a significant concern in the border region between the Netherlands and Germany, especially given the scarcity of forest in the Niederrhein area. One NABU representative explained, *“We have little forest here, and if it is cut down for turbines, there will not be much left. We are worried about the Reichswald being opened up for wind energy. There is currently a plan for 11 turbines on the table, and if that goes through, it will be very difficult to prevent more.”* Beyond the visual impact, residents also emphasise other effects such as noise, shadow flicker, and light pollution—areas they feel are insufficiently addressed. As one municipality representative stated, *“All the effects on noise, shadow flicker, light pollution, they are all unknown, so we are really against this development here.”* However, some note that distance matters; one local remarked, *“If they put the turbines 20 kilometres away, on the other side of the Reichswald, we wouldn’t see or notice them.”*

The **landscape mismatch** is another critical issue. Locals value the landscape highly for its role in tourism and overall quality of life. A resident voiced strong opposition: *“The turbines are so huge and dominating. My living environment is simply ruined. It’s a piece of nature destroyed, pure nature destruction.”* The concern is that these turbines will permanently damage the landscape, especially in vulnerable zones near the Reichswald. Another respondent recognised a potential shift in perception but remained sceptical: *“Maybe people will get used to seeing turbines and just cycle elsewhere, but the noise is loud, and many come here for peace and quiet.”*

Wildlife disturbance is a major challenge. NABU emphasised that *“nature protection laws in Germany have become very weak compared to the push for new energy. It’s almost impossible to prevent turbines from being placed.”* Some protected Natura 2000 areas still exist, but without proper buffer zones. Local observers have documented extensive bird populations around the Reichswald (Figure 16). As NABU noted, *“Many birds are living and nesting here, and their habitat is much larger than the immediate area where turbines are planned. This puts them at risk.”* Residents shared their frustration: *“It is a shame that so much forest and wildlife will be lost for this.”*

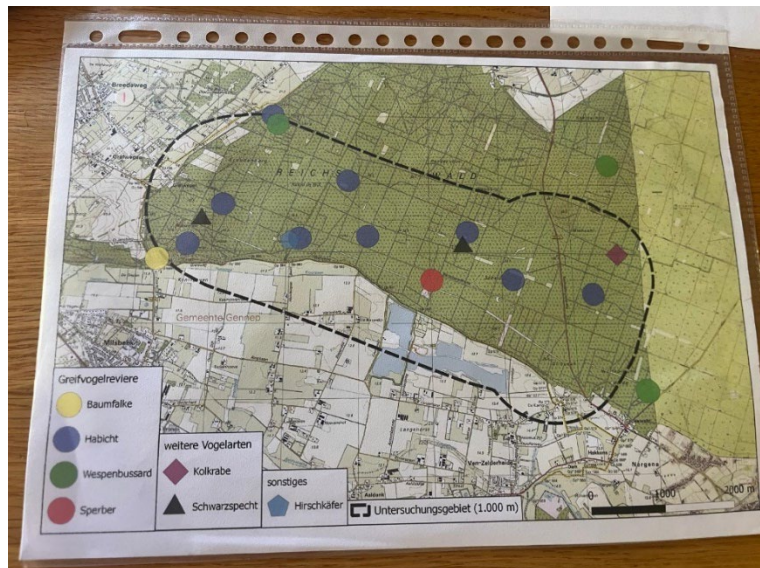


Figure 16 - Map of bird nest in and around the search area of the Reichswald

Residents shared their frustration: *“It is a shame that so much forest and wildlife will be lost for this.”*

On **compensation and local ownership**, opinions diverge. Some German residents support turbines because they receive annual payments per turbine, which makes them beneficiaries of the projects. One official said, *“They get a certain amount per turbine every year, so they are supporters.”* Conversely, Dutch residents near the border report no direct benefits, leading to feelings of unfairness: *“The German side gets cheaper energy and compensation, but we do not get anything from the developers or the municipality.”* Some suggest creative solutions, such as regional ownership or visitor centres: *“If people could say, ‘That electricity comes from here,’ or if there was an info centre with views over the wind park, it might be easier to explain and accept.”*

5.4.6. Border dimension

Cross-border cooperation between Dutch and German border communities is generally viewed as valuable and interesting, particularly for the exchange of ideas and knowledge. One NABU representative expressed this enthusiasm, saying, *“I find it fascinating—the exchange of different perspectives, ideas, and knowledge.”* However, despite the interest, cooperation on specific issues such as wind energy development can be limited. A representative from Bergen Dal noted, *“Contact with Germany is fine; I was in a meeting last week with the mayor of Kranenburg. But on this topic, we never really talk because our views differ.”*

Several officials mentioned existing collaborative structures, such as the joint GmbH involving Kleve, Kranenburg, and Berg en Dal, which primarily focuses on waste management rather than energy or environmental topics. The municipality of Gennep highlighted cultural and tourism cooperation within the Euregio Rijn-Waal, but lamented that *“the willingness to cooperate is always there, but it never really materialises.”* This sentiment reflects deeper historical and cultural divides. One official observed, *“There is still a hard border; changes take three generations. Europe is becoming more unified, but differences between original countries remain.”*

Nevertheless, cross-border cooperation flourishes in areas like healthcare, policing, and recreational infrastructure, with joint efforts in aligning bike routes and tourism promotion. As one local stated, *“We do many cross-border projects with the Euregio Rijn-Waal and neighbouring municipalities, and the Reichswald is also part of that.”*

5.5. Case comparison

Above, all the cases have been explained according to the conceptual model. Below, in Table 10, these findings are compared. This comparison will be used in the discussion.

Table 10 - Comparison of findings in the different cases. The author's own creation populated using findings from the interviews

	Case 1	Case 2	Case 3	Case 4
Context				
Local	A lot of knowledge within the municipality. No residents interviewed, but little activity in the area due to the absence of an action group	Both are actively involved and have gained a lot of knowledge. They are from the region, feel connected to the community, and are engaged	Residents are highly involved, e.g., through an action group in Rekken. Both municipal staff and residents possess a lot of knowledge	High involvement due to a long-running process, including the taskforce Gegenwind
Country	See potential in national policy and the role of the Treaty of Meppen, but also experience its negative aspects	Project De Lutte was put on hold due to the Treaty of Meppen	The Treaty of Meppen is seen as problematic. National contact was initiated with The Hague and Brussels	Decision-making lies with the regional government in Düsseldorf. Municipalities such as Kleve and Kranenburg hold differing views
Process				
<i>Justice</i>				
Involvement in local policies	Hardenberg has its search areas, where the Province of Overijssel is the	Lies is involved through her role in the municipal council. The Province of	Municipalities are involved but have no voting rights in German	Dutch municipalities are not formally involved in decision-

	competent authority; Germany is not involved.	Overijssel is the formal authority, but does not support cross-border projects	decision-making.	making, but are active in the taskforce
Procedural justice	Different procedure, but well informed	Not fairly distributed; benefits only for the initiator	Advantages (e.g., subsidies) on the German side; disadvantages (e.g., noise, visual impact) on the Dutch side. No compensation, such as planning damage.	German municipalities and landowners receive money per turbine; Dutch residents receive no benefit.
Distributive justice	Plans to fairly divide benefits and burdens between both sides	Not fairly distributed; benefits only for the initiator	Advantages (e.g., subsidies) on the German side; disadvantages (e.g., noise, visual impact) on the Dutch side. No compensation such as 'planschade'	German municipalities and landowners receive money per turbine; Dutch residents receive no benefit
Recognitive justice	The municipality feels recognised, but residents experience frustration	Dutch foundation not recognised, therefore unable to file objections	Residents do not feel taken seriously; they cannot participate in German procedures	Dutch residents and organisations are not recognised as stakeholders
<i>Trust</i>				
Involvement site selection	The search area ends at the border	No involvement of the surrounding area on either side	No involvement in site selection; feeling that plans were already fixed	Site selection based on German interests; Dutch interests not considered
Process transparency	Information about the process is well shared	Initially very poor, but has improved.	No information was shared initially, only after pressure from the Netherlands	No information was shared in the early phase. Now improved, partly through joint submissions

Quality of communication	Good communication	Difficult, hard-to-reach people in government	Communication between governments is fair, but citizens feel unheard	Good cooperation within the taskforce. Between governments, sometimes a hierarchical gap
Language barrier	Language barrier present, but manageable with translation tools	Speaking German is no issue, though technical terms can be difficult	German is used, but often hard for residents. Translations are sometimes available	Residents experience a language barrier; documents are translated, but technical jargon remains difficult
Impact				
Prevention	No measures mentioned, but no unlivable situation expected	No measures taken; many concerns about the effects	No concrete prevention measures taken; concerns about noise and landscape dominate	Protests initially halted the project. New plans made without additional prevention
Mitigation	N/A	N/A	N/A	N/A
Compensation	Neighbour compensation scheme for one project, but not everyone benefits	Compensation has been promised, but it's unclear how	No compensation for Dutch residents. In Germany, residents receive discounted electricity and payments	German residents receive money per turbine. Dutch residents receive nothing
Tolerance	N/A	N/A	N/A	Much resistance from residents, especially regarding nature and tourism
Border				
Border	Cooperation is often difficult, but improving	Happens on other topics, poorly on this one	Good cooperation on other themes, such as fire services and tourism. Wind turbine cooperation is difficult due to	Structures like Euregio and joint GmbH exist, but cooperation on this topic remains difficult

			political sensitivity	
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6. Discussion

After explaining and comparing the cases in the above chapter, in this chapter, the expectation of the model will be lined up against the outcomes of the research.

Context Dimension

The first dimension that will be discussed here is the context dimension. Herein, it was expected that if there is a good bond at the local level, this would have a positive impact on community acceptance. However, the study looked more at local involvement in the plan and the bond between the authorities is discussed in the dimension across the border. This showed that in most cases, there was high local involvement. In Losser, Rekken, Winterswijk and the municipalities around the Reichswald all started an action group to unite against the wind turbine plans. Especially at the Reichswald, this is now a large organisation that has been active for more than 10 years. This shows that there is also some social cohesion as residents come together around a shared concern or opposition. Now, Hardenberg is the only case where there is no local action group (anymore) against the German wind plans and little resistance to the German plans was also experienced from the municipality. This indicates that higher levels of local involvement do not automatically result in greater community acceptance.

From the national context, it was expected that if the different governments differed too much politically, this would cause poorer community acceptance. The background research revealed that the rules around wind energy are different in the two countries. After the start of the war in Ukraine, Germany put a lot of effort into wind energy and loosened the rules, making it easier to build in many more places. This is currently not the case in the Netherlands, making the difference in quantity of turbines ever greater. This makes some people feel as if the German developers put the turbines close to the border on purpose, but this is not the case. The rest of the country is starting to fill up, so developers are looking at available places and the border region is such a region. The main piece of policy that often came up is the Treaty of Meppen, in which it was decided in 1824 that building on the border between the Netherlands (Groningen, Drenthe and Overijssel) and Germany (Lower Saxony) within 376 metres was not allowed. It emerged from the interviews that there is considerable confusion at times about this Treaty, in particular whether it applies to the entire border area (i.e. also Gelderland and Limburg) and when this Treaty is enacted (only when a government, Province or State actively objects to it). The advice, therefore, is that better arrangements should be made by the national government for this problem that is increasingly occurring at the border, instead of bringing in a Treaty that is 200 years old.

Procedural Dimension

The second dimension is process, which is divided into justice and trust. For justice, a distinction was made between procedural, distributive and recognitive justice. First, procedural justice, where the expectation was that if there was sufficient information and the residents and government had the opportunity to have an opinion, this would have a positive impact. However, this has often proved problematic in border situations, and residents on the other side of the

border are regularly informed late or poorly. However, progress has been made, and authorities are increasingly able to find each other to exchange information. As a result, residents and authorities have become a little more positive in some cases; it can be concluded that improved communication positively contributes to community acceptance.

For distributive justice, it was expected that when the advantages and burdens are equal on both sides of the border, this would have a positive impact. However, it turned out that the Dutch residents often still mainly experience the burdens (noise, shadow flicker, landscape degradation), and the German residents are the only ones who experience benefits (cheaper electricity, compensation). Hardenberg is the only location where there is a “*buren-regeling*” (e.g. cross-border neighbour compensation scheme) that applies to both sides of the border and where, as mentioned earlier, there are no active protests against the wind farm. It could therefore be concluded that making it possible for Dutch residents to also benefit from the benefits of a project it could have a positive impact on community acceptance.

For recognitive justice, the expectation was that if residents did not feel recognised by the government, this would harm community acceptance and vice versa. It strongly emerged in the interviews that residents often do not feel heard by the German authorities. For example, as a Dutch resident, you have no right to have a say in the municipal council (vice versa as a German resident in the Dutch municipality, this is the case) and there are much stricter requirements on being a stakeholder in Germany (as a result of which, in some cases, it turned out to be very difficult to be able to object). So it is necessary for community acceptance to increase this recognition and thus also increase and/or better communicate the opportunities for participation in Germany.

Trust in the government where the competent authority is settled is important. It is therefore expected because the competent authority is on the other side of the border, the trust will be lower; this turns out to be the case. However, the competent authority is not going to change, and it will remain a different country (where the Dutch inhabitants cannot vote). This could mean that the trust will not grow in the German government. Nevertheless, if the quality of communication improves and a way to deal with the language barrier (using translation tools or learning German/Dutch), the trust in the competent authority can grow and will have a positive impact on the community acceptance.

Impact Dimension

The third factor is the impact of the wind farm. The expectation was that if the German government took measures to reduce the impact of the wind farm (on the Dutch side) and a form of compensation was present, this would have a positive impact on the community acceptance. First, the impact, the interviewees saw the impact of the wind farm on their well-being as very important and overlooked. Taking measures against the impact is often not yet an option, the main goal being to stop the turbines and make sure they do not build them at all or further away from the border. However, because the importance of a resident feeling heard was mentioned above, taking measures to reduce impacts could potentially contribute to greater community acceptance.

Several interviews revealed that in many cases, not much research had been done on the ecological impact of the wind farm on the surrounding area. It was indicated that research often stops at the border and that in Germany, there are much less restrictive rules around nature conservation. A recommendation would therefore be, even though German rules should apply here, to also take Dutch rules into account when it comes to nature protection. An animal's habitat often does not stop at the border, and therefore, to avoid problems (also concerning trust), it would be good to use the stricter rules of the two (in this case, the Dutch rules). This not only applies to nature, but also emerged in the interviews that standards differ for noise and shadow flicker, for example. Again, the advice would be to use the strictest standards in a border region to comply with the law in both countries.

As already mentioned, the expectation was that compensation would have a positive impact on community acceptance. However, it turned out that this would be far from the case for everyone. It was indicated that it would slightly increase overall acceptance, however, it will not help make the biggest opponents suddenly supporters. In the Hardenberg case study, there is a “*buren-regeling*” arrangement, and there are no major opponents within the municipality, but the municipality employee there also indicates that the influence of compensation on acceptance will be minimal.

Tolerance proved to be a difficult factor to investigate. However, it can be concluded that De Bakker's study is correct here. The goal should not be to make everyone accept the wind park, but to make sure the majority accepts it. Also, many people did appear to accept wind energy in general, only they do not want it in their neighbourhood, again showing that NIMBY is at issue.

The Border Area

The border acts as a “hard border” despite open European borders. Differences in policies, procedures and culture are intensified in border regions. EU treaties such as Aarhus and Espoo do formally provide frameworks for participation and cooperation, but in practice, they have limited application. It was found that border municipalities often already cooperate on various themes such as security and tourism. However, it remains difficult to start talking about themes on which you do not agree. Still, it is important to keep the conversation going between municipalities and try to understand each other's views. Despite the fact that the areas are so close to each other, the cultural differences are significant and are further emphasised in this situation. As emerged in the interviews, Dutch people tend to be more outspoken and will express their opinions more quickly; Germans, on the other hand, are more thoughtful and will first think carefully about what they want. There is also less hierarchy in the Netherlands between the inhabitants and the government, where in Germany this is still strongly present. In this situation, try to make use of each other's qualities, sometimes think a bit longer before forming an opinion and let go of the hierarchy a bit more so that the step feels less big for a resident to express his opinion. This will then eventually lead to more community acceptance.

7. Conclusion

This research was to provide insight into the process and community acceptance of wind farms along the Dutch-German border region. The main question was: *'What are the key factors influencing the Dutch community acceptance of wind energy projects on the German side of the Dutch-German border?'*. To be able to draw a general conclusion to this question, the sub-questions will be answered. After this, a theoretical reflection will be delivered and clear recommendations will be summarised. At last, limitations and possible suggestions for further research will be explained.

7.1. Answering research questions

To answer the central research question, multiple sub-questions were used. The first sub question is: *'What is the institutional en local context of wind energy development in Germany?'*. To answer this question, the first thing that was examined was the policies in both the EU and Germany. This revealed that with the start of the war in Ukraine, the EU adopted an emergency regulation, after which Germany also took its emergency measures to simplify the process around getting a permit for a wind farm. One of the components of the easing is that the protection areas in Germany were opened up, which meant that many areas, including along the border, were opened up at once for a short period of time, bringing in many new plans. The treaty that also came up the most from the interviews is the Meppen Treaty (376-metre zone where no building is allowed along the border). There is a lot of uncertainty about this treaty among residents, but also among municipalities in what way this treaty can be used and when they can invoke it.

As background information, the differences in the structure of government in the German states and the cultural differences between the Netherlands and Germany were also examined. These cultural differences, in particular, often came up in the interviews as an obstacle. The local context is case-specific; however, it does appear that people look for each other more in the search for opportunities to stop the wind farm on the German side of the border. Also, the different municipalities often appeared to have good contacts with their German neighbours, for instance, in the field of tourism or fire services. However, cooperating on wind energy proved difficult. An example of good cooperation is the wind farm de Lutte, where there is a lot of interest in developing the farm together, but this remains difficult due to different laws and regulations.

The second sub-question is: *'To what extent do the government and developers try to create a process to include all the inhabitants that want to be included?'*. This question is proving difficult to answer. In most cases, the authorities do their best to keep their residents well informed, even though this often turns out not to be enough for residents and they still do not feel heard. In Hardenberg, for example, there is regular consultation with the German government, while in the Reichswald case study, it is very difficult to make contact with the German government. Here, it is important to mention that the competent authority is different. As mentioned in the institutional context, the administrative culture in Germany is different, making contact with a government that is above your level very difficult.

The third sub-question is: *‘What has been done in each case to minimise the impact of the wind farm on each side of the border?’*. In most cases, little is done to reduce the impact on the Dutch side. However, interviews revealed that this will not contribute to increased community acceptance either. Most residents see the only option as not having the turbines or placing them further away from the border. When asked the question “what if they do come”, the response was often “we still have hope”. One expectation of the study was that (financial) compensation for residents, including on the Dutch side, would contribute to increased community acceptance. However, the interviews show that most residents do not want this, and several municipal employees also indicated that this would not contribute much to the overall community acceptance of a wind farm.

The last sub-question is: *‘What are the opportunities for a better community acceptance for a project in a border region?’*. A number of things emerged in the different case studies that could contribute to community acceptance if this were also applied at the other sites. The most important thing is to respect each other's culture. In Germany, the government is more hierarchical than in the Netherlands, so they are not used to speaking to a citizen on the Dutch side. Try to start a conversation (if possible) with a lower-level government or try to contact the Dutch government agency responsible for this.

The second point ties in with this and is united as Dutch stakeholders. As was done in the example of the Reichswald and at Losser. Make sure there is one clear position from the stakeholders towards the German government to avoid confusion and a lack of clarity. Communication towards residents, but also between governments, is one of the most important things when it comes to the acceptance of a wind farm.

By concluding the different sub-questions, an overarching conclusion to the main research question can be made. However, as the previous chapters have already looked in depth at the different solutions, they will be described more concisely here. The main research question is: *‘What are the key factors influencing the Dutch community acceptance of wind energy projects on the German side of the Dutch-German border?’*

The main factor affecting community acceptance is communication, both between the government and residents and between the German and Dutch governments. The other factors affecting community acceptance are:

- Transparency around the process (e.g. clearly indicating when public participation is possible);
- Clear laws and regulations (e.g. Meppen Treaty and noise and distance standards);
- Where laws and regulations differ, use the stricter of the two.

7.2. Theoretical reflection and further development of theory

While conducting the study, it was found that this theory fitted well with the research. The different factors emerged well in most of the interviews. Before this, the theory of Klok et al. (2023) had been used in quantitative research; because of this, it was sometimes difficult to investigate certain factors well in a qualitative research like this one, such as the “tolerance” factor.

To this theory, the “border” factor had been added. However, this research only looked at Dutch acceptance of German wind farms. Follow-up research could look at other border regions to see if the same problems occur there and thus expand and validate the theory even further. It emerged from the interviews that problems also occur in Germany's other border countries; this is where the first follow-up studies could take place.

7.3. Practical recommendations

In answering the main and sub-questions and in the discussion, some recommendations have already been made regarding the problem of community acceptance. The interviews revealed that the border often still feels like a “*hard border*”. Now, this is not much to change at first, as it remains a separate country with its laws and regulations. By encouraging better communication between governments and between governments and the inhabitants of the area, the border, which is now perceived as very present in this problem, can be softened. Try to understand each other well, sit down together and try to find a way of communicating in which everyone feels heard (whether in German, Dutch or an intermediate form).

The process must be clear to residents. After all, a wind farm is something that greatly changes the physical living environment, and it is important for residents to understand the possibilities for participation and why this location was chosen.

Furthermore, it may help to provide financial compensation for residents from both sides of the border. Nevertheless, it emerged in the interviews that this is far from being desired everywhere. If this were to be chosen, it would be advisable, based on this study, to at least ensure that, in terms of compensation, residents on both sides of the border feel treated equally and receive the same amount of money as the neighbour who lives at the same distance but on the other side of the border.

7.4. Limitations and further research

Some interesting things emerged from this research; however, there are also some limitations to the study. For instance, it was not possible to interview German residents due to the language barrier. Because of this, the research focused on Dutch acceptance, but it would also have been interesting to look at German residents and how they feel about it. This could be a good follow-up research in the future.

In this study, it was chosen to interview both residents and employees at the municipality. The problem with interviewing residents is that, when they know a lot about the subject of “*German Windfarms*”, they are almost always opponents. As a result, the picture painted about the wind farms is often on the negative side. The interviews with the municipality, therefore, often revealed that the people who are positive or have no opinion about the research will hardly be heard and could therefore not be interviewed. In follow-up research, a survey could be used to reach out to residents and get a better idea of what the opinion of the “*average*” citizen in an area is.

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9. Appendix

9.1. Interview guide municipality

Hoofdvraag: What are the key factors influencing the Dutch community acceptance of wind energy projects on the German side of the Dutch-German border?

Nederlandse interview guide – medewerker gemeente

Naam van geïnterviewde:

Functie binnen gemeente:

Gender:

Leeftijd:

Introductie

Al in e-mail, mogelijk ook korte live bevestiging van anonimiteit, opname en vermelding dat ze op elk moment kunnen pauzeren.

(Hallo, eerst zal ik kort samenvatten wie ik ben en waar het onderzoek over gaat. Mijn naam is Silke en schrijf momenteel mijn afstudeerscriptie voor de master planologie aan de Radboud Universiteit in Nijmegen. Mijn onderzoek gaat over de factoren die effect hebben op de ontwikkeling van windenergie aan de Nederlands-Duitse grens. Het doel van dit onderzoek is om een kleine bijdrage te kunnen leveren aan het in beeld brengen van de acceptatie achter wind energie in de context van een grensgebied, in dit geval de Nederlands-Duitse grens.

Hartelijk dank dat u de tijd heeft genomen om deel te nemen aan dit onderzoek. Zoals u wellicht in de interviewguide hebt gezien, zijn de belangrijkste vragen al uitgewerkt, om ervoor te zorgen dat de belangrijkste vragen worden gesteld. Er is echter ook ruimte om in te gaan op aspecten die tijdens het interview naar voren kunnen komen. Tot nu toe heb ik vooral veel literatuuronderzoek gedaan om meer kennis over dit onderwerp te vergaren. Je kunt ervoor kiezen om anoniem te blijven in het onderzoek, in dat geval worden je persoonlijke kenmerken zoals je naam vervangen door een andere term. De meeste mensen niet, maar wilt u anoniem blijven in dit onderzoek?

Om geen dingen over het hoofd te zien is het van belang dat het interview wordt opgenomen. Zo is er minder kans om dingen anders te interpreteren en nog eens terug te luisteren. Deze opnames zijn alleen voor wetenschappelijke doeleinden, niemand anders zal ze horen behalve ik en mijn begeleider en ze worden achteraf gewist. Kunt u bevestigen dat het in orde is om dit interview op te nemen?

Het interview zal ongeveer 30 minuten duren, maar waarschijnlijk korter, afhankelijk van wat er tijdens het interview ter sprake komt. Als u een pauze nodig heeft of stoppen op enig moment, laat het me dan gerust weten.)

Vragen:

Deel 1 - Algemeen:

- Zou u iets over u zelf vertellen?
 - o Naam, leeftijd, voor opleiding
- Wat is uw rol binnen gemeente?
- Zijn er in Duitsland kort aan de grens met jullie gemeente plannen voor windenergie?

- Wat is uw connectie van de plannen voor het windpark?

Deel 2 – Context en border:

- Wat is de mening tegenover wind energie binnen uw gemeente?
- Heeft uw gemeente eigen beleid voor de ontwikkeling van wind energie?
- Heeft de gemeente eigen zoekgebieden voor wind energie aangewezen?
- Community cohesion: Zijn er initiatieven zoals bijvoorbeeld werkgroepen of actiegroepen vanuit de gemeenschap wat betreft wind energie?
- Werkt jullie gemeente veel samen met de (Duitse)buur gemeente (niet op het gebied van wind)?
 - o En voor wind?
 - o Ook met Nederlandse gemeenten?
- Is dit in het verleden ook al zo geweest?

Deel 3 – Process:

- **Justice:**
 - o Worden de burgers in het gebied betrokken bij het opstellen van het Nederlandse beleid? En hoe gaat dit in Duitsland?
 - o Denkt uw dat de Nederlandse burgers zich erkend voelen door de Duitse overheid?
 - o Zijn er mogelijkheden voor de Nederlanders om zich financieel te betrekken bij het windpark?
 - o Vind u dat de lasten eerlijk zijn verdeeld tussen de Duitse en Nederlandse kant van de grens?
- **Trust:**
 - o Worden de Nederlanders al betrokken bij de keuze voor de locaties door de Duitse overheid?
 - o Worden de inwoners en de gemeente goed op de hoogte gehouden van de vorderingen rondom het windpark?
 - o In hoeverre is er de mogelijkheid om alles (documenten) rondom het proces in te zien?
 - o Welke taal wordt gesproken bij de samenwerkingen? Duits- Nederlands - Engels?

Deel 4 - Impact:

- Welke maatregelen zijn er genomen om de impact van het windpark in de omgeving te verminderen?
- Krijgen de inwoners aan beide kanten compensatie voor de aanwezigheid van het windpark?
- Wat zijn de mogelijkheden rondom lokaal eigenaarschap van de turbines? Zowel voor de Nederlanders als de Duitse inwoners?
- Zijn er nog andere maatregelen die genomen zouden kunnen worden om de impact te verminderen?

Deel 5- Afsluiting:

Dat was het interview, hartelijk dank! Ik vond het erg interessant en het kan zeker een waardevolle bijdrage leveren aan het onderzoek. Mocht u nu of later nog vragen hebben of feedback willen geven op het interview, neem dan gerust contact met mij op. Als u geïnteresseerd bent, kan ik u ook het onderzoek toesturen als het klaar is. Nogmaals, bedankt en een fijne dag. Wie weet tot de volgende keer!

9.2. Interview guide inhabitant

Hoofdvraag: What are the key factors influencing the Dutch community acceptance of wind energy projects on the German side of the Dutch-German border?

Nederlandse interview guide – inwoner

Naam van geïnterviewde:

Inwoner van:

Gender:

Leeftijd:

Introductie

Al in e-mail, mogelijk ook korte live bevestiging van anonimiteit, opname en vermelding dat ze op elk moment kunnen pauzeren.

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Hartelijk dank dat u de tijd heeft genomen om deel te nemen aan dit onderzoek. Zoals u wellicht in de interviewguide hebt gezien, zijn de belangrijkste vragen al uitgewerkt, om ervoor te zorgen dat de belangrijkste vragen worden gesteld. Er is echter ook ruimte om in te gaan op aspecten die tijdens het interview naar voren kunnen komen. Tot nu toe heb ik vooral veel literatuuronderzoek gedaan om meer kennis over dit onderwerp te vergaren. Je kunt ervoor kiezen om anoniem te blijven in het onderzoek, in dat geval worden je persoonlijke kenmerken zoals je naam vervangen door een andere term. De meeste mensen niet, maar wilt u anoniem blijven in dit onderzoek?

Om geen dingen over het hoofd te zien is het van belang dat het interview wordt opgenomen. Zo is er minder kans om dingen anders te interpreteren en nog eens terug te luisteren. Deze opnames zijn alleen voor wetenschappelijke doeleinden, niemand anders zal ze horen behalve ik en mijn begeleider en ze worden achteraf gewist. Kunt u bevestigen dat het in orde is om dit interview op te nemen?

Het interview zal ongeveer 30 minuten duren. Als u een pauze nodig heeft of stoppen op enig moment, laat het me dan gerust weten.)

Vragen:

Deel 1 - Algemeen:

- Zou u iets over u zelf vertellen?
- Naam, leeftijd, voor-opleiding, beroep
- Wat is uw connectie van de plannen voor het windpark?

Deel 2 – Context en border:

- Hoe lang woont u al in het grensgebied?

- Voelt u zich hier thuis?
- Voelt u een sterke band met de gemeenschap?
- Wat is uw standpunt tegenover het veranderende klimaat?
- In hoeverre bent u op de hoogte van de ontwikkelingen rondom windenergie?
- Zijn er vanuit de gemeenschap initiatieven gevormd rondom de plannen voor wind energie aan de Duitse kant van de grens? Bent u daarbij betrokken?

Deel 3 – Process:

- **Justice:**
 - o Heeft u het gevoel dat u als burger de mogelijkheid heeft gehad om betrokken te zijn bij het maken van wind beleid in uw gemeente?
 - o Heeft u het gevoel dat er voldoende mogelijkheid was om inspraak te hebben in de Duitse wind plannen?
 - o Voelt u zich door de Duitse overheid erkend?
 - o Heeft u de mogelijkheid om financieel betrokken te zijn bij het windpark in Duitsland?
 - o Vind u dat de lasten eerlijk zijn verdeeld tussen de Duitse en Nederlandse kant van de grens?
- **Trust:**
 - o Vanaf welk stadium heeft u de mogelijkheid gehad om betrokken te zijn bij het windpark? Al vanaf de locatie keuze?
 - o Wordt u als inwoner goed op de hoogte gehouden van de vorderingen rondom het windpark?
 - o In hoeverre is er de mogelijkheid om alles (documenten) rondom het proces in te zien?
 - o Welke taal wordt gesproken bij de samenwerkingen? Duits- Nederlands - Engels? Welke talen spreekt u zelf?

Deel 4 - Impact:

- Welke maatregelen zijn er genomen om de impact van het windpark in de omgeving te verminderen?
- Krijgen de inwoners aan beide kanten compensatie voor de aanwezigheid van het windpark?
- Wat zijn de mogelijkheden rondom lokaal eigenaarschap van de turbines? Zowel voor de Nederlanders als de Duitse inwoners?
- Zijn er nog andere maatregelen die genomen zouden kunnen worden om de impact voor u te verminderen?

Deel 5- Afsluiting:

Dat was het interview, hartelijk dank! Ik vond het erg interessant en het kan zeker een waardevolle bijdrage leveren aan het onderzoek. Mocht u nu of later nog vragen hebben of feedback willen geven op het interview, neem dan gerust contact met mij op. Als u geïnteresseerd bent, kan ik u ook het onderzoek toesturen als het klaar is. Nogmaals, bedankt en een fijne dag. Wie weet tot de volgende keer!