Pro-Active State-Led Participation in Addressing the Governance Challenges Associated with the Spatial Aspects of the Energy Transition

A case study on the PAWOZ-Eemshaven Project

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1. Abstract

Climate change is forcing governing regimes worldwide to transition to green energy sources. For this energy transition to take place, the Dutch government has initiated the building of new offshore wind parks in the North Sea above the Wadden Islands (EZK, 2023). An energy cable infrastructure is built to get the energy generated at these wind parks to land. This is also the case in Programma Aansluiting Wind Op Zee - Eemshaven (PAWOZ-Eemshaven) (EZK, 2023). The program is set up by the Dutch Ministry of Economic Affairs and Climate (EZK) to research future cable routes to transport energy. For this program, EZK has adopted a comprehensive participatory governance strategy to involve stakeholders and residents in deciding the best solution for choosing the best route for the new energy cables (EZK, 2023). For the participatory governance approach to be adopted by regimes worldwide, this niche innovation must require aspects of legitimacy. By analysing documents reporting on the theme meetings, information evenings and stakeholder suggestions surrounding PAWOZ-Eemshaven and a stakeholder interview, this thesis has tested four aspects of legitimacy on the case study of the participatory governance strategy in PAWOZ-Eemshaven. The participatory governance strategy of PAWOZ-Eemshaven showcased great care for input legitimacy, output legitimacy, throughput legitimacy, and feedback legitimacy. Therefore, this thorough participatory governance approach implemented by EZK is beneficial to tackle the spatial governance challenges associated with the energy transition. Therefore, participatory governance as a niche innovation could benefit the energy transition and challenge established regimes to help alleviate the pressure put on regimes due to climate change.

Keywords: Participatory governance, energy infrastructure, energy transition, participation, deliberative governance, PAWOZ-Eemshaven, legitimacy, climate adaptation, national governance, local governance, stakeholder participation, Multi Level Perspective.

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3. Introduction

The Netherlands is increasingly confronted with warmer and dryer summers, heavier and more extended periods of rainfall, and more flooding. The climate is changing, and the effects are increasingly felt in the Netherlands (EZK, 2023). The Netherlands still uses fossil fuels like coal, gas, and oil to generate electricity. The emissions generated by the continued use of fossil fuels are affecting the changing climate. The climate agreement in Paris signed in 2015 with 195 countries, including the Netherlands, states that Co2 emissions have to decline to mitigate climate change. This means that by 2030 most fossil fuel emissions (55%) will have to disappear, and by 2050, the Netherlands will have to rely entirely on sustainable energy sources (EZK, 2023; Ministerie van Infrastructuur en Waterstaat, 2023). One of these sustainable energy sources is wind energy. However, the Netherlands is a small country with limited space to locate wind farms. Therefore, the government has decided that instead of on land, wind farms must be built offshore (EZK, 2023). The national government has researched where offshore wind farms can be built and found a solid space above the Wadden Islands in the North Sea (EZK, 2023). In the 2020 North Sea Agreement, the government and stakeholders agreed this would be a site for further offshore wind farm development (Ministerie van Infrastructuur en Waterstaat, 2021).

To get the energy generated by these offshore wind farms onshore, a cable has to be built between the wind farm and an attachment point onshore. The most logical spot for this cable to get attached is Eemshaven; this is due to the many industries that can benefit directly from renewable energy, and the cable can be attached easily to the national energy grid. The cable route will go through the Wadden Sea, a vulnerable nature zone full of fisheries, bird species, and ship traffic. The Wadden Sea area belongs to UNESCO's world heritage and is a Natura 2000 area (EZK, 2023). On top of this, one concept cable route could also go through a piece

of fruitful agricultural soil. This makes deciding on the route a careful and precise job that requires research into its negative and positive effects (EZK, 2023).

"Programma Aansluiting Wind Op Zee-Eemshaven (PAWOZ-Eemshaven)" is the program set up by the Dutch Ministry of Economic Affairs and Climate (EZK) to research possible future cable routes to transport the energy generated by the offshore wind farms above the Wadden islands to Eemshaven in Groningen. Governing institutions could use participatory governance as a strategy to involve as many stakeholders in the region as possible and find a solution together that enjoys broad societal support. In a participatory system of governance, all stakeholders in the region can participate in meetings and conferences and give suggestions online or by letter, and therefore be involved in the government's decision-making process (Schroth et al., 2020). To research the best cable route, EZK has initiated such a strategy and implemented an in-depth participatory process since this research requires the participation of many stakeholders and residents to figure out the best solution for the challenge of choosing the best route for the new energy cables. Each stakeholder has their requirements and concerns for what the new energy cable infrastructure would look like. By using participatory governance, EZK can benefit from the perspectives of professionals, NGOs, civilians, and landowners in the region (Schroth et al., 2020). However, choosing the correct route can be very challenging when dealing with fragile nature areas like the Wadden Sea (Van Tatenhove, 2011).

In the Wadden Sea area, there are many different stakeholders that all have different sets of values and concerns, which makes it challenging to come to a consensus and avoid conflict. Therefore such a participatory governance strategy could take much time, making the process impractical and inefficient (Van Tatenhove, 2011). This loss of time might be undesirable

both from the perspective of the government as well as from the perspective of (most) stakeholders, especially when dealing with urgent matters like the energy transition connected to climate change. While on the other hand, the deliberation with stakeholders can benefit PAWOZ-Eemshaven since the involvement of stakeholders can help steer transitions and help in making the best possible decisions (De Koning et al., 2021).

This thesis aims to investigate whether the legitimacy of proactive state-led participation could benefit governments in addressing the governance challenges associated with the spatial aspects of the energy transition. To this end, the thesis is structured in the following manner. Firstly, the literature is reviewed on participatory governance and the definition and possible benefits and drawbacks of this form of governance are explored. Following, it is examined how deliberative governance can help manage transitions, like the transition to more renewable energy sources. Furthermore, it is explored how the participation of different relevant stakeholders can enhance or potentially challenge the various aspects of governanceand policy legitimacy. Secondly, the case study of PAWOZ-Eemshaven is introduced. In this section, background information on the case study is provided, actors are identified, their participation strategy is elaborated on, and their decision-making structure is explained. Thirdly, qualitative research methods are elaborated on, as well as ethical considerations and study limitations. Moreover, the Multi-Layer Perspective (MLP) framework is introduced, and its implementation for this in this research is discussed. Furthermore, results are presented, and data is described. This includes document analysis, exploring the reports published on the various information evenings, the team meetings, and the "nota van antwoord" (memorandum of reply). Moreover, the results of the stakeholder interview are presented. Finally, results are discussed by connecting theory with the results. Questions of the legitimacy of PAWOZ-Eemshaven are discussed, and conclusions are drawn to answer

the research question: Can the legitimacy of proactive state-led participation benefit governments in addressing the governance challenges associated with the spatial aspects of the energy transition?; using the Multi-Level Perspective (MLP) framework.

4. Literature Review

The complex interactions between a broad and diverse group of actors increasingly shape contemporary society (Schroth et al., 2020). Actors can range from government, academic, business, and societal sectors. All these actors involved in such complex systems must collaborate to create solutions that are technically sound, broadly acceptable, and economically viable (Schroth et al., 2020). This collaboration is crucial in industries where social practice and technology are firmly intertwined, like healthcare, rural development, and mobility. It applies to long-term ambitions, future scenarios, and short-term developments (Schroth et al., 2020). In this context, inclusive approaches to such collaboration aim to prioritise involving people impacted by the ambitions in question, allowing for early consideration of potential societal implications and the blending of different viewpoints on the desired developments (Schroth et al., 2020). Participation in these processes allows the public to assist in identifying potential societal effects and ethical issues and become 'enactors', and advance their views through cooperation with other players (Jørgensen et al., 2009).

In PAWOZ-Eemshaven, many actors and stakeholders are involved, and technological and social practices are strongly intertwined. Therefore choosing a form of participatory governance can be effective in creating sound and desired societal solutions. Additionally, the participation of numerous stakeholders ensures that new technologies are adopted within each

of the involved sectors. Therefore, including a wide range of actors is essential not only for preserving the ideal of democratic participation but also for establishing socially desirable agendas (Schroth et al., 2020).

Deliberative governance can be used to manage a transition (De Koning et al., 2021). Deliberative governance is achieved by facilitating public deliberation within the governance structure (De Koning et al., 2020). Burkhalter et al. (2002) have defined deliberative governance as "a combination of careful problem analysis and an egalitarian process in which participants have adequate speaking opportunities and engage in attentive listening or dialogue that bridges divergent ways of speaking and knowing" (p. 398). Within deliberative governance, actors with governmental and non-governmental positions come together and aim to find a solution for a shared problem (Hendriks, 2009). Deliberative governance is a good option for governments attempting to promote and lead transitions since more conventional governmental strategies are less suitable for steering and promoting these transitions (Grin, 2011). When facing the multi-levelled nature of the Dutch policy-making system, change cannot be achieved with the national, provincial or local government acting as the single policy-making actor. In the governance of Dutch policy-making, power is shared among multiple levels (local, regional, national, and transnational); therefore, change must be achieved on all these levels for the transition to occur (Piattoni, 2009). This suggests that the structural transformation of social practices and institutions demands the interaction between the governance levels and the various actors (Van Hoof et al., 2020). Thus, involving multiple actors in the management and governance of transitions is beneficial and essential (De Koning et al., 2021). In deliberative governance, the participation of the stakeholders gives the deliberation value. This participatory form of governance is essential in steering transitions like the energy transition.

According to Van Tatenhove (2011), the participation of all relevant stakeholders can challenge the legitimacy of integrated marine governance. Legitimacy relates to the quality of policymaking, the outcome of policy processes, and the citizens' level of acceptance of the political system (Van Tatenhove, 2011). Legitimacy, in essence, refers to the notion or perception that the conduct and outcomes of a particular entity align with a socially constructed framework of standards, beliefs, ethics, and definitions that are socially desired and acceptable (Van Tatenhove, 2011).

Legitimacy can be distinguished into four types: Input legitimacy, throughput legitimacy or process legitimacy, output legitimacy and feedback legitimacy (Engelen and Sie Dhian Ho, 2004; Scharpf 1999, 2004; Edelenbos et al., 2009; Van Tatenhove, 2008). Input legitimacy refers to the "will of the people"; if the decisions are being made following the will of the community members, then this decision is legitimate. When looking at participatory governance, input legitimacy translates to if the decisions are being made following the authentic preferences of the participants involved (Van Tatenhove, 2011). Output legitimacy refers to the government for the people, wherein governmental decisions successfully advance the general welfare of the relevant community (Scharpf, 1999). Governments and their decisions possess output legitimacy when the outcome or product produced by the government promotes the public's welfare (Van Tatenhove, 2011). Throughput legitimacy strongly emphasizes the decision-making process and questions the legality, transparency, fairness, deliberation and efficiency of the decision-making procedure and structure (Risse & Kleine, 2007). When looking at participatory governance, the participatory process has to be fair, open, legal, and efficient for the decision to be throughput legitimate. The fourth, Feedback legitimacy, refers to the extent to - and the manner in - which stakeholders are informed by the politicians and administrators about the results of the decision-making process; in turn, the stakeholders can provide feedback about the decision-making process and can be regarded as new information for the politicians and administrators, benefiting the decision-making process (Van Tatenhove, 2011). Suppose the stakeholders are not sufficiently informed about the outcomes of the decision-making process. There is no possibility for feedback; therefore, the decision-making process must become more legitimate. Even if the participants are sufficiently informed and could provide feedback, but the government does not regard the feedback as new valuable information, the decision-making process lacks feedback legitimacy.

The question of legitimacy comes with some key challenges that make it difficult for governing institutions to reach legitimacy. One of the critical challenges is the imbalance in power between stakeholders (Van Tatenhove, 2011). Participatory governance demands engagement and participation in all relevant stakeholders' decision-making processes. If some stakeholders have more influence and power than others, the outcomes of the decision-making process will be unequal. They will not represent the interest of all relevant stakeholders involved (Van Tatenhove, 2011). This challenge is relevant to throughput legitimacy since the input of all stakeholders should be considered to an equal extent. However, in the process, not all input of the stakeholders is treated as equal. Therefore, this challenges the fairness of the process and makes the decision process illegitimate.

Another critical challenge presents itself in the potentially conflicting interests among different stakeholders. The stakeholders involved in participatory governance may have differing values, goals, and priorities that could create tensions and animosities that need to be resolved more quickly and can hinder the decision-making process. These animosities can lead to biases and favouritism for specific stakeholders, which challenges the governance processes' legitimacy (Van Tatenhove, 2011). Like the other challenge, favouritism can lead

to an unfair and illegitimate decision-making process. However, this key challenge is more relevant to output legitimacy. Although the outcome benefits the greater welfare of the people when dealing with specific stakeholders, perceptions of the greater welfare can differ. Participants can perceive the outcome of the decision-making process as undesirable, and therefore the outcome can be perceived as illegitimate.

Achieving a consensus and making fast and efficient decisions can be challenging within participatory governance, especially when dealing with complex, urgent matters like governing the various uses of a marine environment (Van Tatenhove, 2011). Or, in the case of this paper, climate change mitigation. Ultimately, while participatory governance is a crucial component of integrated marine governance, or arguably of any complex social-spatial challenge, it also demands careful attention to power relations, resolution of conflicts, and decision-making processes to preserve legitimacy and guarantee equitable and sustainable results (Van Tatenhove, 2011).

5. Introduction to Case Study PAWOZ-Eemshaven

In 2021, EZK published a report on a preferred route for the wind farm cable. However, this report raised many questions in the public, and citizens wanted to prevent the development of this route. Due to the concern about the environmental impact of the cable route, environmental NGOs, citizens, and the municipality of Schiermonnikoog started a petition against the building of the energy cable through Schiermonnikoog. This petition has been signed 18.000 times, putting extra pressure on EZK to find an alternative route (NOS, 2021). Therefore EZK decided to do more thorough research, which includes a comprehensive participatory process (EZK, 2023). This research program is called *Programma Aansluiting*

Wind Op Zee (PAWOZ)-Eemshaven to find the balance between the different social, economic and environmental objectives on national and local levels.

PAWOZ-Eemshaven consists of a report on environmental impact called the MER (Milieu Effect Rapportage, "environmental impact assessment") and an integral effects analysis (IEA), wherein different routes are being analysed to understand what impacts the routes have on, for example, the environment, climate, and agriculture (EZK, 2023). The MER procedure will start with an Outline memorandum on scope and detail called the NRD (Notitie Reikwijdte en Detailniveau) (EZK, 2023). The NRD includes an explanation of what is being researched, in what detail this is being done, and how one would get involved. This NRD was available for consultation from the thirtieth of September to the tenth of November 2022. Everyone who wanted could read the NRD and, more importantly, respond by providing feedback and suggestions. A total of 29 responses were submitted. These responses have been considered to finalise the NRD (EZK, 2023). EZK is the leading institution responsible for the program and output delivery. However, to draft the NRD, MER and IEA, the ministry has commissioned two consultancy firms, Royal HasKoningDHV and Witteveen+Bos. TenneT is another actor in the program. TenneT is an expert on energy infrastructures and will be the future initiator of cable placement. Furthermore, TenneT is a consultant on engineering, cost, and energy systems. (EZK, 2023). Gasunie is another actor in the program that carries the same responsibilities as TenneT but a different specialisation (EZK, 2023).

The national government has put extra effort into consultation with regional stakeholders.

The project has been realised through consultation with other ministries, the provinces of Groningen and Fryslân, municipalities, waterboards, interest groups such as environmental

NGOs, the owners of the cables and pipelines, landowners and local citizens (NetopZee, z.d.). The stakeholders and local citizens could participate by attending theme meetings and organised information evenings, where EZK provided information on the PAWOZ-Eemshaven project. There was room to ask questions and bring suggestions. Furthermore, participants could propose new routes or change the existing routes to comply with their interests (EZK, 2023).

The Participation plan of PAWOZ-Eemshaven aims to unite and understand the different interests of citizens, businesses, civil society organisations and administrative bodies. Consider knowledge, experience, and advice from the various parties in deciding what to investigate and choosing the final routes. Furthermore, it aims to keep interested parties informed and take them on board about progress and choices. Therefore, the ultimate decisions must be traceable, understandable and transparent. Fundamentally, as a starting point, the programme aims to initiate and maintain the dialogue with all stakeholders to share questions, concerns and opportunities with them in order to create a deliberation environment where participants are open to one another, keep each other informed, and achieve good cooperation (EZK, 2023).

During the participation process of PAWOZ-Eemshaven, EZK has organised two theme meetings with professional stakeholders to discuss the NRD of PAWOZ-Eemshaven. Furthermore, ten information evenings for residents and stakeholders have been organised in the relevant region, where citizens would get informed about the content of the concept-NRD and could give their reactions and input (EZK, 2023). These meetings occurred in Dokkum, Uithuizermeeden, and on the Wadden Sea Islands, Ameland and Schiermonnikoog. In Pieterburen, EZK organised an information evening for landowners to emphasise impacts on

agricultural land. The first round of information evenings occurred in June 2022, and the second round occurred in October 2022. EZK claims 300 stakeholders from the area have participated in or attended these meetings. Next to the meetings, EZK has also been in conversations with the LTO (Agriculture and Horticulture Organisation of the Netherlands) and agricultural companies (EZK, 2023). Throughout the participation period, everybody could submit a comment and give their opinion about PAWOZ-Eemshaven online or additionally share new information or insights about the project. This is called eParticipation. For this purpose, an online platform was developed to view the routes in detail, ask questions and share suggestions for new ideas or routes (EZK, 2023). The theme meetings and information evenings have been documented in so-called "sfeerverslagen" (atmosphere reports) and shared online. Between the thirtieth of September and the tenth of November 2022, the concept NRD (c-NRD) could be reviewed and reacted to; 29 reactions have been collected and have influenced the finalisation of the NRD. The reactions have been documented in the "nota van antwoord" (memorandum of reply). I will analyse these documents in this thesis's result and discussion section.

In consultation with the Wadden region administrative consultation, the minister of climate and energy will take the formal decision. The ultimate choice of the PAWOZ-Eemshaven will be made within the Waddengovernance structure (EZK, 2023). This new governance structure was implemented in 2020 to improve the representation and collaboration of national and regional governing institutions and stakeholders. The Waddengovernance tries to involve as many interests as possible in decision-making (EZK, 2023). Therefore, the Waddengovernace aims to explain everything as easily and clearly as possible to ensure that everyone can understand and follow the process of certain decisions.

6. Methodologies

6.1 Methods

For the data collection, document analyses and stakeholder interviews are used. Governmental documents published by EZK surrounding PAWOZ-Eemshaven and all relevant papers covering this program from governmental and non-governmental organisations are acquired. Furthermore, reports published about the kickoff meetings, the theme meetings, and the "Sfeerverslagen" (atmosphere reports) written and published by EZK after each information evening are analysed. Therefore, a summary of all meeting reports is produced, which contains the most important aspects raised during meetings. After this, the summaries were compared to find key overarching themes or stark differences. During the participatory process of PAWOZ-Eemshaven, professional stakeholders, municipalities, and citizens can provide suggestions on the concept-NRD (c-NRD). For this thesis, these suggestions and how they have influenced the finalisation of the NRD were analyzed. All the documents analysed have been taken from the governmental website of "Rijksdienst Voor Ondernemend Nederland" (RVO), where a particular page is provided for PAWOZ-Eemshaven. The actual documents used are referred to in the results section and the bibliography section. By using qualitative methods, different perspectives are acquired on the participatory governance approach used by EZK by conducting an in-depth, semi-structured interview with one of the relevant stakeholders. Relevant stakeholders are those who submitted critiques or concerns to PAWOZ-Eemshaven and experts who know the project and its complications. Stakeholder interview questions are about the participants' experience of this stakeholder consultation trajectory. The participant is first asked preliminary questions, such as how they experienced the participatory governance approach executed in PAWOZ-Eemshaven. Next, the participant is asked critical questions. In the interview, the extent to which the stakeholders perceive that the government will seriously consider their

input is questioned, as well as the fairness of the process, even if the outcome does not suit them.

Lastly, the final part of the interview focuses on how the stakeholders view the relationship between the central government and other interest groups. Here, the participant is asked questions regarding the future of conducting policy and whether the governance approach executed in PAWOZ-Eemshaven could benefit other projects concerning the energy transition and its governance challenges. To obtain interview partners, the details given in the reports published by EZK, my network, the network of my supervisor, and the network of the University of Groningen were used. The interview was conducted in a semi-structured way and transcribed directly. Finally, all the information gathered is merged, coded by reading transcripts and documents, and themes are identified and presented in the results section.

6.2 Framework

As mentioned before, the governance of Dutch policy-making is divided among multiple levels (local, regional, national, and transnational). Change must occur on all levels to stimulate a transition (Piattoni, 2009). Therefore, the Multi-Level Perspective (MLP) framework is used for this research. This framework depicts socio-technical transformations resulting from technological advancements at three levels of analysis (Fuenfschilling & Truffer, 2014).

The first level of the MLP model is the macro level or the socio-technical landscape. The socio-technical landscape is slowly developing transformations in societal structures (for example, ideology, demographics, geopolitics, and spatial structures). It can also be exogenous shocks (for example, economic crises, wars, and natural disasters) (Geels et al., 2017).

The second level is the socio-technical regimes. This level is seen as the "grammar" of the system. The institutionalised formal and informal rules known as 'regimes' create the fundamental framework that ensures a system's stability (Geels, 2011). Regulations and institutionalised practices are included in these regimes. For example, in a country, the local government may have the legal obligation to allow citizens and stakeholders a set period to view construction plans and give their input before issuing the building permit.

The third level in the model is the technical niche. In this level of the model, new technologies are developed and advanced, and the process of incorporating these innovations into adequate institutional contexts. These technical niches are shielded by regulatory support, including university grants or research program financing (Fuenfschilling & Truffer, 2014).

The transformations in the landscape level put a strain on regimes, and niches are constantly developed through innovations which can generate new institutional structures and ultimately challenge the established regime. These two changes may weaken regimes and pave the path for new socio-technical frameworks (Fuenfschilling & Truffer, 2014). However, for these socio-technical niches to pressure regimes and benefit transitions, the precondition of legitimacy must be met. Geels (2011) asserts that legitimacy is an essential precondition of the Multi-Level Perspective (MLP) framework since it is crucial to mobilise support, overcome resistance, form societal expectations, and foster the development of coalitions required for successful sustainability transitions (Geels, 2011). In this thesis, I will start from the assumption that climate change on the landscape level is pressuring established regimes. Using the MLP framework, I will analyse if participatory governance as niche innovation can help steer transitions, benefit the governance challenges associated with the energy transition, and ultimately challenge the established regimes.

6.3 Ethical considerations

As I will be conducting qualitative research, the central part of this research concerned with ethics is the data collection, which mainly consists of interviews. Regarding the interviews, informed consent was taken before conducting an interview. During the interviews, the possibility of participants withdrawing their consent at any time is emphasized. The data collected is dealt with confidentiality and anonymity. Raw data will be eliminated as soon as storing it is no longer necessary. Moreover, research intentions and purposes are openly presented, as well as the researcher's identity Potential power dynamics between the different stakeholders were taken into account.

6.4 Methodological Limitations

This thesis includes some methodological limitations. The first is the number of interviews for the data collection. Due to a lack of responses and the unavailability of stakeholders in the given time frame, this thesis includes only one stakeholder interview and one expert interview. More information is needed to provide a quality comparison of the differentiating opinions of various stakeholders. Not all stakeholders share the same values; therefore, the opinions on the participatory governance approach in PAWOZ-Eemshaven could differ and interviewing these multiple stakeholders is essential. However, while the interviews did not provide the data for comparison, the one stakeholder interview was of great value for this thesis. Due to the lack of interview participants, this research had to rely mainly on document analyses, which was not expected from the start. These documents were all published by EZK and, therefore, could possess biases and might not be representative. Moreover, the documents provided by EZK, and the interviews conducted for this thesis, were published and conducted in Dutch. This could have caused a loss in meaning through the translation of documents and interview transcripts.

7. Results

EZK has organised theme meetings and information evenings to discuss PAWOZ-Eemshaven with relevant stakeholders. Citizens, landowners, and other stakeholders gathered in these theme meetings and information evenings to discuss, get informed about the project and share their perceptions of risks, opportunities, possibilities, and possible threats with EZK. The suggestions gathered at these events, and those given online or by post during the timeframe the NRD was open for review have been documented and answered in the "nota van antwoord" (memorandum of reply). The result section consists of two parts: the document analyses and the stakeholder interview. The first section of the document analyses covers the information evenings, the second section the theme meetings, and the third section discusses the "nota van antwoord". Finally, the stakeholder interview conducted is elaborated on.

7.1 Information Evenings

The information evenings (IE) usually started with a presentation from a government official of that region or municipality sharing their ideas and concerns surrounding PAWOZ-Eemshaven, followed by a climate expert about climate change and the importance and opportunities of wind energy and the energy transition. After this, one of the program directors of PAWOZ-Eemshaven gave a presentation about the possible routes and the plans for participation. These evenings were meant to inform the public about the program and gather everybody's input on what has to be researched and to what detail. During the IE, everybody could ask questions and share their concerns, perceived risks, and ideas. An information market occurred after the presentations, questions and answers, and usually a discussion about PAWOZ-Eemshaven. In this market, people could review the concept routes in more detail on a screen, and there was the possibility to provide input online. At this

market, TenneT and Gasunie were also present to answer all the questions of the people present about the technical aspects of the cables or pipe routes. EZK considers all the information gathered at these IE to create the final NRD. In October, a second round of IE was organised to present the findings and share the concept research plan (concept-NRD) with the stakeholders in the relevant regions. The concept-NRD also included the suggestions given at the previous IE and new routes proposed by EZK. All IE have been documented in "sfeerverslagen" (atmosphere reports). These documents were written after the information evening took place. All information in this section is based on these sfeerverslagen. The sfeerverslagen are published in Dutch on the website of Rijksdienst voor Ondernemend Nederland (RVO), under the PAWOZ-Eemshaven page, which is referenced in the bibliography (EZK, 2022).

The IE were held in the regions where the concept routes were placed. The IE in the summer were well visited; in Dokkum, Schiermonnikoog, and Uithuizermeeden, there was a presence of 20 people. In Pieterburen, where the information evening mainly was focused on the agricultural sector and landowners, there was a presence of 35. In Ameland, only seven people attended. After the summer, during the second round of IE, the presence changed a lot. In Schiermonnikoog, the attendance increased to 33, and in Ameland, it increased to fifteen. The information evening in Pieterburen was attended by 50 people, like last time, consisting of many farmers and landowners. The attendance in Dokkum stayed the same, and the attendance at the information evening in Uithuizermeeden decreased to four people.

During the first information evening, a focus was set on informing the citizens and stakeholders in the region. Therefore, most of the discussions were based on the questions of the people attending. People asked questions about the positioning of the cables, the technical aspects of the infrastructure to be built if hydrogen was considered, and how Germany was

involved. A common point discussed was the question of compensation since the people living on the island or the people owning the land have to deal with the possible damages. While the question of compensation went beyond the scope of the information evening to be answered by the representatives present, this discussion was certainly taken seriously by EZK, and there was a common ground that zero damages should be the aim. In most IE, the people present showed a clear preference towards the routes located in the east. Since the routes in the west would cause, the most environmental impact and the routes in the east are the most direct. During the IE in October, EZK introduced a new concept route to existing routes. This route is referred to as the tunnel route, which could potentially avoid most environmental damages, although much research still has to be done to get a clear assessment of this concept route. During the IE after the summer, there was much positive feedback about this tunnel route and preferred by many.

The main difference between the IE in the summer was that every meeting had a different audience, judging by the primary concerns raised. For example, in the information evening in Schiermonnikoog, there seemed to be the most concern for the damage to the habitats of the animals in the Wadden area, while in Pieterburen, there was the most concern for the degradation of the soil by saltwater intrusion or magnetic fields. During the IE in Pieterburen, where many landowners and farmers were present, EZK put an extra emphasis on land degradation, especially in the information evening after the summer, where after the request in the previous meeting, there was a representative of Acacia Water present to elaborate on their research on saltwater intrusion and water quality. During the IE, there was a pattern requesting the avoidance of the part where they lived; in Schiermonnikoog, there was a preference for the alternative routes that would not cross their island, and in Pieterburen, there was an explicit request to look for alternatives over the sea, to avoid damages to their

land and agriculture sector. However, during the information evening in Ameland, a suggestion was made to bring the cable to their island so that the island could directly benefit from the energy that would be generated. However, this was not possible since the routes through Ameland were planned for hydrogen pipes only and not electricity cables.

Throughout the IE, most misunderstandings were based on the aim of the IE and the NRD itself. There was much concern about the environmental impacts of the project. However, these impacts will be researched in the MER published after the NRD. However, the representatives of EZK could solve these uncertainties and provide information about the project's process and aim for the IE. Another misunderstanding was that the suggestions made in the previous IE had not been listened to. For example, in Schiermonnikoog, the people had made a clear statement in the previous information evening. They requested not to have a route in Schiermonnikoog, but this route was still on display. The representatives of EZK could clarify by saying that all routes are still on display to show the differences between the routes and the benefits and drawbacks of each route so that the public can compare them and create their preferences.

As previously mentioned, everything discussed during the IE has been reported in "sfeerverslagen" (atmospheric reports); however, not every report stated the general atmosphere during the meetings. The reports that included an assessment of the atmosphere reported that people were curious, open to discussing and asking questions, and content. However, people present also felt concerned for their land, the environment, and the animals in the area. During the second round of the IE, people were also critical. For example, in Pieterburen, people were questioning the participatory process. They pointed out stakeholders' different opinions and ideas and that the ministry can do what they want and

choose what is best for them. The EZK representative explained that all the ideas and opinions must be considered and reviewed against each other to make the final decision possible. However, to compare the different parties' opinions, they must be investigated thoroughly.

7.2 Theme Meetings

On March 28th, a kick-off meeting was held by EZK for stakeholders to discuss the programme and to provide first input. Stakeholders included land and sea users, environmental organisations, and municipalities. The meeting aimed to inform stakeholders about the program's purpose, goals, structure, and challenges, as well as their desired involvement. Stakeholders emphasised the need for quick access to essential data to offer timely opinions, clarity on procedures, and ongoing progress updates. Concerns were raised about the decision-making process, particularly the possibility that some interests would be prioritised over others. In response, the ministry stressed that all interests are considered in a coordinated manner, with close involvement through the Wadden governance structure. The stakeholders called for adherence to the Agenda for the Wadden Sea Region 2050, wherein the national government, provinces, municipalities, water boards, nature organisations, and the business community are represented (Agenda voor het Waddengebied, 2020). The agenda offers a joint guiding and comprehensive perspective on the future of the Wadden Sea region. They also requested transparency regarding significant regional initiatives and to consider their cumulative environmental impacts, including those related to gas extraction, wind energy, and other essential projects. The kick-off meeting's strategy and emphasis on thorough participation were well-received. The stakeholders appreciated the upfront consideration given to various interests but stressed the importance of realism and acknowledging limitations. All discussed information would be incorporated into the proposal for participation for PAWOZ-Eemshaven.

Following the kick-off meeting, EZK organised two theme meetings. The first, held on June 2nd, focused on the study's scope, while the second, on June 30th, addressed the level of detail in the study. Another meeting occurred on November 24th in Groningen, specifically discussing responses to the C-NRD. During this meeting, there was particular interest in the tunnel variant of the cable route. Stakeholders had the opportunity to ask questions and suggest alternative routes, which were discussed and clarified by representatives from EZK and TenneT. All the suggestions made were put in the "Nota Van Antwoord" (memorandum of reply) that I will analyse in the next part of the results section. At the end of the meeting, stakeholders were asked about their desired involvement in the subsequent phases of PAWOZ-Eemshaven. EZK considered stakeholders' suggestions and explained their existing plans for stakeholder involvement. Attendees at the meeting complimented EZK for the participation process from the previous year and stressed the importance of keeping stakeholders informed and involved in future stages of PAWOZ-Eemshaven. All information above is based on reports written on the theme meetings published on the website of RVO by EZK, a link to the reports can be found in the bibliography (EZK, 2022).

7.3 Reactions on the Concept-NRD

Between the thirtieth of September and the tenth of November 2022, the concept-NRD (C-NRD) was open for review. Twenty-nine reactions have been submitted and were published in the "nota van antwoord" (memorandum of reply). In this thesis, these reactionswere reviewed to see how they have changed or influenced the finalisation of the NRD. In the *Nota van Antwoord*, questions and suggestions are given. However, not all of the

suggestions are relevant to the NRD. For example, there were requests for further environmental research, or people found it unclear to what detail the environmental impact will be researched; all these suggestions and unclarities have been answered and will become part of the MER. However, these suggestions will not influence the NRD, and are therefore not included them in the results section. All suggestions relevant to the NRD will be considered and analysed in how they influenced EZK to produce the final NRD. All information below is based on the *nota van antwoord* as published on the website of RVO; a link can be found in the bibliography (EZK,2023).

The twenty-nine reactions, which EZK answered in the nota van antwoord, have been submitted by various stakeholders. The writers of the reactions were anonymised and characterised by private or landowners. The reactions provided by institutions were characterised by name. The institutions that shared their reactions were the already existing wind park Gemini, Waterboard Noorderzijlvest, and Nature organisations, of which the Waddenvereniging, Natuurmonumenten, Het Groninger Landschap, and Natuur en Millieufederatie Groningen presented multiple joint reactions. Other institutions were LTO-Noord, Rijkswaterstaat Noord-Nederland, Nederlandse Vissersbond, and Stadt Borkum. The reactions varied much from one another. Some reactions were precise demands, like the wind park Gemini, which demanded that the cable routes not cross their cables and keep a minimum distance of 500m due to the risk of possible damage. EZK will consider this suggestion and research the risks and technical challenges of crossing cables and the distance to the cables of Gemini. Other people reacted with a preference for a specific route. The preferences were mainly for the eastern routes due to their directness and minor damage to the environment or agricultural grounds. The tunnel route was also popular and considered by many as the preferred option. Other reactions emphasised the project's urgency and stated that EZK should start as soon as possible since the demand for green energy is rising. One landowner was concerned with the idea of the cables crossing agricultural land since it puts food security at risk, and there are enough alternatives to avoid this.

In the reaction of the Waterboard Noordzijlvest, there was a request to be closely involved in the decision-making procedure of choosing the preferred route. The waterboard requests to be an equal partner as the central government. EZK replies that they will be of great importance and want to involve local and regional governments and the waterboard.

The nature organisations came with a joint statement. The organisations were primarily concerned about the environmental impact of the cable infrastructure. The organisations stated that every route that crosses one of the closed nature areas would cause environmental stress. The agenda for Wadden 2050 states that the central government wants to prevent any stress in the protected areas of the Wadden Sea, but some of the routes do not comply with this prevention stated by the central government. The organisations also pointed out that the reference areas were chosen because nature needs to stay untouched. Therefore, the area can provide a standard of reference by which to evaluate the impact of human activities on the tidal seabed. If a cable passes this area, it will become a touched area, and the reference area concept is invalid. Therefore the cables must avoid the references as much as possible. The nature organisations also request that all the pipe and cable placement construction happens at once and not for every energy cable or new offshore wind farm in the future. So when new wind parks are built, the Wadden Sea does not have to be cut open again.

The Nederlandse Vissersbond also emphasised the speed of the construction process to minimise the impact on the environment and fisheries. Another request of theirs was to

stay away from the fish hotspots in the north sea and build the infrastructure 3 metres underground to avoid obstruction for fisheries.

The LTO Noord-Nederland (Agriculture and Horticulture Organisation of the Netherlands) was primarily concerned about the impacts on agricultural land and the farmers in the region. Generally, the LTO was against the routes crossing private land and provided suggestions for this scenario. One suggestion was that if the cable will cross privately owned land, the landowner should be the one who decides how the cable will cross their land and how this building process affects them the least. Another suggestion is that they do not want environmental compensation since they believe it is valuable agricultural land. If the environment gets compensated instead of the farmers, this will threaten the future of farmers in the region. The LTO strongly emphasises how the land impacts should be researched and provide a step-by-step plan for how they believe the impact is best researched. EZK considers the suggestion and will consider it in the MER. The LTO ends its reaction by emphasising that the project's planning should not hinder the quality of the research. Since a good evaluation of the agricultural impact is necessary for realising the project and, therefore, should not be rushed.

The city of Borkum also emphasised the importance of not passing the Natura 2000 areas and the reference areas in the Wadden Sea. Another reaction was that the cable route should not be built in salt marshes since these are crucial in capturing CO2 and are essential to combat climate change. EZK will consider the suggestions, and the project's environmental impact will be researched further in the MER.

In the *nota van antwoord*, many unclarities and uncertainties have been put forward. These were about the need for more description in what detail particular aims and themes were considered, like circularity, hydrogen, and future wind farms. EZK has cleared up questions

of uncertainties and provided lengthy answers and references to research or other parts of the C-NRD. Other uncertainties were about the cables' ecological impacts and the infrastructure's building. EZK has emphasised that they will research many of these uncertainties in the MER, and based on past research, EZK could invalidate some of the perceived risks and uncertainties put forward in the reactions.

In total, sixteen concept routes have been created and have to be researched, of which 15 possible cable routes to attach the offshore wind farms with the national energy grid in Eemshaven. Seven of these routes are from previous studies. EZK has proposed one additional route due to the success of cable attachment in the south of the Netherlands, and during the participatory process, eight new routes have been proposed. Sometimes routes are similar, or it is immediately apparent that a route does not fit the programme. Therefore, all 16 routes have been looked at and provisionally assessed. Based on this assessment, ten routes are proposed to be examined in detail for the programme as visualized in Figure 1. It is unclear whether the ten routes include all of the suggested routes of the stakeholders. Nevertheless, one can state that the stakeholders' suggestions did influence the options provided in the final NRD.



Figure 1: The concept routes as visualized in NRD (EZK,2023)

7.4 Stakeholder Interview

After negative experiences with the participatory governance strategies of the ministry, the stakeholder was delighted with the current strategy of PAWOZ-Eemshaven. The stakeholder states that in past experiences with state-led participatory governance, the ministry already had a fixed plan of how they wanted the end product to look, and the participation of stakeholders would not influence the plan. Therefore, the only way to influence the program was by stepping to a judge, who did have the power to block or influence the project.

According to the stakeholder, the participatory process during PAWOZ-Eemshaven was different, and they felt that this time the ministry had a genuine interest in the input of the stakeholders and aimed to accommodate deliberation. The stakeholder stated that the information was well provided and could follow the project's developments. The stakeholders were included in the project and informed well of the possibilities and challenges. They also stated that there was plenty of room and possibilities to ask questions and suggestions, and the ministry provided lengthy responses of good quality. Therefore the stakeholder concludes that until now, the participatory process has been going well. The stakeholder understands that the decisions made by the minister are not always the preferred decisions of the stakeholders. When this happens, the stakeholders must return to the drawing board and see how the final decision impacts their interests. If the possible damages due to the unpreferred decision are severe, the stakeholders must find another way to influence the final decision and take the ministry to court. However, this takes a lot of time and money, so if the final decision does not interfere significantly with the stakeholder's interest, it is not worth taking the ministry to court, and the stakeholders will have to accept the final decision.

According to the stakeholder, such a thorough Participatory governance approach can be a solution for making the best decisions in the energy transition, but only when stakeholders and the ministry can reach a consensus. Such a thorough participatory approach costs much time, which can be wasted if the efforts are unsuccessful. If one of the stakeholders takes certain decisions to court, the project can lose much time, which is undesirable in the energy transition.

The stakeholder argues that through a comprehensive participatory governance process, governments can decide based on the stakeholders' interests. Therefore the decision is more

likely to receive support from the stakeholders. If stakeholders widely support the decision, the chances of going to court are lower.

According to the stakeholder, participation is essential to make a well-considered decision. Participation enables governments to know what is happening in the relevant regions and what is on the mind of the stakeholders in the region. One can spot the concerns and detect bottlenecks in the early stages of the program and bear these in mind throughout the research. The stakeholder is convinced that this will lead to better decisions and programs. The stakeholder is optimistic about the participatory strategy of the ministry but finds it a shame that the decision for this broad participatory process for PAWOZ-Eemshaven came late; if the stakeholders had been involved from the start, time would have been saved.

8. Discussion

To test whether the participatory approach during PAWOZ-Eemshaven was sustainable and efficient, it is essential to look at the project's legitimacy (Geels, 2011). To test the legitimacy of the program, I have looked at input, output, throughput, and feedback legitimacy. I used the definitions of legitimacy by Van Tatenhove (2011) as described in the literature review.

Input legitimacy refers to the "will of the people" (Van Tatenhove, 2011), meaning that to be input legitimate, decisions made by EZK should be according to the authentic preferences of the community and its stakeholders. Since the stakeholders involved in PAWOZ-Eemshaven had different values and interests, it is hard to decide according to everybody's authentic preferences. Furthermore, the final route is yet to be decided. The participatory approach was used to decide the NRD, the policy plan setting out the scope and detail of the research. Stakeholders could influence what routes had to be researched and to what detail; they could

also suggest changes to routes or completely new routes. In the first stages of the research, during the kickoff meeting, stakeholders could suggest how they wanted to be involved. In this meeting, the stakeholders requested access to essential data, clarity on procedures, and progress updates throughout the research. At the last theme meeting on the twenty-fourth of November, the stakeholders were optimistic about the approach of EZK, and compliments about the participatory approach of EZK were given. Furthermore, during the interview, the stakeholder stated that this time the participatory strategy gave the impression that the ministry genuinely intended to accommodate deliberation and collaborate with the stakeholders in the region to come to the best decision. Therefore, I can state that due to this genuine interest of EZK in deliberating with the relevant stakeholders and adapting the requests for participation at the theme meetings, the participatory governance of PAWOZ-Eemshaven is input legitimate.

Output legitimacy refers to "governance for the people" (Van Tatenhove, 2011). To be output legitimate, EZK must make decisions that advance the general welfare of the people living and working in the relevant region. Like with input legitimacy, it is hard to advance the general welfare of the stakeholders when their values and interests differ significantly. In the case of PAWOZ-Eemshaven, the output could be seen as the placement of the energy cable and hydrogen pipe infrastructure, transporting the electricity and the potential hydrogen generated at the offshore wind farms to the national energy grid in Eemshaven. However, this decision is not final yet, so to test the output legitimacy of PAWOZ-Eemshaven, I looked at the final version of the NRD. The NRD states that ten out of sixteen concept routes have been created and will be researched. Seven of these sixteen concept routes already existed due to previous research, one was created additionally by EZK, and eight have been suggested during the participatory process. Since some routes looked much like others and some

suggested routes were technically not feasible, EZK has assessed these routes and selected ten final routes that will be researched in the MER. It is unclear whether the eight suggested routes are included in these ten routes, but one can state that they influenced the final decision on which routes must be researched in greater detail.

Through participatory governance, EZK aims to assess the general welfare of the community and, based on this assessment, decide what to research and, ultimately, where to build the cable and pipe infrastructure. There was a general preference for the eastern routes during the participatory process. Therefore one could state that choosing the routes located in the east would be according to the general welfare; however, in the NRD, the routes in the west were still present since all the ten routes must be researched to make a well-considered decision. To assess the output legitimacy further, we must wait for the ultimate decision of the minister. As stated in the literature review, specific stakeholders have different perceptions of the greater welfare (Van Tatenhove, 2011). In other words, the final decision will likely benefit one stakeholder and be wrong for another. Therefore, the output of PAWOZ-Eemshaven is likely to be both output legitimate and illegitimate, depending on the stakeholder's perception. Nevertheless, one can conclude that the ambition of EZK to assess the general welfare of the community through participatory governance is an effort to make the output as legitimate as possible.

Throughput legitimacy questions the legality, transparency, fairness, deliberation and efficiency of the decision-making structure and procedure (Risse & Kleine, 2007). The participatory process and structure of PAWOZ-Eemshaven have to be fair, open, legal, and efficient for the participatory governance strategy of EZK to be throughput legitimate.

During the interview, the stakeholder argued that PAWOZ-Eemshaven could have been more efficient if EZK had adopted the thorough participatory governance strategy from the start, not only after the protests on Schiermonnikoog. The stakeholder stated that the thorough participatory governance approach of PAWOZ-Eemshaven did take much time. However, when the stakeholders can reach a consensus, the juridical part of the program can be avoided. This thorough participatory process can be efficient, but this depends if the final decision is consensus-based and all stakeholders are sufficiently satisfied. EZK made a clear decision to emphasise the quality of the participatory process. EZK could have kept it with one information evening to save time. Instead, they organised ten information evenings. However, this would have been costly for the results of the process, and the likeliness of reaching a consensus would decrease. Stakeholders also requested an extra emphasis on quality rather than rushing decisions. EZK still handled this extra emphasis on quality in an efficient manner, organising the first round of information evenings all within eight days, and the second round of information evenings took place within fifteen. In total, the participatory process took place from the first meeting end of March till the closing of reviewing period of the c-NRD in November.

To make the participatory governance strategy fairer, EZK organised information evenings in five different locations in the relevant locations. They were making participation more accessible for citizens in the different regions. EZK also aimed to inform the citizens in an easy and followable manner so that the information provided would be more understandable and accessible. If people were unable or unwilling to come to the theme meetings or information evenings, they could be informed about the program online and give their reactions or ask questions. There was also the possibility of providing suggestions by post or by phone. This made the participatory process more accessible and, therefore, fairer.

To make the participation strategy transparent, EZK organised a kickoff meeting, wherein they explained how they plan to involve the stakeholders in the program, and the stakeholders could give their suggestions on how they wanted to be involved. To ensure transparency throughout the participation process, EZK organised two more theme meetings to discuss the scope and detail of the research and update stakeholders about the program's status and a final meeting discussing the reaction to the C-NRD. The C-NRD has been open for review between the thirtieth of September and the tenth of November 2022. All documents and reports relevant to PAWOZ-Eemshaven have been published on the website of RVO, accessible to the public. To ensure transparency, the nota van antwoord has also been translated to German since one of the respondents was the German island Borkum. The stakeholder interviewed found the process transparent and had the impression that EZK was actively listening to the stakeholders and was transparent about the challenges and limitations of the program. Legality is also considered since stakeholders can hold the ministry accountable in court when the decision-making process and the final decision are handled illegally. This juridical process takes much time and is undesirable for both parties. Therefore, it is of great interest for EZK to handle this process with great obedience to Dutch and European law.

The throughput of the participation process was handled legally, fairly, and transparently. According to the stakeholder interview, efficiency was doubted due to the late start. The thorough participatory process also took extra time to be more transparent and fair. However, for the participation process to be of good quality and to aim for consensus to save time in court, the process had to be thorough and, therefore, lengthy. Throughout the thorough process, EZK aimed to be as efficient as possible in spreading information and organising the

meetings. Therefore, the participatory process was throughput legitimate and did include most aspects of throughput legitimacy.

Feedback legitimacy describes the degree and manner in which politicians and administrators, in this case, EZK, inform stakeholders about the outcomes of the decision-making process; in turn, the option of the stakeholders to provide feedback about the decision-making process and how the politicians or administrators (EZK) regard this feedback as new information (Van Tatenhove, 2011). Feedback is closely intertwined with the participatory governance strategy of EZK, and one could argue that it is the cause of the start of PAWOZ-Eemshaven. Since in 2021, there were uncertainties and protests on the island of Schiermonnikoog, which the original cable route would cross, EZK decided to start a more thorough participatory governance strategy, PAWOZ-Eemshaven. Because the old strategy of EZK did not seem to work, citizens and stakeholders actively made EZK aware of this dissatisfaction. According to the stakeholder interview, EZK showed a clear interest in the input of the stakeholders during the participatory process of PAWOZ-Eemshaven and considered the suggestions given as new information. This also showed in the information evenings, where there was a suggestion to build a route alongside a dyke, which is now a new version of a concept route in the NRD.

Another example is the presence of Acacia Water at the second information evening in Pieterburen, after requests for more information about soil degradation at the first information evening. During the participatory process, stakeholders and EZK worked on finalising the NRD. First, a proposal for participation was made where stakeholders could react after two theme meetings were organised for them to suggest and question the detail and scope of the research. Finally, the c-NRD was presented in another theme meeting, where stakeholders could provide the final feedback before the finalisation of the NRD in January 2023. While in

the participatory process of PAWOZ-Eemshaven, stakeholders were sufficiently informed about the results of the decision-making process, the stakeholders had sufficient opportunities to provide feedback, and EZK considered this feedback as new valuable information. Therefore the participatory governance strategy implemented in PAWOZ-Eemshaven includes the elements of feedback legitimacy.

9. Conclusion

Climate change is pressuring the established governing regime on the landscape level, leading to the climate agreement in Paris that was signed in 2015 by 195 countries, which states that Co2 emissions have to decline to mitigate climate change, forcing regime changes at the national level, for example, the transition to greener energy sources and build new energy infrastructures (EZK, 2023; Ministerie van Infrastructure en Waterstaat, 2023). In this thesis, I have argued that a thorough participatory governance strategy like the strategy adopted in PAWOZ-Eemshaven by EZK can benefit the energy transition legitimately and with great efforts to seek a consensus. The participatory governance strategy of PAWOZ-Eemshaven was executed with great care for input, output, throughput, and feedback legitimacy. Due to this thorough participatory approach, many stakeholders had an optimistic perspective on the strategy of EZK. Since the participatory approach carried the broad support of stakeholders, the final decision is likely also to be supported.

Nevertheless, this depends on whether this decision is based on the actual interest of the stakeholders; if EZK takes a decision that deviates from the stakeholders' preferences, EZK could receive backlash, and the program could take longer. Adapting such a thorough participatory approach and making decisions according to the consensus with the

stakeholders is beneficial for the energy transition in the case of PAWOZ-Eemshaven and, therefore, can be seen as a socio-technical niche. Participatory governance as niche innovation can therefore challenge the established regime, ultimately become part of the socio-technical regime, and help address the governance challenges associated with the spatial aspects of the energy transition.

The limitations of this thesis include the representability of this case study. Case studies provide accurate overviews and an excellent opportunity to apply the theory. However, their outcome depends significantly on the context. Therefore, it is not easy to scale up the results. PAWOZ-Eemshaven provided excellent information on the effectiveness of participatory governance on a local scale; it is crucial to remember that the lessons learned could not apply to different contexts. Therefore for future research, it would be beneficial to compare various case studies to test whether including a broad participatory process is beneficial to solve the governance challenges of the energy transition. This research could also be expanded beyond the energy transition's spatial elements and applied to other forms of climate adaptation governance on global and local levels. Secondly, for future research, it would be beneficial to conduct the data collection in a longer time frame to increase the chances of participation of stakeholders. Even though it is difficult to interview all relevant stakeholders, it is essential to include more than one to compare the various opinions of the stakeholders involved.

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11. Appendix

Interview questions,

Introducing yourself

- Name, GRL student, BSc Thesis,

Explain the purpose of the research:

- I am a student from the RUG Campus Fryslân, study area Global Responsibility and Leadership. I am currently writing my undergraduate thesis on the Proactive participation of government in addressing governance challenges associated with the spatial aspects of energy transition.

What will be the outcome of the research?

- We are doing this interview in order to write a report on this topic.
- For this, I would like to know more about your perceptions and opinions about the participation process.

What will the interview look like?

- I am going to ask you questions about your experiences before, during, and after the PAWOZ participation process. Feel free to say anything that comes to mind.
- I will sometimes take notes of what you tell me that I would like to know more about.

Permission

- In addition, I will record this interview to be able to return to it later. The recordings will be destroyed at the end of the study. Do I have your permission to record this interview?

- The information we get during this interview will be used anonymously and kept confidential. This means that only I will have access to this data. Do you give your consent for the interview?
- If at any point during or after the interview you decide you no longer want to participate or you are not comfortable with us using your input, please let me know and we will delete the notes and audio recording.

Do you have any questions before we start?

Introduction questions,

- 1. How did you experience the participatory governance approach by the government?
 - Were you asked to join?
 - Was there space to give your opinion?

Main questions

- 2. What were some of the concerns/ requests that you had raised during one of the meetings or in one of your letters?
- 3. Do you feel like the concerns and requests you brought up have been listened to and been taken seriously?
- 4. How would you feel if the concerns or requests you brought up in the meetings/letters will not be executed by the Ministry of EZK?
 - Would you trust them in taking the best decisions possible, when they listened to all the stakeholders involved?
 - Or would you try to seek other ways to get your requests implemented,
 or appeal to the central government?

5. How do you perceive the relationship between the central government and other interest groups?

Future questions

- 6. Do you think that this form of participatory governance works well for the PAWOZ?
 - If yes, do you think that this form of governance could be beneficial for other projects surrounding the energy transition?
- 7. What is an essential thing that the EZK did not include in the governance approach in PAWOZ?