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The role of NGOs in Environmental Impact Assessment processes in the North Sea.

The case of the gas extraction project N05-A.

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Colophon

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Abstract

As a precautionary policy tool to evaluate the consequences of a proposed project on the environment, the European Union introduced the Environmental Impact Assessment Directive. As a fixed component Environmental Impact Assessment (EIA) includes the involvement of stakeholders in defined participation phases. Non-governmental organizations (NGOs) are seen as important actors in the participation process. Environmental NGOs in particular are strongly committed to environmental issues, and they often serve as important representatives for the interests of the population and therefore secure democratic values. Increasingly academics are concerned about procedural justice in EIAs.

The aim of this thesis is to study the perception of different stakeholders in the N05-A gas extraction process. On the one hand, this research aims to identify whether public stakeholders have the just ability to successfully participate in EIA activities in marine contexts. On the other hand, it should be analyzed whether NGOs can play a key role in marine environments by acting as representatives of the public and therefore secure procedural justice. Therefore, the main research question is 'How do the stakeholders of the N05-A project perceive the role of NGOs with regard to securing procedural justice in the EIA process?'. To answer the research question a mixed-methods approach was used, including a quantitative survey and semi-structured interviews with relevant stakeholders.

The results show that the respondents of the survey do not fulfill all the factors for successful participation in the N05-A gas extraction project in the North Sea. Environmental NGOs in turn have the ability to act as representatives of the public, especially in marine environments. Based on the results of this case study, further comparative studies of EIA participation on the sea could be useful to better understand the particularities of participation behavior in projects with marine contexts.

Keywords: The North Sea, Environmental Impact Assessment (EIA), Non-governmental organizations (NGOs), Public Participation, Gas extraction

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List of abbreviations

EBM	Ecosystem-Based Management
EEZ	Exclusive Economic Zone
EIA	Environmental Impact Assessment
ENGOS	Environmental Non-governmental organizations
ES	Ecosystem services
EU	European Union
ICZM	Integrated coastal zone management
MSP	Marine spatial planning NGO Non-governmental Organization
NGOs	Non-governmental organizations
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNESCO	United Nations Educational, Scientific and Cultural Organization

1. Introduction

In the light of the climate protection goals anchored in the Paris Agreement and the recently held COP26 (United Nations Climate Change Conference), the idea of marine environmental protection is increasingly becoming a part of public interest. Therefore, proposed projects are being criticized more and more by the public regarding their environmental compatibility (BMU 2020). The gas extraction project N05-A on the German-Dutch border, off the islands of Borkum and Schiermonnikoog, is a local showcase of this and the ongoing debates between concerned citizens, environmental non-governmental organizations (NGOs), governmental authorities, and representatives of the gas extraction sector (ONE-Dyas B.V., 2020).

Background to these discussions is, on the one hand, the direct environmental impacts and risks of the planned project like underwater noise, physical damage of the seafloor, atmospheric emissions, discharge of gas, waste, and accidental events (DTI 2002). These potential environmental impacts are of particular concern as the project area is located next to the national park Wadden sea. Latter is protected across the borders of three countries due to its importance as a natural habitat and is recognized as a World Heritage Site (Stock 2009). On the other hand, gas extraction projects are generally highly criticized in the policy frame, trying to concurrently meet decarbonization goals and cope with the increasing oil and gas demand (Atlantic Council 2020).

While there seems to be a public perception that the need for natural gas will decrease long-term, future trends speak a different language (Janicki et al., 2017). According to the scientific predictions for the European Energy market, there is evidence that the extraction of natural gas will further increase until 2050. This rising demand will be especially relevant for the Netherlands as the country is a significant player in the global market for natural gas. Recently a major part of the country's onshore gas production was reduced in response to earthquakes in the Groningen gas field. For the Netherlands to be independent of imports and secure the increasing demands, the natural gas extraction will partly be outsourced to offshore fields in the North Sea (Mulder & Perey 2018).

As a precautionary policy tool to evaluate the consequences of a proposed project on the environment prior to the decision-making, the European Union introduced the Environmental Impact Assessment Directive (Directive 2014/52/EU) as it is an update of a preliminary directive already published in 1985. Next to including potential environmental impacts, a fixed component of Environmental impact assessment (EIA) is the involvement of stakeholders in defined participation phases (Wood 2014). In this way, the developments described in the literature towards more collaborative planning and the increasing integration of environmental concerns in spatial planning processes are brought together in a promising policy tool. Nevertheless, although EIA is well-established in most European countries, "its application to projects in the marine environment is at a much earlier stage of development" (Guerra et al. 2015, p. 182).

NGOs are seen as important actors in EIA participation processes. Environmental NGOs, in particular, are strongly committed to environmental issues, and they often serve as essential representatives for the interests of the population and, therefore, secure democratic values. The latter is specifically relevant on seas that are often seen as 'out of scope' for citizens and thus potentially affect public participation processes to be unsuccessful (Lai and Hamilton 2020).

The potential impact of public non-governmental stakeholders' efforts is for example shown by the judgment of the Hague Court of May 2021 against the oil company 'Shell' in response to a lawsuit by environmental NGOs and citizens. The judgment obliges the oil company Shell to reduce their CO2 emissions by 45 percent compared to 2019 levels by 2030. This court judgment exemplifies the strong signals being sent towards gas production companies. For the first time in history - through the participation of committed citizens and NGOs - a company was obliged to meet its environmental protection responsibility and radically reduce its emissions. This is one of the examples illustrating the increasing involvement of environmental concerns in broader society as well as the influence that NGOs and public stakeholders can potentially play out even against major corporations.

Nevertheless, "taking into account the fact that NGOs are important in impact assessment, academics are increasingly concerned with procedural justice issues regarding representation by NGOs and their engagement" (Lai and Hamilton 2020, p.1). Therefore, the role of NGOs in EIA participation processes in marine contexts is further discussed in this thesis regarding NGOs' ability to secure procedural justice. The latter is described as "the ability of people affected by decisions to participate in making them" (Ottinger 2013, p. 250).

1.1 Relevance

Scientific Relevance

In the history of spatial planning, a shift in planning can be identified from previous top-down decision making towards a communicative turn, which regards collaboration and finding consensus as a central element of successful planning (Healey 1996). This shift is also interconnected with environmental planning as sustainable development increasingly emerges as an essential governance guideline. Previously regulatory-based policies are due to sustainable developments becoming more and more proactive while integrating environmental concerns in overall governance activities (Richardson 2005).

Nevertheless, planning processes on land might differ from those at sea, which deal with complex interdependencies. In the literature, this is argued to lead to diverse problems, like risk and uncertainty, resulting in unequal power structures and problems of inclusion in participation processes (Morf et al. 2019). Therefore, there is a need to approach ways to cope with the complexity of planning on seas and analyze whether precautionary approaches like EIA can lead to a more adaptive and inclusive planning process. Although the effectiveness of EIA participation processes has been addressed in the literature, environmental NGOs acting as representatives of the public to secure procedural justice have barely been considered. This study can add on the particularities of public participation processes in European waters and reshape discussions on EIAs' effectiveness and procedural justice in marine contexts.

Societal Relevance

The societal relevance of this work results from three points, in particular, namely the implementation of governmental practices with the EIA Directive; questions of procedural justice that concern the public interest to be included in a just way into the decision-making processes on the sea; and the industry sector of the selected case study is highly relevant in societal debates on the energy transition.

Firstly, according to the EIA Directive, public participation is intended to contribute to more transparent decision-making in which all stakeholders can participate. So far, however, there is hardly any scientifically sound knowledge about whether these functions of public participation for the population are also given in the marine context and what role NGOs can serve as representatives of the public's interests. This knowledge deficit is used to examine the ability of the public and NGOs to successfully participate in the EIA participation process in a European marine context.

Secondly, depending on the study results, important conclusions can be drawn on how participatory processes are carried out regarding procedural justice in planning processes on the sea. The results might also indicate a change in how NGOs should be legitimated to act as representatives during the participatory process of EIAs.

Thirdly, both Germany and the Netherlands are striving for an energy transition. Despite its environmental impact, gas is traded as one of the cleanest fossil fuels and is often viewed as an essential resource in debates about the energy transition. Gas thus becomes an example of the difficult societal debate about the balance between the economic need for gas and the ecological

effects on nature that result from gas extraction. In addition, the rise in gas prices further fueled the debates on the subject of gas.

1.2 Problem statement

Against the described background, the aim of this thesis is to study the role of NGOs in the N05-A gas extraction participation process. On the one hand, this research aims to identify whether public stakeholders have the just ability to successfully participate in EIA activities in marine contexts. On the other hand, it should be analyzed whether NGOs can play a key role in marine environments by acting as representatives of the public and therefore secure procedural justice.

The research objective results in the following primary research question:

How do the stakeholders of the N05-A project perceive the role of NGOs with regard to securing procedural justice in the EIA process?

Secondary research questions:

- a. Can the public participate successfully in the EIA participation process of the N05-A project?
 - a1) Does the interviewed public fulfill the factors for successful participation?
 - a2) Does the marine context have an impact on public participation?
- b. Can NGOs successfully participate as representatives of the public in the EIA participation process of the N05-A project?
 - b1) Are the factors enabling NGOs to act as representatives of the public fulfilled?
 - b2) How do the stakeholders in the N05-A project perceive environmental NGOs with regard to acting in the role of representatives?
 - B3) Do the interviewed NGOs fulfill the factors for successful participation?
- c. How is the role and the presence of procedural justice perceived by the stakeholders of the N05-A project?
- d. Is the change to increasingly include collaborative and environmental planning as described in the literature reflected in the perception of the stakeholders about the practice of the N05-A project?

1.3 Reading Guide

How knowledge can be gained is an important question that derives from fundamental philosophical thoughts (Godfrey-Smith 2003) and can be pursued further to be linked to the necessity of using theory in the present work. Studying requirements for knowledge and perception is broadly summarized under the term of epistemology, which follows the underlying assumption that knowledge can be formulated in the form of general statements and theories (Kawall 2005). Abdel Rahman & Sommer (2008) emphasize that what we know strongly shapes how we perceive things, which builds the basis for how we make decisions (Lee 1999; Abdel Rahman and Sommer 2008). Therefore, the inclusion of theory is also a vital aspect of planning, which Allmendinger (2017) describes as inevitable, as “most practically, planners theorize as an everyday activity whether they recognize it or not. After all, the very activity of planning is based upon a theory that the world will be a better place (however defined) with it than without it” (Allmendinger 2017,p.3).

Therefore, and to answer the research question a literature review on the current developments in the field under study will be presented in the next chapter. The literature review follows a thematic approach, using mainly journal articles as well as the most relevant basic literature on the topic. Section 2.1 and 2.2 introduce the next chapter with a 'setting the scene' part on the most relevant developments in environmental and communicative planning as well as on the particularities of planning in the context of marine environments. These set the underlying framework for this thesis to dive deeper into concrete thematic approaches in 2.3 to 2.6, that are relevant for this research, namely Environmental Impact Assessment in section 2.3, Participation in 2.4, Environmental and especially Procedural Justice in 2.5, and the role of environmental NGOs (ENGOS) in EIA participation processes in 2.6. Chapter 2 ends with a conceptual model that combines all the relevant concepts and sets them into relation with each other to be able to answer the research question. Chapter 3 introduces the case N05-A, followed by the methodology used for this thesis in chapter 4. In chapter 5 the results will be presented and discussed in chapter 6. This thesis ends with a conclusion and reflection in chapter 7.

2. Theoretical framework

2.1 Setting the scene: The nature of planning and the planning of nature

The context which builds the action framework for planning to operate has changed crucially in the last decades. It has changed on various levels, added new perspectives, and developed a set of new approaches (Allmendinger 2017). That concerns the nature of planning itself, the way how planning is carried out and how planners act and engage in the planning process, as “new pressures for economic competitiveness, greater accountability and participation, improved quality of life for citizens, and global environmental responsibilities [are some of] these changing circumstances [which force] planners (...) to re-evaluate their work”(Allmendinger 2017, n.d.). These changes also regard the increasing acknowledgment that interactions with the nature surrounding us, often referred to as ‘the environment’, are a crucial part of planning, as they build the fundament for every part of human development (Daniels 2017). Most recently “a new environmental agenda has prioritized the goal of sustainable development” (Allmendinger 2017, n.d.) bringing environmental concerns to the political arena and setting milestones with effects on the development of new approaches in planning.

The intention of the following sections is to give an overview of the main developments discussed in the literature regarding the changing nature of planning as well as the changing planning of nature. These are highly relevant for this work as the discussed current participation processes are embedded and linked to these fundamental developments. Nevertheless, there are a few gaps that are identified in the following sections on the knowledge about participation processes and justice in marine contexts.

The planning of and with nature: Environmental planning

A major change in perspective started to evolve around the 1960s and gained increasing popularity in recent years not exclusively in planning but in all relevant societal developments, namely integrating environmental concerns in all aspects of human life. Environmental planning evolved out of this acknowledgment that environmental considerations should be considered while making decisions (Daniels 2017). “Today that recognition remains a top priority and continues to broaden the scope and purpose of environmental planning and the role the environment plays as a decision criterion in the planning and development process” (Lein 2003, p.23).

The term environment is described in the literature in a variety of meanings, a view of them offered by Lein (2003) entailing “a set of resources to draw from and conserve” or “a series of natural functions to be maintained, hazards to be avoided, and opportunities to be exploited” to “an all-encompassing entity that simply exists not as a passive feature there to serve human needs, but as a set of active processes that define a behavior and establish patterns that interact with and redirect human trajectories” (Lein 2003, p. 23).

It is easy to get lost in the number of books examining several diverting meanings and usability of the term environment especially in connection with the term planning and nevertheless not finding general unity about their meaning. Therefore, this work refers to the definition provided by Baldwin (1985): “environmental planning may be defined as the initiation and operation of activities to direct and control the acquisition, transformation, distribution, and disposal of resources in a manner capable of sustaining human activities with minimum disruption of physical, ecological, and social processes. Although definitions will vary, the environmental approach to planning seeks to explore economic growth alternatives that are socially and environmentally sustainable” (Lein 2003, p.24). White (2015) adds that although environmental planning is a mix of the two different terms ‘environment’ and ‘planning’, they together are: “concerned with society’s collective stewardship of

the Earth's resources. In this sense, the words environment and planning are framing devices that provide the focus of discussion: in short, they are the lens as well as the subject" (White 2015, p.4).

Acknowledging the value of the environment itself is nothing new. While humans in ancient years had a close connection to their natural environment by directly seeing the effects their interventions on the natural system around them had, that changed with the establishment of national and global hierarchies as well as trading on larger scales and distances to encourage economic growth with the result of exhaustion of resources and other severe environmental damages. Humanity was able to close their eyes about the effects that their own actions on the environment had as the scale of managing resources changed from local to global which made it less apparent, in particular to local people, where and to which environmental cost resources are used. The increasing globalization opened up the possibility to import resources at a minimal price from foreign countries and on the other side outsource the environmental consequences that come at the cost of this management mostly too far away and poorer countries (Hughes 2005).

The 1960s and 70s heralded a change especially regarding the way environmental concerns were incorporated in decision-making processes. A crucial factor in that development was initiated already in the 19th century and solidified itself much more notable in the second half of the 20th century, being the politicization of nature and the environment. The differences between this era and previous periods manifested themselves regarding the social organization, the scale, the growing knowledge of impacts on the environment, and the capacity, creating better possibilities to affect political processes and influence the public opinion as well as political parties on environmental concerns (White 2015).

Public awareness grew in recent years about the relationship between humans and the environment and that "we affect nature just as it affects us" (White 2015, p.). At the beginning of the 21st century, it was getting increasingly clear that the environment is not an isolated factor and thus cannot be viewed as being one anymore (White 2015). Sustainability, which is set as an overarching goal in most theories and practices attached to environmental planning, links very well to this issue (Haughton 2017) by acknowledging the interconnectedness of social equity, environmental health, and economic developments (OECD 2016). While primarily economic-driven solutions shaped planning for a long time, the concept of sustainability added a new perspective by increasingly also including environmental and social aspects. Environmental Planning in that sense can be seen as the involvement of humans in some kind of management of natural systems, by balancing human needs with environmental quality (Daniels 2017).

While publications, like the famous Brundtland Report, laid out the fundamentals for sustainable development (see figure 1) and proposed to balance economical, ecological, and social needs they are mostly not very precise about how to steer the change in a sustainable direction nor about how to cope with the complex nature of environmental problems (Jordan 2008). This complexity arises on the one hand by the world increasingly getting interconnected, and single causes being able to have wide environmental effects (White 2015).

On the other hand, "the large sociotechnical systems that lie at the core of discussions of sustainability—such as the energy, mobility, and agricultural systems – (...) really are very large, very complex, and very diverse" (Meadowcroft 2009, p.328). According to Hughes (2005) especially the growing world population will reinforce itself and the major environmental challenges connected to it, potentially leading to "the declining power of local communities over their own environments, energy resources, and loss of biodiversity" (Hughes 2005, p.294). Other scholars have similar expectations on how the future of environmental planning will look like, as for example White (2015) states that there are going to be more humans, increasing urbanization, need for resources, and new

pressures on the natural system and therefore the need to balance the requirement of growth, with the needed standard of living as well as with environmental concerns.

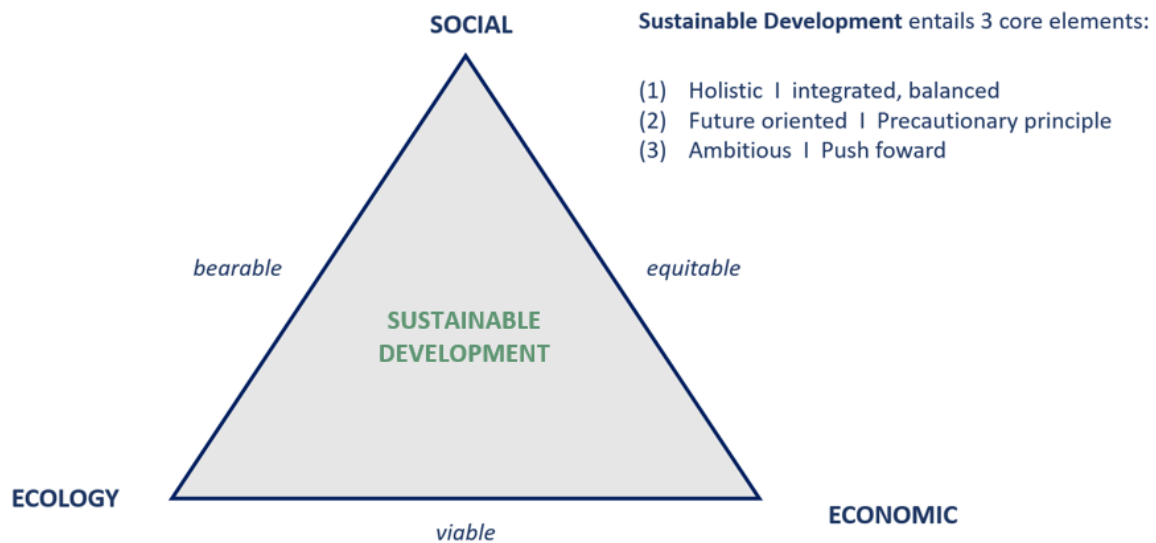


Figure 1: Sustainable Development: According to Brundtland (1987) sustainable development is progress and change that aims to meet the needs of today without compromising the ability of future generations to meet their needs (own figure based on Warner 2010; Jordan 2008)

The nature of planning: Government vs. governance?

With its aim to increasingly include environmental ideals and knowledge into planning, environmental planning holds a crucial position in achieving sustainability. The latter can however only be ensured by an understanding of how to cope with the named pressures and complexity in environmental planning, what planning environmentally contains, and how to manage that process (Daniels 2017; Lein 2003).

The recent years made clear that sustainable development is not something that happens automatically. It rather “needs to be carefully discussed, openly debated, and possibly even centrally planned” (Jordan 2008, p.19). The question of how to manage and steer planning processes is at heart of the widely discussed difference between government and governance which entails a fundamental place in recent debates in social sciences (Jordan 2008; Lafferty und Hovden 2003). The term government refers to actions that are guarded by legal authority, focusing on activities of the state being at the central stage. In contrast, the term governance implies that actions are shaped and secured by joint goals. This means that also actors like NGOs or businesses, as non-state actors, are brought into play to steer planning processes (Jordan 2008). White (2015) adds to these definitions that the value of understanding the term governance lies in its ability to focus on all actors and agencies involved and consequently to analyze their interactions.

Governance is currently often used to describe the changing role of the state. It is esp. in industrialized countries widely used, as the popularity of governments decreases alongside hierarchical ways of governing in general. Societies have changed from being only managed by the central authority, often referred to as a command-and-control practice, towards including a wider range of non-state actors (Warner 2010; Jordan 2008). In the literature on environmental planning, there is consensus that “the traditional perception of the state as simply exerting sovereign authority over civil society does not address the practical limitations of this bounded spatiality and power in a globalized world. There is a strong view that governments should be more concerned with organizing

and guiding rather than commanding and controlling- in essence, a light touch or small government that can enable others to act” (White 2015, p.60).

Looking at the modes of governance, which are summarized regarding environmental planning by Evans (2012) as well as White (2015), next to hierarchical modes there are also market-based and network-based modes of governance. Market-based governance refers to the provision of goods and services, taxes, creating incentives, or developing new market instruments. Jänicke (2008), for example, offers some interesting insights on ecological modernization as a market-based governance approach. Network-based governance, as it will be the focus of this research, refers strongly to participation and a network of actors who guide the society for themselves (Jordan 2008). Taking this perspective means to include a variety of actors, from agencies to NGOs or scientists who can together tackle problems in a decentralized way (White 2015).

Adding to the named modes, governance can also be seen as being cross-scale, performing on several scales and including vertical as well as horizontal interactions. This is a relevant point for this work as well, as it facilitates new developments that fit better to the complex and transboundary nature of environmental issues that are especially relevant for marine contexts (see 2.2). On the other side, distancing from command-and-control practices next to growing pressures like globalization, Jänicke (2008) points out that actor constellations involved in environmental planning are becoming increasingly complex. An important note regarding the inclusion of stakeholders is that governance is not solely about the contrary opinions of these actor constellations, but that it is fundamentally linked to power structures, as who is able to take part in decision-making processes, which will be further discussed in section 2.4 and 2.5 (White 2015).

The history of spatial planning is connected to the described developments of governing modes. Beginning in the 1990s a shift in planning can be identified from previous top-down decision making towards a communicative turn, which regards collaboration and finding consensus as a central element of successful planning (Healey 1996; Zuidema 2016). “Communicative rationality shifts perspective to the meaning given to an action (...). Hence, communicative rationality also shifts perspective away from a sole focus of planning action based on the object of intervention (...) towards the intersubjective process of making decisions” (Zuidema 2016, p. 19).

This shift in planning, in general, is also closely linked to environmental planning, as sustainable development is increasingly setting the focus to guide environmental governance by applying the environmental perspective in overall governance activities including the named shift in planning towards a collaborative rationale and involving wider stakeholders (Richardson 2005). The latter entails a variety of benefits like increasing resources, knowledge, and the chance to make decisions in a common matter. “It is also useful as a means of addressing environmental concerns, particularly given how they may be caused, and addresses, beyond the core power of the state, whether by individual behavior, the market or the forces of global capitalism” (White 2015, p.63)

The evolving plurality of environmental governance, which means that the state is only one of a variety of actors, leads to further complex situations compared to the command-and-control situation (White 2015). Among scholars, there is, therefore, a consensus that Healey’s call for a communicative turn is not always easy and realistic to implement into planning practice, and “it has become a strong argument that the role of government in the context of multi-level governance is a ‘functional necessity’ and has to be reinvented and strengthened” (Jänicke 2008, p.559). Jordan (2008) also regards network-based and market-based modes of governance rather than working with the government than isolated from it. The work by Lane and McDonald (2005) adds to this discussion by reviewing the often clearly separated ‘top-down’ against ‘bottom-up’ approaches, reasoning that environmental governance is more complex as well as multi-scalar than this division indicates. This uncertainty makes the precautionary principle an imperative to follow in environmental planning (see 2.3).

Effective environmental governance in addition continues to emphasize the need for rules that facilitate interactions to happen. Away from the point of view that the state is acting in the public interest, it has taken on a simpler role of overseeing the formation of relationships, for example by implementing a legal requirement to work with community organizations, NGOs, or private stakeholders. This changed role facilitates decisions to be made. Importantly, this can also mean that decisions are not being made (White 2015). The latter strongly connects to procedural justice, which will be discussed in section 2.5.

To sum up, this section showed the most important developments which led to increasingly including environmental factors in decision making as well as following new ways of governance that in theory allow stakeholders to make or hinder decisions. Nevertheless, this section also outlined the increasing complexity of environmental problems, as well as involved actor constellations in comparison to previous top-down governments. In the next section, the particularities of marine spatial planning will be addressed, which are explained to be even more complex. Nonetheless, the ways marine systems are planned appear rather as an extension of terrestrial planning that underestimates the special requirements of marine spatial planning.

2.2 Setting the scene: Environmental planning for coasts and oceans

Marine Ecosystem Services

With a 72 percent share of the earth's surface, oceans are the largest ecosystem and “one of the most important areas of biodiversity conservation” (Hughes 2005, p.302) on earth. Due to their depth, they account for approximately 90% of the earth’s inhabited space (WWF 2020). In addition to their function as a habitat for a variety of species, the oceans perform various essential tasks (WWF 2020). “The oceans absorb a third of humanity's carbon dioxide emissions and 90 percent of the excess heat generated by increased greenhouse gas emissions; it's the largest carbon sink on the planet” (Woody 2017, n.d.). They provide the main source of food for a billion people, serve as sources for energy and raw materials, and are important for the global climate. The oceans are also one of the most important factors within the global economy. For example, tourism, fishing, and the pharmaceutical industry are dependent on the marine ecosystem. Due to their globally connected network, the oceans have always been an important transport route (Portman 2016). Not only oceans are important but also at the interface of land and sea, coastal areas increasingly attract people and stimulate development and population density at a worrying rate. Today, more than 44 % of the earth’s inhabitants live within a 150 km distance of the coasts. That is more than the entire earth population consisted of in 1950. "Population density is a measure of stress placed on coastal areas; when more people are using a limited resource, the carrying capacity of a region can easily be exceeded"(Portman 2016, p. 13). The functions and benefits that humans receive from ecosystems, in this case, provided by the Oceans and coasts, are summarized as Marine ecosystem services (MES) and are illustrated in figure 2. They are meant to help identify the benefits as well as threats of the natural ecosystem and can be used as a basis for decision-making processes (ibid.). Four types of ES can be distinguished:

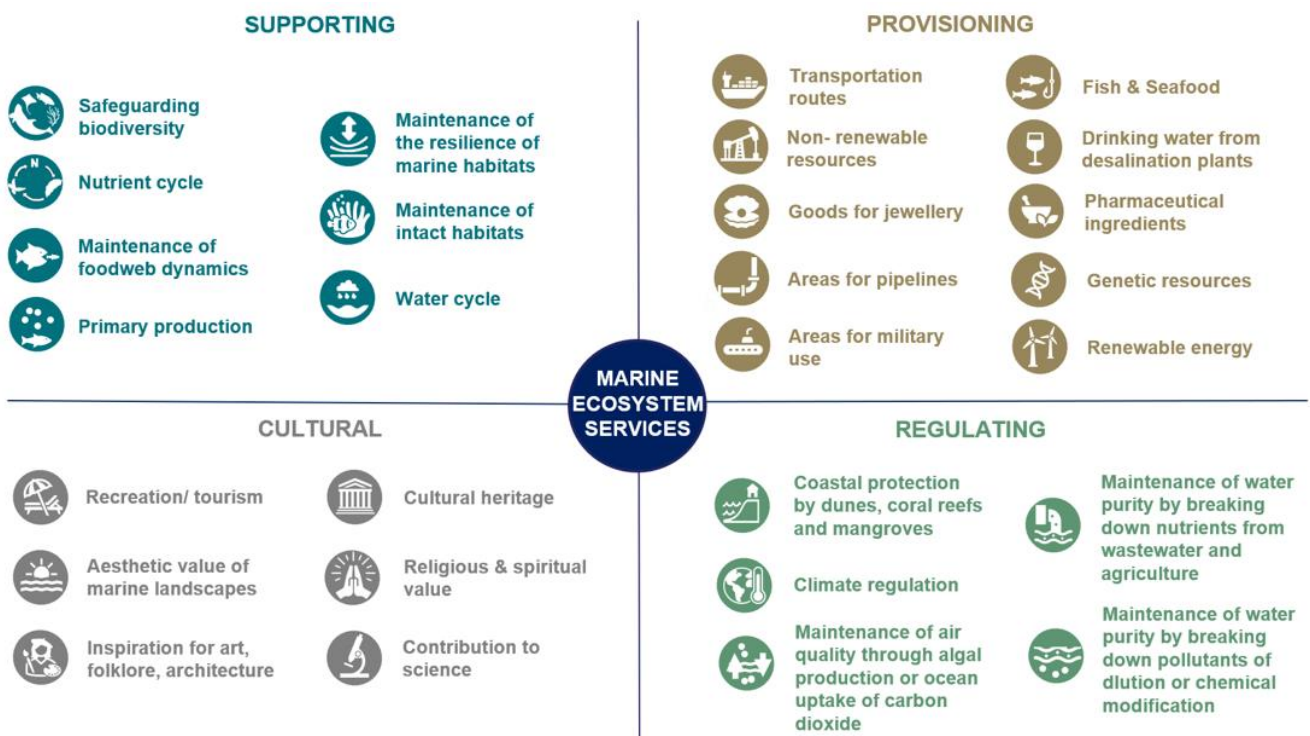


Figure 2: Marine Ecosystem Services (own source based on Bollmann et al, 2010)

Marine systems: Oceans and coasts under threat

A lot of the ecosystem services provided by coasts and oceans are under threat today, as in the last decades a series of complex and interrelated global problems have arisen. The cornerstones of environmental issues regarding marine systems are climate change, ocean pollution, destruction of habitats, and non-sustainable exploitation of resources. The latter is caused by the growing need for resources that increase stress on the vulnerable ecosystem. As land-based resources are becoming progressively limited, resources provided by oceans and coasts are becoming more and more attractive. A showcase for this is oil and gas extraction, which can be seen as a fundamental element in fueling modern industrial societies. While available deposits are getting scarce and costs are rising, technological advances have made it easier as well as cheaper to exploit vulnerable resources of the oceans, e.g. gas and oil deposits, which were unreachable in previous years (Bücker et al. 2014). Nowadays, "already more than a third of the oil and gas extracted worldwide comes from offshore sources" (Bollmann et al. 2010, p. 142). Next to oil and gas drilling the oceans and coasts are extensively used for energy production, fishing, transportation, and the extraction of mineral resources. This is especially intensive in the North Sea which is currently the busiest sea in the world (OSPAR Commission 2018). These pressures led to severe degradation of coastal and marine habitats, mainly due to anthropogenic impacts. "By many accounts, our oceans and coastal environments are highly threatened and, as such, are 'in crisis'" (Portman 2016, p. 5). Nearly half of our world's oceans are already severely or heavily impacted by humans and except for remote areas in the Pacific and the poles, there's virtually no space left on the ocean without human footprints (IPCC 2019). "Due to coastal development, population growth, pollution and other human activities, 50% of salt marshes, 35% of mangroves, 30% of coral reefs, and 29% of seagrasses have already been lost or degraded worldwide over several decades" (Barbier 2017, p. 507).

While marine areas are today acknowledged as crucial ecosystems the planning profession has in the past mainly focused on terrestrial planning and widely ignored oceans and coasts as important areas. The planning of marine systems "has been based on the premise and ambition that it should complement or be integral to terrestrial spatial planning by essentially extending planning to the sea" (Gazzola & Onyango 2018, p.1).

That is also displayed in the way marine systems are legally zoned in the most relevant framework by the United Nations Convention on the Law of the Sea (UNCLOS). UNCLOS provides a distinction of the marine system into legal zones which tie onto a country's land ownership, by extending the sovereignty of a national or federal state into the sea waters. The further you move, from the territorial seas (12-nautical-mile-zone), over the exclusive economic zone (200-nautical-mile-zone) towards the high seas, the more the sovereignty over the available resources dwindles (UNCLOS 1982).

Figure 3 shows this delineation of the marine system according to UNCLOS. In the literature, this zoning is often criticized to be a social construct that doesn't map the conditions of the real world. While zoning makes sense from a legal perspective it does not from an ecosystem perspective as nature doesn't stick to the boundaries set by human institutions (Bücker et al. 2014).

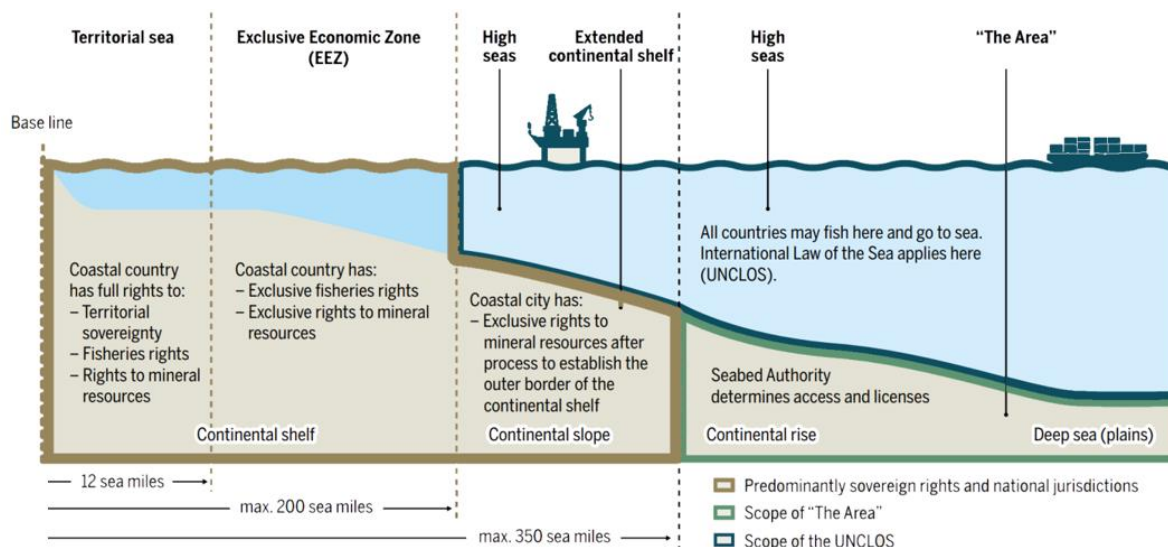


Figure 3: Marine Zoning

The United Nations Convention on the Law of the Sea (UNCLOS) partitions the ocean into different legal zones. Within this framework, the sovereignty of a state diminishes as distance from the coast increases (Source: Modified figure based on: Ocean Atlas 2017).

Planning marine environments, the same way as terrestrial environments easily leads to essential differences of marine systems in contrast to terrestrial systems being overlooked. Gazzola & Onyango (2018) argue that this might not only lead to differences in how the marine ecosystems are valued and viewed but might also affect the way decisions are made. This could also influence how the special characteristics of marine systems are protected and how sustainability agendas are built up as “the random application of terrestrial models to the marine environment may not succeed in protecting resources and [their] underlying ecology” (Portman 2016 ,p. 16).

The main differences of marine environments in comparison to terrestrial environments and what follows from these differences for environmental planning, are derived based on a literature review about environmental planning of marine systems and is compiled in table 1. The main differences being the blurred boundaries, the way marine systems are treated as a dichotomy, their three-dimensional space, the lack of knowledge about marine ecosystems, their highly dynamic and complex nature as well as the differences in who owns the sea compared to terrestrial land ownership (Gazzola and Onyango 2018; Portman 2016; Barbier 2017; Carr et al. 2003). All these differences concern the way in which marine systems are managed and understood through environmental planning, particularly referring to “disciplinary, conceptual, legitimacy and knowledge deficits [which] also affects decision making processes” (Gazzola and Onyango 2018, p.2). Overall, there is a need for environmental planning to not only acknowledge these differences but also to plan in an integrated way, including an ecosystem-based approach and to deal with the high dynamics and complexity of these vulnerable ecosystems (Lubchenco and Petes 2010).

DIFFERENCES OF MARINE ENVIRONMENTS	EXPLANATION	CONSEQUENCES FOR (ENVIRONMENTAL) PLANNING
BOUNDARIES	<p>While terrestrial systems normally have clear boundaries, marine systems have more fuzzy boundaries.</p> <p>Where terrestrial ecosystem boundaries are set by e.g., topographical discontinuity, the same criteria simply don't work for marine systems as these areas can be zones of high productivity and are convergence zones for many different species. Fish migration is a showcase of this, with fish being able to travel far across socially constructed boundaries – therefore making conservation attempts a lot more difficult.</p>	<ul style="list-style-type: none"> - Need for planning across administrative boundaries (e.g., transnational) - Need for ecologically coherent marine planning units defined by natural processes, rather than administrative and political feasibility - Greater emphasis on the ecosystem level, including a redefinition of the concept of an ecosystem boundary, to meet the distinctiveness of marine environments
DICHOTOMY OF ECOSYSTEMS	<p>In the academic literature different marine ecosystem-/ landscape types – such as oceans and coasts – are often treated separately. Depending on the definition the coastal and marine environments can begin up to 100 kilometers inland. This shows how difficult it is to draw a clear line between what is the coast and what is ocean. Each of the latter planning systems cannot exist and operate in isolation. Marine systems should rather be seen as a mosaic of ecosystems, which are highly interlinked. Nevertheless, they are often still treated as a dichotomy today.</p>	<ul style="list-style-type: none"> - Principles of integration are fundamental to the planning approaches of marine systems - Silo-thinking doesn't work when looking at marine ecosystems - The subdivision of the marine system is clearly a social construct - which means that it is based more on human choices and institutions than on the environmental needs
THREE-DIMENSIONAL	<p>The consideration of the three-dimensional living space of marine systems is highly relevant as many physical, environmental, and biotic processes vary widely across depths. In recent years, human activities, such as oil and gas drilling are increasingly reaching deeper marine areas. Most current decisions and policies do not explicitly incorporate the 3-D nature of the oceans and are still based on a two-dimensional approach.</p>	<ul style="list-style-type: none"> - The marine environment requires a three-dimensional spatial approach which is difficult to represent on two-dimensional maps that mostly only include the surface area

<p>KNOWLEDGE</p>	<p>Oceans have been less studied than land, leading to a lack of knowledge as 80% of the ocean remains unexplored.</p> <p>As it is difficult to protect what is unknown this also leads to a lack of protection, with only about 7% of the world's oceans being designated as marine protected areas. This leads to marine systems being the most vulnerable, while least understood as well as protected areas of the world.</p>	<ul style="list-style-type: none"> - High level of uncertainty in planning as there is a big lack of knowledge - Need for scientific research on marine ecosystems - Acknowledgement that humans are profoundly terrestrial organisms who do not view the marine environment as having the same value as terrestrial environments due to lack of knowledge and poor understanding of the physical environment or of the way in which sea-based development activities affect the functioning of marine ecosystems.
<p>DYNAMIC</p>	<p>The marine system is an extraordinarily dynamic environment, while in contrast, the terrestrial environment is more static. The constant motion and force of water, whether induced by human or natural forces, can cause rapid changes in the physical conditions of the sea.</p>	<ul style="list-style-type: none"> - The high level of dynamic makes the integration of the two spatial planning systems fundamentally problematic - Higher level of uncertainty - Difficult to implement a place-specific spatial planning reaction
<p>COMPLEXITY</p>	<p>Marine systems are not only dynamic but also highly interconnected through a network of surface and deep-water currents. These systems don't exist in isolation but are often interconnected containing relatively unstructured food webs and nonlinear system dynamics. This leads to the effect of transboundary and global threats to the marine environment.</p>	<ul style="list-style-type: none"> - Marine systems are complex and non-linear systems - High level of complexity and uncertainty - What happens in the oceans also closely affects humans
<p>OWNERSHIP</p>	<p>A big difference between terrestrial and marine systems is land ownership. Although it allows exploiting the given resources it also provides a series of responsibilities, expectations, rights, and duties. Challenges associated with planning the marine environment are therefore often problems relating to the management of common-pool resources.</p>	<ul style="list-style-type: none"> - The further you move towards the high seas, the less legal property allocation there is -> leading to a lack of responsibilities for wide parts of the marine system - All stakeholders have a right to be involved in decision-making processes -> effective and inclusive participation by multiple actors - The marine system cannot be defined solely as either a state-governed public good or as a commodity or private good.

Table 1: Differences of marine environments and consequences for planning

Ocean governance

Following up from these differences between terrestrial and marine planning is the question of how marine systems are governed and regulated and how societies make collective decisions regarding oceans and coasts. This can be summarized under the term ocean governance. Due to the described difficulties regarding the ownership, marine systems are “best seen as a commons —a non-state, non-private shared resource that can only be protected if stakeholders who depend on it take collective responsibility for preservation and restoration with self-devised protocols, values and norms” (Brodie Rudolph et al. 2020, p. 1).

A variety of institutions are currently dealing with ocean governance. The United Nations (UN) is in this regard particularly responsible on the global/ international level, followed by international organizations who manage bound regions - e.g. Oslo-Paris Convention (OSPAR) for the Northeast Atlantic region -; as well as non-governmental organizations (NGO’s). The most relevant framework, which has been introduced on the previous pages, is UNCLOS which entered into force in 1994 and forms the foundation for marine policy. Figure 4 shows the responsibilities which can be divided within the umbrella of the UN, and which deal partly or completely with the governance of marine systems. These responsibilities can be split up in the areas of biodiversity, labour, law, fisheries, development, sea mining, shipping, and science. As illustrated in figure 4, this leads to different institutions being responsible for different types of marine activities, which creates sectoral responsibilities. The latter can be useful to make progress with individual protection goals but can be a barrier to the implementation of cross-sector policies, which are often needed in the multi-dimensional, complex and transnational environment of marine ecosystems. In addition, the UN conventions are not all legally binding, as it is mostly up to the respective member state to implement these regulations into national laws. Many scholars therefore argue that for a sustainable development of the marine system, silo thinking has to be replaced by system thinking and that environmental planning must be overall integrative (Bollmann et al. 2010).

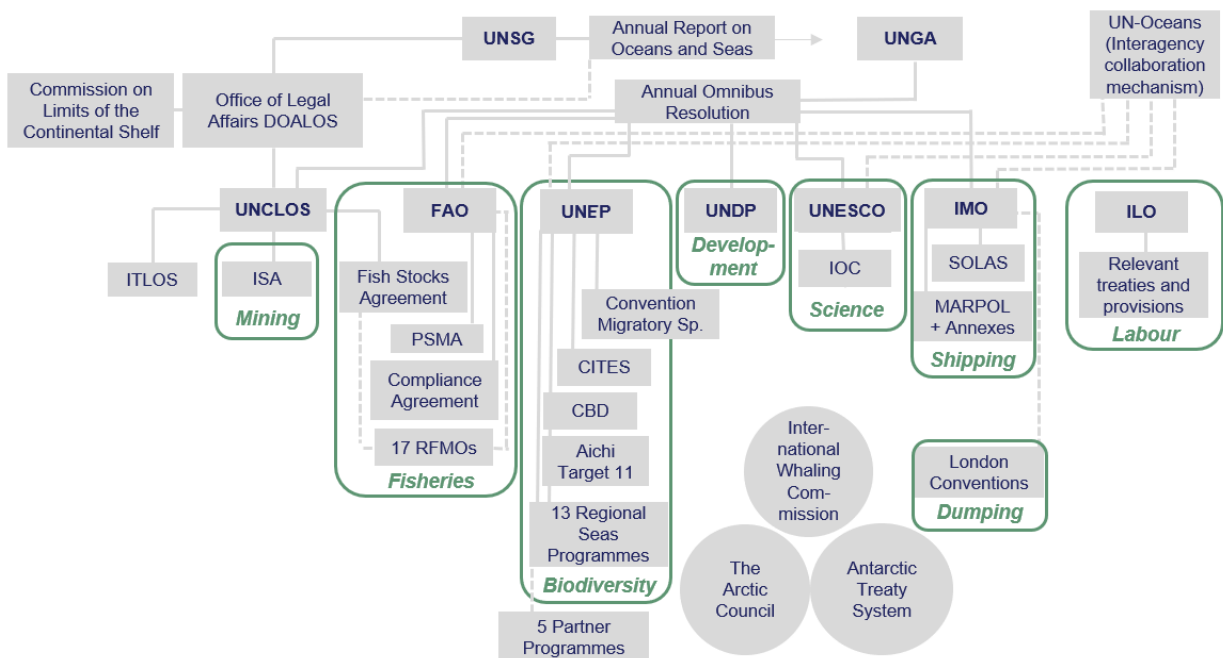


Figure 4: International Governance Structures for the Ocean

With the adoption of the United Nations Convention on the Law of the Sea (UNCLOS) the international community created a comprehensive framework for legal governance of the seas which, over time, has evolved into a powerful body of law (Source: Modified figure based on: Bollmann et al. 2010).

Sustainable development for oceans and coasts

"Sustaining the ecological health and productivity of our coastal and marine environments in the face of the intense global social, economic and environmental changes is one of our most daunting tasks" (Portman 2016, p. 6). In recent years sustainable development of marine systems has also been prioritized as a topic on the international agenda as it was also introduced as one of the Sustainable Development Goals (SDGs) by the UN (UN 2015).

As described above the coastal and ocean areas have individual characteristics which have implications on the way they should be managed. Regarding the sustainable development of marine systems, a few issues stand out from what has been derived from the literature. These are the need for integration, an ecosystem-based approach, and just inclusion of stakeholders in decision-making processes (Portman 2016).

Box 1 – Factors needed for sustainable development of marine systems

Integration

Environmental planning should in general be integrative. Due to the described differences in comparison to terrestrial systems, these types of integration are according to Portman (2016) particularly important for marine systems:

- Cross-boundary integration
 - professional boundaries (e.g., disciplines)
 - physical boundaries (type of landscape or ecosystem)
 - institutional boundaries (e.g., administrative, or jurisdictional)
- Science-policy integration
- Intergenerational integration

Ecosystem-based management (EBM)

According to the Convention of Biological Diversity (CBD) EBM "is a strategy for the integrated management of land, water and living resources that promotes conservation and sustainable use in an equitable way" (CBD 2004, p. 6). EBM requires the consideration of ecosystems as a whole with the goal to preserve a resilient, healthy, and productive ecosystem in order to provide and maintain the ecosystem services (ibid.).

Inclusion of stakeholders

As described above marine systems contain different types of ownerships and can therefore best be described as commons, which need to be collectively managed. This in turn means that there are a variety of stakeholders who have a right to be involved in decision-making processes (Levin et al. 2017). Just participation will be further discussed in section 2.4.

One of the most relevant developments which include these three components and regarding coastal areas has been integrated coastal zone management (ICZM). Nevertheless, "it seems that ICZM, in some ways, failed to be integrative enough to extend to the management of far-from-shore marine areas" (Portman 2016, p. 28). In recent years much hope has therefore been set on marine spatial planning (MSP) to fill this gap. MSP should not be a replacement for ICZM but rather builds on it. Most commonly MSP is defined as a "public process of analyzing and allocating the spatial and

temporal distribution of human activities in marine areas to achieve ecological, economic, and social objectives that are usually specified through a political process” (Ehler & Douvère 2009, p. 18).

It is an approach that tries to manage competing uses of the marine areas by trying to avoid potential conflicts before they arise and therefore balancing needs for development with the need to protect the vulnerable marine ecosystems. There is consensus in the literature that MSP should follow an ecosystem-based approach to maintain the ecosystem services. “It is these [services and] values that should inform and shape marine spatial planning, and [should] (...) provide the basis for intentional use of resources” (Gazzola and Onyango 2018, p. 1). MSP involves stakeholder participation as a crucial step in the process as well as it should be implemented in an integrative manner (Jay 2018).

Box 2 - Marine Spatial Planning

Ehler and Douvère’s (2009) Step-by-Step Guide to MSP, which provides the major framework of how MSP should be conducted, provides the following steps:

1. Identify need and establish authority for planning in the marine environment
2. Obtain financial support for the marine planning process
3. Organize the process through pre-planning
4. Organize stakeholder participation
5. Define and analyze existing conditions
6. Define and analyze future conditions
7. Prepare and approve the spatial management plan
8. Implement and enforce the spatial management plan
9. Monitor and evaluate plan performance
10. Adapt the marine spatial management process

These ten steps do not necessarily have to be taken in a linear way as well as feedback loops should be included in the process. Although MSP is an ambitious approach to balance the human and non-human requirements regarding the marine system, critics question its ability to target issues around land-sea integration and knowledge deficits, power inequalities and environmental justice. The latter two will be discussed in further depths in the following sections. Around the globe MSP has also so far not been implemented in all countries or not to the same extent. Nevertheless, this fact also gives planners the opportunity to learn from previous mistakes and to better implement sustainability goals (Jay 2018).

In other words, MSP is the overall framework that guides marine planning and aims at improving decision-making in a sustainable way. This is similar to Environmental Impact Assessment (EIA) which also takes into account environmental considerations and will be discussed in the next section.

2.3 Environmental Impact Assessment

Mitigation of environmental impacts

Due to the described complexity and uncertainty surrounding the planning of marine systems, together with the knowledge gaps about environmental responses e.g. to human induced activities, in the literature the need for planning of marine systems to follow a proactive and preventative manner is often stated. While proactive planning aims at preventing negative impacts on the environment, following the precautionary principle, reactive planning in contrast reacts to a problem or a crisis that has already occurred (Gazzola and Onyango 2018).

The precautionary principle, alongside with EBM (explained in 2.2), gained attention and importance as proactive approaches during the 90s of the last century, offering new approaches to environmental planning and decision making. The precautionary principle's essential components are: "taking preventive action in the face of uncertainty; shifting the burden of proof to the proponents of an activity; exploring a wide range of alternatives to possibly harmful actions; and increasing public participation in decision making" (Kriebel et al. 2001, p. 871).

EBM and the precautionary principle can be seen as overarching guidelines -esp. in the planning of marine systems- and thus have been enshrined in EU legislation by the Maastricht Treaty of 1991, followed by the Treaty of Nice in 2001 which announces that: "[European] community policy shall be based on the precautionary principle and on the principle[s] that preventative action should be taken, that environmental damage should as a priority be rectified at [its] source" (Portman 2016, p. 84). These components have been referred to in recent marine policies, like the Marine Spatial Planning Directive (MSPD) and the Marine Strategy Framework Directive (MSFD). The latter aims at measuring and defining the Good Environment Status (GES) of marine systems (Hassler et al. 2019).

Among the relevant instruments following the precautionary principle and to achieve EBM is Environmental Impact Assessment (EIA). According to its definition "EIA is the process of identifying, predicting, evaluating and mitigating the biophysical, social and other relevant effects of development proposals, prior to major decisions being taken and commitments made" (IAIA 2009, n.d.).

In other words, EIA is a process that investigates the impacts of proposed projects on the environment before these projects are carried out. According to CBD (2010), the purpose of EIA is to support the decision-making process, possibly leading to coordinated and balanced needs for developments and the environment. It should be of help with formulating measures for development, representing an important instrument for the participation of various stakeholders, and serving as an important tool for thriving sustainable development. Environmental impacts basically are negative or positive modifications on environmental parameters that result from the effects of human activity. They are measured within a certain period of time in a certain geographical area and are compared with the situation of not undertaking the project (ibid.).

Environmental Impact Assessment Directive

Legislation regarding EIA was first implemented in the USA more than half a century ago. The EU followed with an EIA directive in 1985 (Directive 85/337/EEC). Since then, EIA has spread worldwide making it an important instrument in planning practice. Very recently the amended Directive 2014/52/EU was adopted in 2014, which must have been enshrined by 2017. It aimed at identifying shortcomings of the previous directives, included renewals of almost every article of the 'old' directive and therefore introducing a new phase in the EIA regime for European countries. The new amendments hold great potential for leading to improved environmental decision-making (Arabadjieva 2016).

The growing popularity of EIA in recent years was also followed by the extension of the impact assessment (IA) family. Most prominent in that respect is Strategic environmental assessment (SEA). While SEAs and EIAs share joint guiding principles, values, and procedural steps, their biggest difference is their scope. SEAs are broader, on a much more strategic level, and regard overarching plans, policies, and programs. EIAs apply more to the project level, dealing with site-specific planning, which will also be the focus of this work. Figure 5 shows the process of an EIA (Glasson & Therivel 2019). As illustrated in the figure, public participation is an affects all steps of the EIA process. For this research, the first two phases are especially relevant.

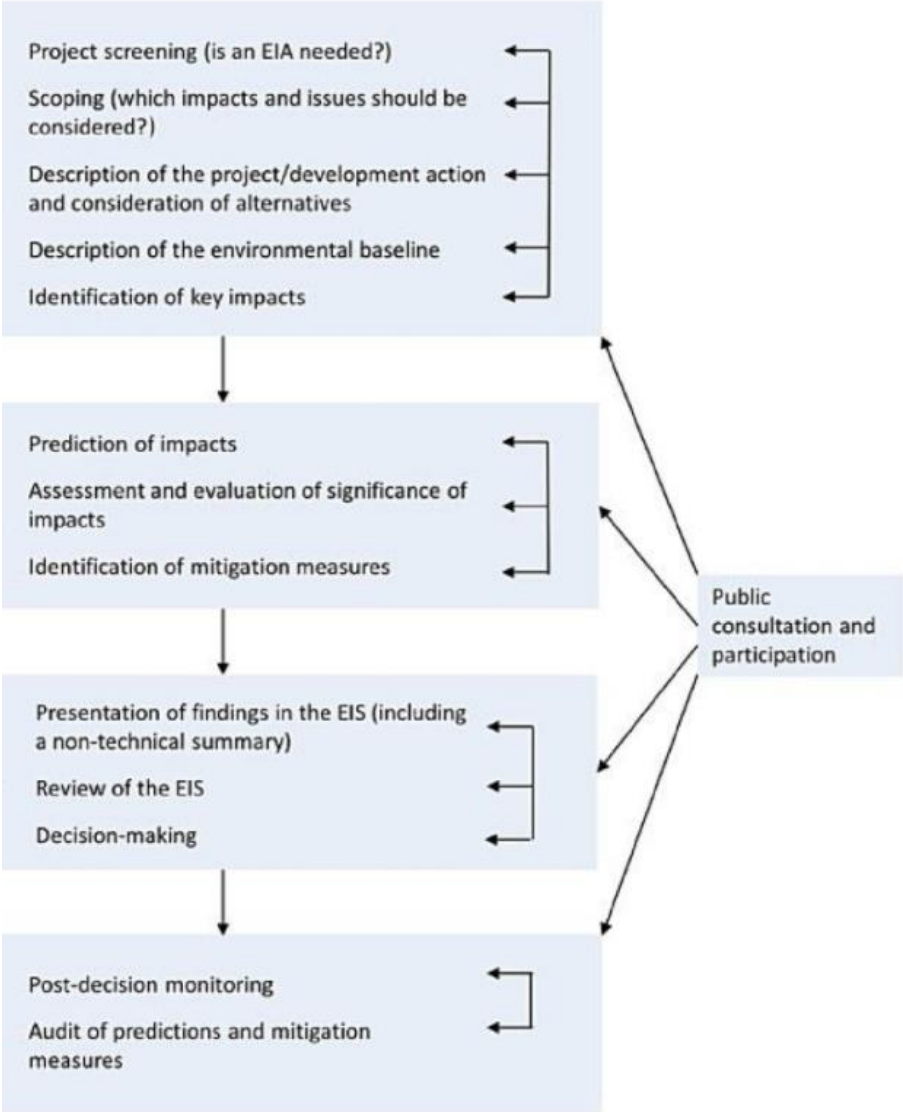


Figure 5: EIA Procedure (Glasson and Therivel 2019)

A literature review on EIAs with projects similar to the one relevant in this work shows that only little research has been carried out in this area. Nevertheless, noteworthy are a few studies on cases in the North Sea which include an EIA. While being old, these cases contextualize this work as they directly review the decisions of EIAs for oil and gas exploration. Marquenie & Verburgh (1998) describe a gas drilling project in the Dutch Wadden Sea, which was brought to court for formal reasons. Brans (2001) notes that while often administrative procedures, like bringing these cases to court, have been started by parts of the public or NGOs to stop oil and gas activities, courts often reject these claims outweighing economic against environmental needs. Fitzpatrick et al. (2000) present an oil drilling case in the Danish North Sea which was approved concluding its EIA with the statement, that “in the highly unlikely event of an oil spill from the South Arne field, the

environmental damage caused by a worst-case oil spill would be of a temporary nature” (Fitzpatrick et al. 2000, p. 143). A statement which for sure would not be agreed on by a lot of environmental scientists today, around two decades later. In connection with this work, it is worth mentioning that gas blow-outs and major offshore oil spills have been among the reasons to exemplify where reactive measures fell short and subsequently to engender preventive measures and policies which have led to a better understanding of environmental impacts and to amended EIA legislation (Gazzola and Onyango 2018).

Box 3 – Criticism on EIA

Since these publications about EIAs for oil and gas projects promising changes have been made in the EIA legislation with regard to being “easier in the process; more open and participative; more comprehensive; more mandatory; more closely monitored; more widely applied (e.g. at various levels); more integrative; more ambitious (with regard to sustainability objectives); and more humble (recognizing uncertainties, applying precaution” (Glasson & Therivel, p.). Nevertheless, as analyzed by Kalina (2017) and Bice (2020), also the amended EIA directive is not without problems. These problems concern above all:

1. The methods used for the EIA, since not all steps are mandatory, and the steps are carried out differently in different EIAs
2. Effectiveness and quality of the EIA with respect to achieving its purposes
3. The proportionality and the quality efficiency of the EIA
4. The monitoring after the decision and how these findings are included in follow up projects
5. The role of participants in the participation process

The latter point is most important regarding this thesis and will be further elaborated on in section 2.4.

EIA theory vs. practice

Although in the literature a turn to communicative and more participatory approaches are described, increasingly scholars, as well as professionals who work in environmental conservation, identify problems of information exchange between scientists and practitioners leading to the assertion of a science-practice gap (Fabian et al. 2019; Riecken et al. 2020; Menard et al. 2017). Fabian et al. (2019) explain the main reasons for this gap in their work, namely a big part of the information produced by scientists is not being read or understood by practitioners.

In that debate, Environmental Impact Assessment as a management tool is also often criticized. Clausen et al. (2011) argue that “while significant improvements have been achieved in the EIA policy framework, an important gap remains between EIA theory and practice” (Clausen et al. 2011, p.1). This is described to be especially relevant in connection to participation (Rehhausen et al. 2018). While the literature has widely acknowledged the needed change towards a higher inclusion of public stakeholders in decision-making processes, scholars like Değirmenci and Evcimen (2013) state that although many of the problems have already been recognized and there are approaches for improvement in theory, these have not yet been put into practice.

2.4 Participation in Environmental Impact Assessment

“The success of any environmental impact assessment (EIA) procedure largely depends on the level of public participation. Therefore, it is the most important and integral part of any EIA exercise” (Hasan et al. 2018, p. 12). This section looks closer at problems and chances of participation in EIA, the role of the so-called ‘public’, and factors for successful public participation.

Within the last decades, participation has not only gained importance in the scientific community but has also been integrated into several international agreements. Figure 6 shows the most relevant legal agreements in the European legislation, which lay the ground for the necessity of public participation in decision making, like the often-cited Aarhus convention and the implementation of EIA and SEA directives (Kumar Dara et al. 2017).

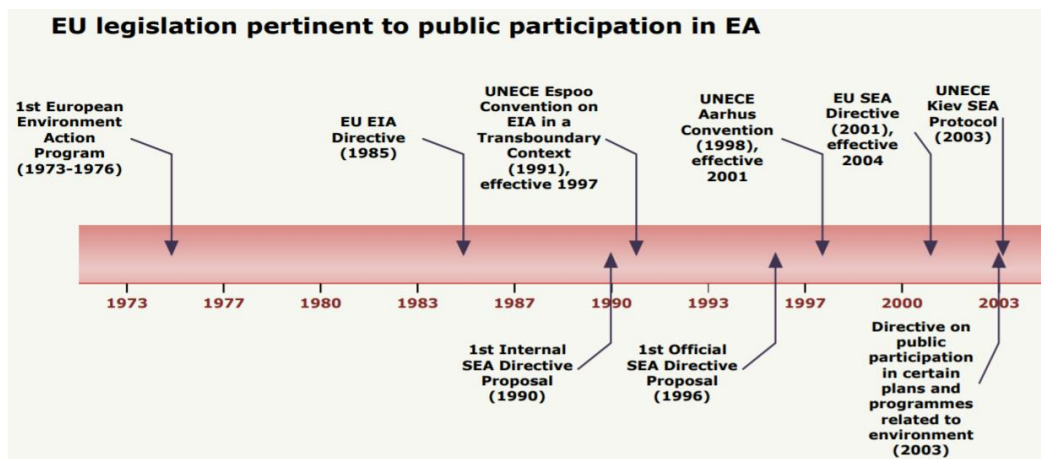


Figure 6: EU legislation pertaining to public participation in EA (Kumar Dara et al. 2017)

Box 4 - Functions of public participation

By allowing the public, interested groups, and affected people to participate in decision-making processes, participation can fulfill a variety of functions (Regener 2009):

State-oriented functions

Integration function - Including the public helps gain acceptance and approval for the decision and to counteract protest, rejection, or resistance. Participation has a unifying and community-building effect.

Legitimation function - With the possibility of participation, the public can obtain information about the procedure, the planning and decision-making process, monitor it and comment on it, and express criticism and objections. If the suggestions of the public are considered, decisions also gain legitimacy.

Rationalization and effectiveness function - Through participation, the process is rationalized, as information is brought in by the public, which completes and improves the basis for decision-making. Linked to this is the effectiveness of public participation, as the expanded information base can promote consensus and improve the acceptance of the decision. This in turn leads to a process acceleration or avoidance of process delays as well as time-consuming and cost-intensive subsequent changes to the planning.

Public-oriented functions

Legal protection function - Public participation serves to give those potentially affected by the planning the opportunity to assert their interests, rights, and concerns about a project already at an early stage.

Control function - Public participation makes the process transparent, which gives the public the opportunity to control the planning and decision-making process by inspecting the documents and verifying that all relevant (environmental) matters have been incorporated.

Information function - (1) Information of the public: The provision of information for the public is an indispensable prerequisite for them to express objections to the planning or decision making, submit statements and thus bring information into the process. (2) Information for decision-makers / planning bodies: Through public participation, new information is obtained which improves the quality of the decision.

The latter function shows to be specifically important as the provision of the necessary information in advance is the fundament for any dialogue and involvement of affected stakeholders to take place (Kumar Dara et al. 2017). This refers to information and timing which will be picked up and evaluated again in the section for the functions of successful participation.

Chances and problems of public participation in EIA

The described functions clarify why participation not only belongs to one of the most important sub-principles of sustainable development and is an integral element of successful EIA but is also referred to as an important element for the preservation of a democratic society (Kumar Dara et al. 2017; Jordan 2008). Public participation “engenders civic competence by building democratic skills, overcoming feelings of powerlessness and alienation, and contributing to the legitimacy of the political system” (Fiorino 1990, p. 229). The chances of public participation are manifold. Not only for democratic societies by including affected communities and key stakeholders, who can develop a better understanding of governmental policies and decisions, improving transparency, social learning, legitimacy, and more communitarian values; but also, for the environment by reducing environmental disputes (Glasson & Therivel 2019; Kumar Dara et al. 2017). Empirical research shows that public participation in environmental governance enhances higher-quality decisions regarding environmental planning and conservation efforts (Gellers & Jeffords 2018).

Nevertheless, Jordan (2008, p. 29) criticizes that “public participation is widely and sometimes rather uncritically identified as a ‘good thing’, but we need to know more about how it should be governed, its opportunity costs, and, ultimately, what it actually delivers in terms of human development ‘on the ground’”. With that, Jordan (2008) hits a ‘sore point’ of participation processes that is often mentioned, since these are rarely quick, easy, or inexpensive processes and include high risks of environmental conflicts especially in EIA (Glasson & Therivel 2019).

Critics of public participation in addition highlight the unequal power dynamics. These relate to the fact that different actors may have uneven access and influence to participating in the process and on the decision-making. In EIA this relates on the one hand especially to the lacking influences of affected communities and on the other hand to the role of developers (Glasson & Therivel 2019). Arguments are getting loud in the EIA community that the participation process is too developer-oriented which benefits specifically powerful private-sector developers. As the EIA and the belonging

participation process is carried out by the developer itself or a consultant of the developer it is improbable that the project will be forecasted to have dramatic environmental consequences. Glasson & Therivel (2019) add that “from a minimalist defensive perspective, some developers, and still possible parts of some governments, might see EIA as a necessary evil and administrative exercise to be gone through that might result in some minor often cosmetic changes to a development that would probably have happened anyway”. This leads to the fact that solely including public participation does not automatically result in more just or environmentally friendly outcomes. In the next part, the key stakeholders in EIA participation processes will be introduced.

Key stakeholders in the EIA participation process

Any planned project involves a set of interests and perspectives. Regardless of what kind of development, Glasson et al. (1994) divide the stakeholders involved in the EIA into four groups:

The developers

The developers are the ones proposing a planned project. They can be public sector developers, like Highway agencies, or private sector developers.

Directly/ indirectly affected and interested stakeholders

This group includes all affected and interested stakeholders on a proposed development, like statutory bodies and non-statutory bodies (local groups, the public, and national/ international groups). This key actor will be further discussed in the following section. Nevertheless, it is worth mentioning that with regard to local / community groups the concept of NIMBY (‘not in my backyard’) is gaining relevance in EIA processes. Their interests are mostly related to obtaining cultural and property values and prevailing the existing lifestyle. Moysiadis et al. (2015) argue that this phenomenon occurs in correlation with the living distance of residents towards a proposed project.

The regulators and consenting authorities

Regulators can be at the supranational, national or local level, while it is mostly the local level authorities that provide the legal ground which projects of the developers have to pass. The local authorities are also often the ones who ensure access to participation processes.

Consultants, advocates, advisers

These can range from international companies to advocates from legal practices and can be employed by the developer, the government, or local groups.

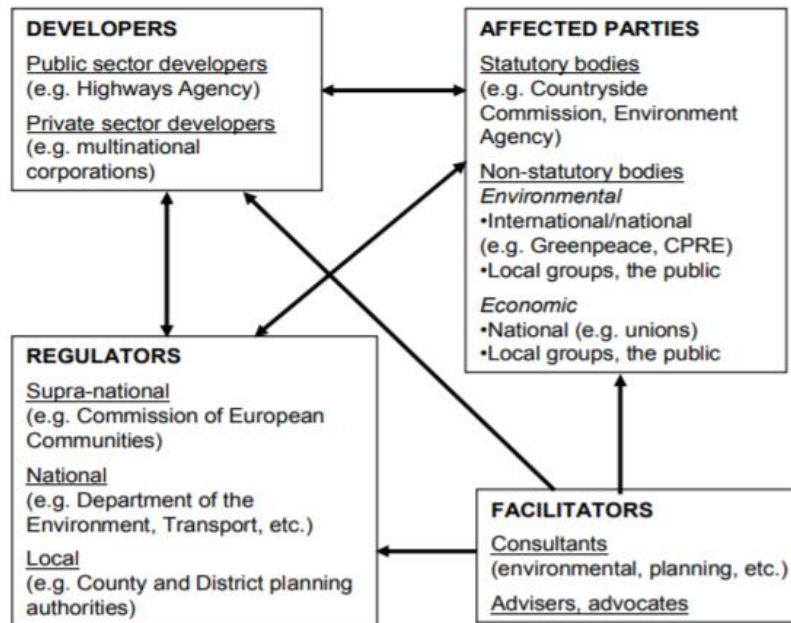


Figure 7: Key actors in EIA (Glasson et al. 1994)

Box 5 – The role of ‘the public’ in participation

Taking a closer look at ‘the public’ which is mentioned under the group of affected and interested stakeholders and is a term that is widely used in most participation theories. In practice, there is no such thing as ‘the public’, rather a distinction must be made between different types, actors or groups of the public. In general, the public includes individuals and groups of people who act outside the administration and outside political parties for their individual interests or for community interests. The public can be distinguished between the organized public (interest groups) and the general public (interested and / or affected individuals). The general public includes all individuals interested in or affected by a planning or decision-making process. They stand up for their individual interests and can be organized in a citizens' initiative. The organized public (also known as interest groups) includes both statutory interest groups and non-governmental civil society organizations (e.g. non-governmental organizations) (Posas & Fischer 2008).

As can be seen, the public consists of a variety of people and groups with different interests. The question in that sense arises if there even exists something like a ‘public interest’ or if that is just a sum of individual opinions? Sum planners, like Nigel Taylor (1994) refuse this by arguing that “addressing environmental issues (including ozone depletion, global warming, and pollution and resource depletion generally) that threaten health and survival and enhancing public spaces are certainly in the public interest. By extension, due to addressing precisely these areas, EA can also be construed as an activity in the public interest” (Posas & Fischer 2008, p. 104). As in EIA it is hardly possible to consult everyone who belongs to the public, current EIA practices try to work with those stakeholders who can jointly be seen as representatives of the public. Representatives of the public are, for example, state and local parliaments, municipalities, advisory boards as well as associations, clubs, public bodies, and NGOs. Before the possible representation of the public by environmental NGOs in the EIA process is discussed in 2.6, first, the forms of public participation are discussed, followed by factors that influence positive outcomes for meaningful participation (ibid.)

Factors that influence meaningful and successful participation in EIA

In the participation literature, a number of principles are commonly described that influence a successful outcome for participation processes. The most relevant ones were collected from the literature and are presented below (Fitzpatrick & Sinclair 2003; Regener 2009; Morgan 2012; Kumar Dara et al. 2017):

Information

Only if the public is informed about the plan as well as the course of the procedure and the opportunities to participate, stakeholders can take advantage of the participation offers and get involved in the process. This includes the announcement of the information as well as the accessibility of the documents. The duration in which the information is shared is also important. The shorter this is, the less time the public has to deal with the sometimes complex contents of the EIA in order to then be able to decide whether objections should be raised. Another important aspect is the design of the information material. This regards the scope of content, comprehensibility, and clarity of the shared information.

Design

The design of the participation process is another factor that influences public participation. It is relevant here whether only the formal minimum requirements for participation are met or whether further informal participation offers are made that go beyond the statutory minimum standards. It is also crucial whether the public is merely informed (passive participation) or consulted (opportunity to comment, active participation) through the formal and informal participation offers, or whether proposals for solutions are developed together with the public or even decisions are made (cooperation, interactive participation).

Time

Various authors mention the timing of public participation to be a decisive influencing factor. Public participation often takes place too late, at the end of the process, when objectives have been established and investigations have already been carried out or decisions have already been made. If this is the case it makes it difficult for those affected to implement essential changes and influence decisions. Participation should take place before essential, irreversible decisions have been made. With regard to EIA, this relates to opening up public participation already in the scoping phase.

Environmental relevance

The environmental relevance of the planned project also plays a key role. The environmental relevance of a plan depends on its content as well as the location of the planned area has an influence. If the plan is located in an area that is highly sensitive regarding environmental concerns, then the environmental relevance of the plan is higher than it would be in an area with low sensitivity.

Affectedness

Another factor that has an impact is how affected stakeholders are by the plan. Like the environmental relevance, the extent to which stakeholders are affected also results from the content of the plan and the location of the planned area. It is expected that when planning takes place in or adjacent to a residential area that there are more potentially affected stakeholders than far away from residential areas. This applies primarily to the participation of private individuals or citizens' initiatives and not to environmental NGOs. Environmental NGOs are in that sense seen as representatives of environmental interests who are always affected when an intervention takes place since this is usually also associated with environmental impacts. The extent of the organization's participation is, therefore, less

dependent on affectedness, but rather on the environmental relevance of a proposed project. Experience with a German-Dutch motorway project has shown that the willingness, especially of the unorganized public to intervene depends to a very large extent on the direct personal concern. This refers especially to the earlier discussed NIMBY phenomenon.

Expertise

Further influencing factors are the expertise regarding environmental problems as well as knowledge about the procedure of EIAs. This can be deduced from the fact that many authors state that those involved did not have the relevant specialist knowledge on the one hand to understand the complex contents of the plan documents and on the other hand to bring usable information into the process. According to the experience of some authors, most of the information relevant to the environment and most of the information that can be used for the process has been brought in by professionals or associations.

Particularities of public participation in the context of marine systems

As this research focuses on participation processes of EIA in the context of marine systems the question arises whether the named influencing factors have to be considered in a different way while looking at the success of participation for planned projects in marine areas.

Portman (2016) names factors which above all could influence participation processes in the context of marine areas differently than in terrestrial areas. Although marine systems are held in public trust and are common goods that in principle everyone has a stake in exploiting but also protecting, humans are predominantly terrestrial organisms and a big part of the people who are considered to belong to the public has never seen marine systems firsthand. A big part of the public seems to be clueless and unconcerned about planned projects in marine areas and seem to value marine environments less than terrestrial environments, mainly due to the in section 2.2 described lack of knowledge about these systems. These points might explain why the individual interests represented are often solely specific resource exploiting interests, like gas and oil extraction, although marine systems in general are a public trust resource, and that public organizations (often seen as representatives) have more influence compared to their work in the terrestrial environment (Guerra et al. 2015). Gazzola et al. (2015) note that the increasing contribution of the latter two groups, NGOs and major industries like gas and oil, in decision making might lead to unjust inclusion of other stakeholders, like communities or individual stakeholders.

From these arguments and connecting back to the previous sections on the influencing factors for successful participation, the hypothesis is made that the marine context has an influence on the factors expertise, affectedness, and information.

2.5 Environmental Justice

This criticism on the inclusion of marginalized stakeholders, described in the previous section, is strongly connected to questions of environmental justice. Environmental Justice (EJ) can in general be divided into distribution, recognition and procedure. Growing attention focuses on the underlying procedural patterns of EJ - which in some articles is also referred to as participatory justice (Deacon & Baxter 2013).

Definitions of procedural justice (PJ) vary. From more basic ones like procedural justice being “the ability of people affected by decisions to participate in making them” (Ottinger 2013, p. 250) to definitions setting a higher goal by adding that “residents of affected communities [should] have a genuine opportunity to change the outcome of a siting decision through their participation” (Ottinger 2013, p. 255). However, some scholars like Shrader-Frechette (2005) claim that for procedural justice goals to be satisfied it is not sufficient to say that e.g. community members solely have an equal voice as other powerful actors in the process and decision making. They argue that especially community members should have the right to informed consent. The latter refers to the ability of people to make free decisions unregarded from external control. Taking the example of a facility that is potentially dangerous and located close to a residential area above the objections of the affected stakeholders, one can argue that the autonomy of the citizens is disrespected as they could not take a free decision whether they want to live with that risk or not. Just having the same voice as other stakeholders does not guarantee the right to informed consent, like used in a medical way. In other words, informed consent as the fundament for procedural justice argues that changing the outcome of a planned project is not enough, stakeholders must instead be able to refuse a project or facility to be built at all (Ottinger 2013).

That this is a topic worth analyzing, and participation processes in EIA often do not include procedural justice goals as described in the definitions above, is e.g. shown by Deacon & Baxter (2013) who exemplify with a case study how the option to say ‘no’ is denied for stakeholders of unwanted developments. With regard to community residents and local stakeholders, the literature increasingly suggests the inclusion of local knowledge as integral for a successful EIA. This is especially relevant for facilities close to residential areas which may coexist with the lifespan of the nearby stakeholders (Ottinger 2013).

Procedural justice, if looked at under the broad umbrella of sustainability (explained in 2.1), can be assigned to the social sphere of sustainability. Connecting back to sustainability it can be seen that sustainability and EIA have a lot in common as they do not only include ecological goals but rather operate at the nexus of environmental, social, and economic issues of life. “Exploring the contours of sustainability allows us to understand the usefulness of PJ outside the context of strictly environmental outcomes” (Gellers & Jeffords 2018, p.104). Nevertheless, they also benefit ecological issues as “substantial evidence demonstrates that where environmental policy incorporates procedural rights, environmental protection efforts are more robust” (Gellers & Jeffords 2018, p.104).

The recognition of procedural justice within the EIA participation process gained importance in the literature in recent years. In that sense especially the inclusion of less powerful stakeholders who are often not heard in the process even though they are directly or indirectly affected by a proposed project. Nevertheless, there still remain problems with the involvement of the public or community stakeholders. It is generally agreed in the literature that procedural justice requires the affected individuals to have all important information and be capable of making a decision regarding their expertise about a planned project and the consequences their decision will have (Ottinger 2013). “The phenomenon of knowledge gaps challenges current notions of procedural justice because it suggests that the substantial understanding required by norms of informed consent, or even informed participation, may not be attainable.” (Ottinger 2013, p. 264). Therefore, this work will

focus on the role NGOs might play in securing procedural justice by representing part of the public/affected parties.

2.6 Environmental non-governmental organizations in EIA

Environmental non-governmental organizations (ENGOs) are usually organizations which work independently from the government and typically work in favor of the public interest for the protection of the environment. According to Hasan et al. (2018) NGOs have been excellent in the EIA processes all over the world. Many scholars have specifically focused on the role of NGOs in EIA in Asian countries. Hasan et al. (2018) describe in their work the role of NGOs in comparison to governmental organizations (GO's). They argue that the execution of EIA in Asian countries heavily relies on the work of NGOs (ibid.).

There is evidence that the involvement of NGOs in EIA obtains a number of benefits, as they improve the accountability of the process and involved governments, fill existing knowledge gaps as they mostly have high expertise in addressing environmental problems on various levels and increase the engagement of stakeholders interested or involved in the process (Ryu et al. 2004; Hasan et al. 2018; Lai & Hamilton 2020). Together with local communities and other affected stakeholders the involvement of NGOs opens up the opportunities for multi-level governance. The latter is described by Jänicke (2008) to increase pressure especially against the polluting industry who, in the past, was often able to hide behind governments. With increasing stakeholder complexity, mainly since the 1970s and 80s, alongside with the communicative turn in planning, environmental pressures and obligations have increased for polluters (Jänicke 2008).

Box 6 – The roles of ENGOs in EIA

From the literature several potential roles of environmental NGOs within EIA can be derived (Ryu et al. 2004; Hasan et al. 2018; Lai & Hamilton 2020):

Knowledge Provider

ENGOs can provide interested parties with their version of information and expertise on the planned project.

Watchdog

They can propose more sustainable options, monitor the EIA during the process and the follow-up and

Pressure Group

ENGOs can put pressure on developers and decision-makers to properly conduct the EIA and check that governments and developers stick to the legal requirements.

Intermediate

They can mediate between different stakeholders and potentially bridge the gap between local and global actors as well as between science and policy. Lai & Hamilton (2020) argue that Intermediates who communicate and negotiate among various stakeholders are the ones representing PJ in local environmental practices.

Representative

ENGOs can act as representatives on behalf of the nation, the public, or the environment to advocate environmental considerations into the EIA.

The role of ENGOs as representatives

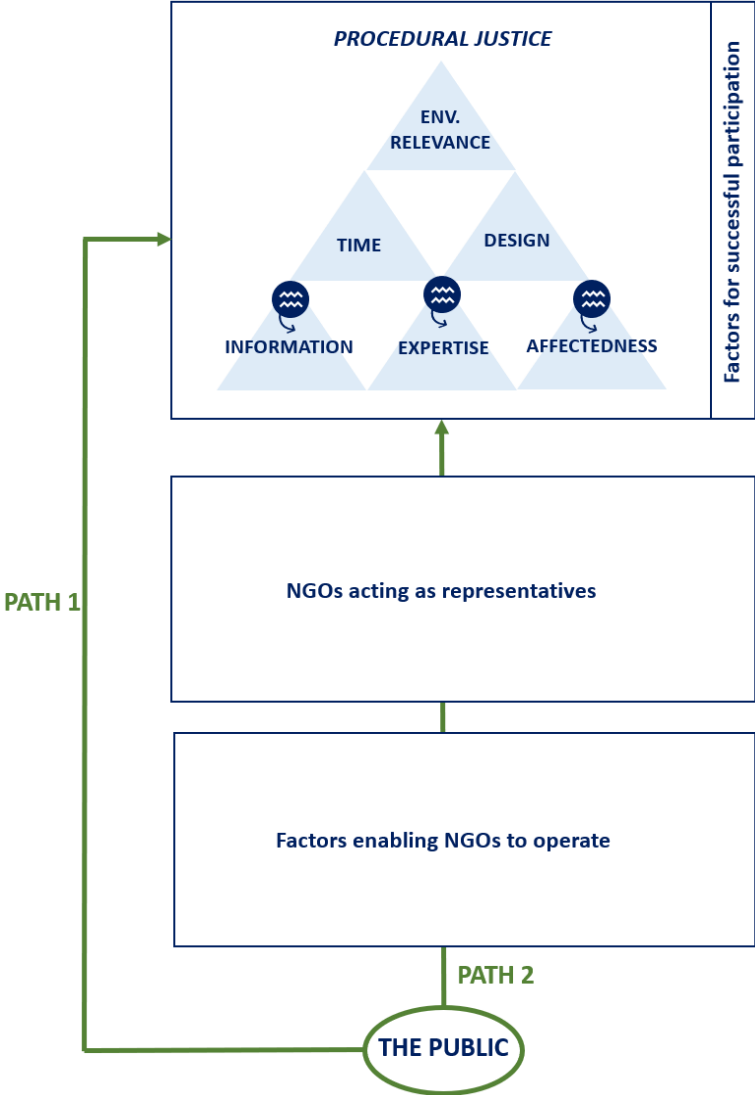
Lai & Hamilton (2020, p. 6) argue that “NGO intermediaries are significant representatives for channeling stakeholders' concerns in IA projects. Their role in promoting procedural justice in IA processes should therefore be further examined”. In other words, ENGOs are often seen as representatives especially for the needs of environmental protection but as well for the concerns of the public and especially local stakeholders whose voices might otherwise be dismissed. This section looks closer at the legitimacy of this representation and the specific situation of EIAs in the marine context. Regarding procedural justice in EIA, their role as representative for the public is most relevant and will be discussed in more detail. The involvement of ENGOs in EIA is according to Hasan et al. (2018) widely secured across the globe. Nevertheless, some factors can be identified that have an impact on the possibility of ENGOs to participate successfully in EIA. Their involvement depends on the legal anchoring of a country with regard to the participation of NGOs in environmental policymaking and it also largely depends on ENGOs' institutional capacity. Not every NGO has the same institutional capacity to be effectively involved in the EIA participation process. Another important factor is the greater societal acceptance of the public towards the work of NGOs to work as representatives. The latter factor can be fulfilled if the public grants trust and legitimacy towards ENGOs.

Critics mention three common concerns regarding the legitimacy of NGOs to act as representatives. Those are that they may affect the interests of stakeholders for other agendas, that their participation does not necessarily lead to a balance in the represented interests and that the involvement of NGOs is mostly not democratically legitimized (Lai & Hamilton 2020). Advocates of marine systems add that there is valid reasoning to include ENGOs, especially in EIAs in the marine environment, as there is a minimized number of stakeholders due to fewer residential areas in the vicinity and the lack of knowledge and interest towards these systems. Nevertheless, it should be avoided to only include NGOs as this dismisses the social factors of EIAs in the marine context, such as social learning, awareness, and knowledge about marine systems that can be gained throughout such a process as well as the importance of non-scientific knowledge by including local communities (Kelly et al. 2021).

Concluding the theoretical chapter of this thesis, it can be seen that important developments have taken place at the end of the last century with regard to increasingly including environmental, alongside participatory concerns into planning practice. A precautionary tool embodying these developments is EIA, which is widely recognized and used worldwide in order to avoid potential environmental impacts of a project before it is carried out. Although EIA includes public participation as an integral part of its process, critics argue that unequal power structures still underpin and hinder a just and sustainable outcome. This is where the concept of procedural justice comes into play, claiming that participation processes in EIA should not only be open to all, or allow stakeholders to change the outcome of a project but that the stakeholders involved in the project should also have the right to refuse proposed projects. Nevertheless, as this thesis considers EIA in the context of marine systems a number of influencing factors on the participation process come into play compared to terrestrial planning. Those regard especially the affectedness, information, and expertise of the public which may affect successful participation outcomes in the context of marine systems. To fill these gaps and to secure procedural justice goals, environmental non-governmental organizations might act in a role that represents the public. From the literature, a number of factors could be identified that potentially enable ENGOs to fulfill this purpose. Which those are and how they stand in relation to each other are presented in the conceptual model in section 2.7. This research makes a decisive contribution to the existing literature. Although some recent studies, like Lai & Hamilton (2020) looked at the role of NGOs with regard to securing procedural justice, their study evaluates a different context. On the one side it regards EIA in a terrestrial environment and on the other side they analyze the role of NGOs in Indonesia, where NGOs seem to have less social acceptance and often work in favor of governments instead of the public. In addition, the literature

showed that there is little case study research carried out on the topic of procedural justice in the European context. This work addresses these research gaps by providing a case study on the role of NGOs with regard to securing procedural justice in EIA in the European and marine context.

2.7 Conceptual Model



The figure on the left shows the conceptual model in a simplified version. Path 1 investigates the direct involvement of stakeholders belonging to the public and their ability to participate successfully (in terms of procedural justice) in the EIA participation process. It also looks at the assumed influence of the marine context of the EIA on the public participation. Path 2 investigates the role of NGOs as representatives of the public and their ability to perform this role and to participate successfully in the EIA participation process (with regard to securing procedural justice). By carrying out empirical research on Path 1, it can be determined whether the public can just participate in an EIA in the marine context or whether there is the need for another stakeholder to act as a representative to advocate for the public interest. By carrying out an empirical study on Path 2, it can then be analyzed if NGOs have the ability to perform this role and therefore to secure procedural justice.

Figure 8: Conceptual Model – simplified

Figure 9 shows a more detailed version of the conceptual model, including a description of the different boxes. The bottom box of the conceptual model shows the factors that built the basis for NGOs to act sufficiently. If they get trust and legitimacy awarded from the public, if they have the legal permission from the respective national authorities and if they have the institutional capacity, they are enabled to fulfil the functions illustrated in the box above. The roles/ functions shown in the middle box in turn give them the possibility to participate successfully and meaningfully in the EIA participation process. In the top box are the factors of successful participation (as explained in 2.5), which are triangle shaped to in their sum built one big triangle to illustrate that they are all necessary

factors for successful participation. The triangles on the bottom are the fundament to fulfil sufficient procedural justice goals. Those are equally the ones, who are marked with a wave symbol, which should indicate that if the EIA takes place in marine environments this might affect these influencing factors.

On the bottom left the path for the role of the public in the EIA participation process starts. The public can on the one side directly participate in the participation process and follow the green line up to the top box.. On the other hand, if the public awards trust and legitimacy towards NGOs, NGOs can be enabled to act in the role as representative of the public and with that participate in the process.

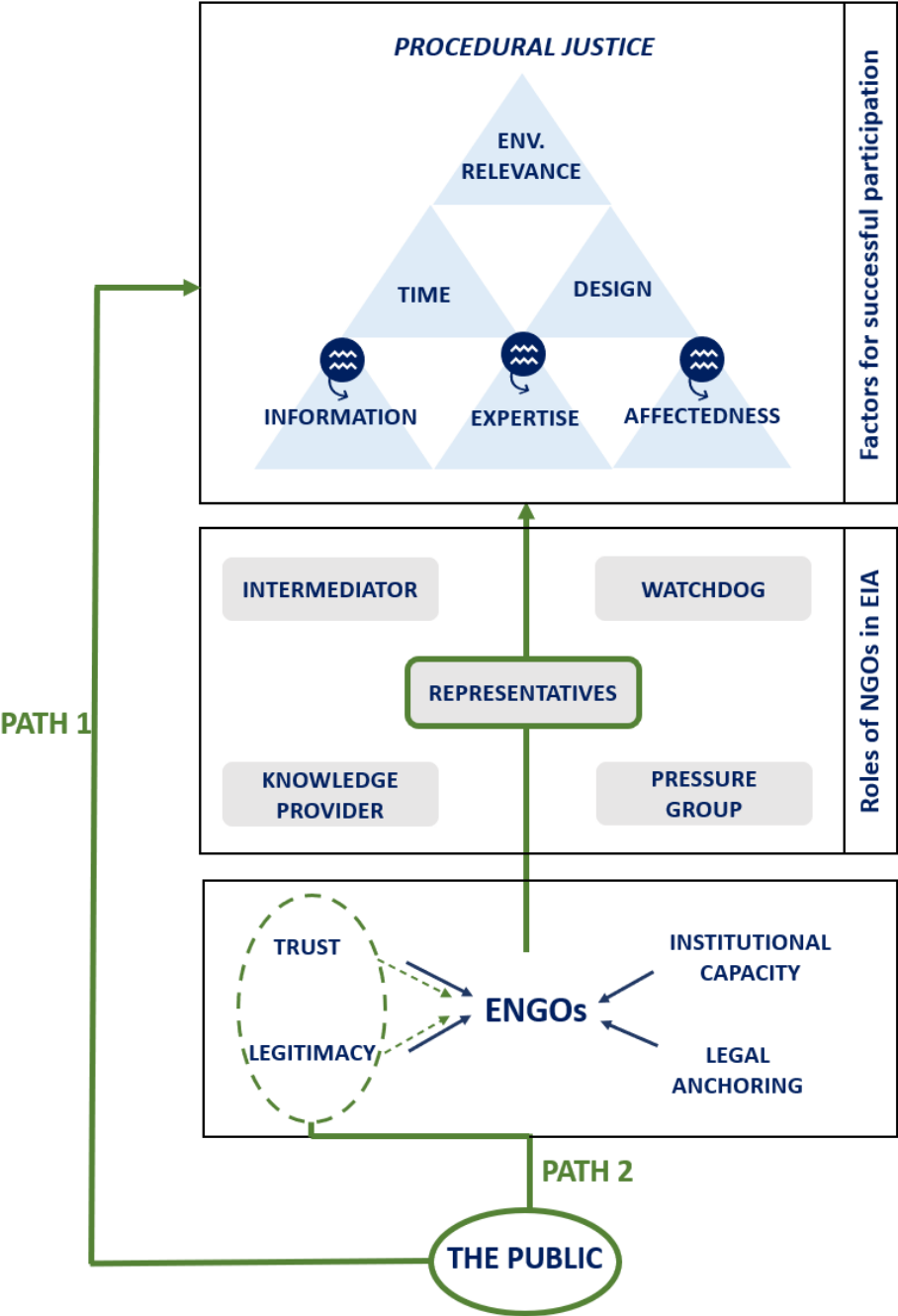


Figure 9: Conceptual Model

3. The gas extraction project N05-A

This chapter looks closer at the N05-A gas extraction project and the reasons for choosing it as the case for this thesis.

ONE-Dyas B.V. is a Dutch company mainly engaged in the exploration and the extraction of natural gas from deposits in the Dutch, German and British parts of the North Sea. In 2017, a consortium of natural gas producers ONE-Dyas and Hansa Hydrocarbons Limited as well as the state-owned company EBN B.V. found a natural gas field (N05-A) in the so-called GEMS area. The GEMS area, which stands for 'Gateway to the Ems', comprises a cluster of natural gas fields in the Dutch and German parts of the North Sea north of the Ems estuary. In order to enable the extraction of natural gas from the N05-A field, the consortium wants to build an offshore platform in the North Sea above this field. The planned location of this platform is in the Dutch territory of the North Sea, about twenty kilometers off the coast of Schiermonnikoog and Borkum. The project lies within the 12-mile zone (see 2.2) and is therefore in Dutch territorial waters (ONE-Dyas B.V., 2020).

A maximum of twelve boreholes will be sunk at this location, some of which will develop the N05-A natural gas field and the rest of which will develop several other nearby fields. In the case of these other fields, it must still be proven that they contain exploitable natural gas deposits. These fields are the so-called prospects. Both the field N05-A and some of the prospects are partially on German territory. The natural gas produced is transported to the mainland via pipelines. ONE-Dyas expects to be able to produce natural gas from the developed natural gas fields for around ten to twenty-five years. The company expects to be able to produce a maximum of four million cubic meters of natural gas per day as part of this project. Natural gas production on this scale is considered an activity for which an environmental impact assessment (EIA) must be carried out.

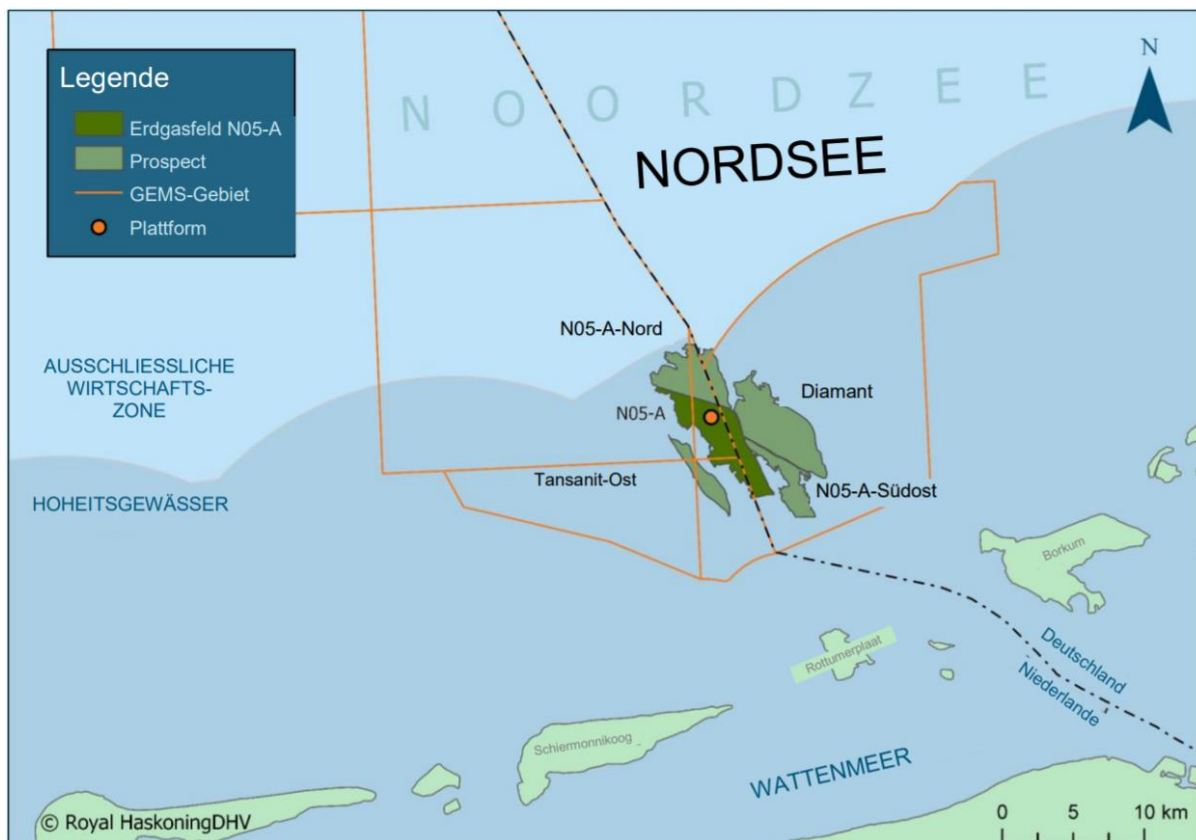


Figure 10: Location of the N05-A project (One Dyas B.V. 2021)

Building a platform, drilling deep wells, and laying a pipeline requires the approval of the Dutch Minister for Economic Affairs and Climate. In preparation for this permit, the EIA is carried out to thoroughly investigate the possible effects on the environment. The first step in the EIA process is the submission of the notice to carry out an EIA by ONE-Dyas B.V. The notification contains the audit plan for the future environmental impact assessment. The announcement describes how the environmental assessment will be carried. In addition, the EIA will include an appropriate assessment of any significant impacts on one or more Natura 2000 areas. In the EIA, in addition to the effects of a project, such as the effects on the environment (people), health, the landscape, nature, the soil and water, alternatives must also be described. So the information about these effects can play a significant role in the decision-making process (ONE-Dyas B.V., 2020).

The planned location of the gas extraction platform of ONE-Dyas B.V. is about five hundred meters from German territorial waters. In addition, both the field N05-A and some possible gas fields (prospectus) around N05-A are (partially) on German territory. For this reason, it is necessary to carry out a cross-border environmental impact assessment. The international “Convention on Transboundary Environmental Impact Assessment” (Espoo Convention) ensures that in these cases the public and the authorities of the neighboring country can also use the formal channels to submit comments. In addition to the Espoo Convention, the Netherlands and Germany have special agreements on cross-border environmental impact assessments. In 2005 the Netherlands and Germany made a joint declaration on the Cooperation within the framework of cross-border EIAs. The joint declaration was updated in 2013 and serves as a handout that contains key points and concrete agreements on how a cross-border EIA can be performed appropriately. The aim is a smooth exchange of information between the two neighboring countries where relevant and necessary. The basis for this is on the Dutch side, both being national legislation: the Environmental Protection Act (Wet milieubeheer) and the General Administrative Law Act (Algemene wet tax law). Internationally applicable laws and regulations are the EIA guidelines of the European Union, the Espoo Convention, and the Aarhus Treaty. In the Espoo Convention (1991) it was agreed that states vis-à-vis their respective neighboring countries have an obligation to inform about projects with possible significant cross-border environmental impact. Furthermore, the public in the neighboring country has an equivalent form to participate in EIA procedures. Through the Treaty of Aarhus (1998), the signatory states guarantee Public access to relevant environmental information (Dutch Ministry of Infrastructure and Environment 2013). The plan approval process for the project is currently under the auspices of the Dutch Ministry of Economic Affairs and Climate on the dutch side. The State Office for Mining, Energy and Geology is involved in the process on the German side. In both the Netherlands and Germany, anyone can view the notice and submit a statement within the public participation process.

The environmental relevance of this project results from the location, the technical implementation and the gas production against the background of achieving climate targets and the energy transition. The location of the project on the Dutch side is in the ‘Borkumse Stenen’ area, which is currently being examined for suitability as an independent Natura 2000 area. Directly adjacent on the German side are the nature reserves ‘Borkum Riff’ and ‘Borkum Riffgrund’. These two areas already belong to the Natura 2000 network and are therefore of international importance. The ordinances of the nature reserves prohibit interventions as they are planned for the project. The Wadden Sea National Park, which has been awarded various protection ratings and is intended to guarantee the highest possible level of nature conservation, is also close to the project.

The technical implementation of the project, including the exploration of the area, building a platform, drilling deep wells, and laying pipelines, as well as the drilling phase and the planned follow-up activities to close the borehole can lead to a variety of environmental problems. These include among others underwater noise, emissions in the air and the water, destruction of the seabed, endangering protected species and habitats, possible movements of the ground, all with potentially devastating effects on the environment (ONE-Dyas B.V., 2020).

In addition, the environmental relevance results from the current debates about gas production in general. According to Maribus (2015), the consumption of oil and natural gas continues to rise. They state that "since the beginning of the 1970s, worldwide energy consumption has doubled. By the year 2035, it will increase again by more than one-third [...]. In the quest for new resource supplies, humans are also encroaching ever further into the sea. Today around one-third of crude oil is drilled at sea - and the trend is rising" (Maribus 2015, p. 39). The background to this is that natural gas can be used relatively flexibly and is seen as the 'cleanest' of fossil fuels. It is traded as an important transition resource in the energy transition. The Dutch government is also striving to keep domestic natural gas production at the same level as possible in the coming years to not be dependent on imports.

After the disclosure of the Groningen gas field due to earthquakes, the N05-A project is a showcase to exemplify the increasing search for natural gas in the North Sea. As it includes an EIA, is situated in a marine context, and is of high environmental relevance, this can potentially set a precedent to elaborate on the role of NGOs to secure procedural justice perceived by the different stakeholders. Therefore, the N05-A project is very suitable to carry out this case study research, as it allows to look at different perspectives of the involved stakeholders and in addition, can add to the literature by introducing an EIA in the marine context in Europe.

4. Methodology

In this chapter, the choice for conducting a single case study is elaborated upon, an overview of the methodology used for this thesis will be explained, followed by the details about the data collection process and data analysis. In the end, an overview of the ethics and limitations of the case study will be given.

4.1 Research Strategy

To be able to answer the research question “How do stakeholders of the N05-A project perceive the role of NGOs with regard to securing procedural justice in the EIA process and does this perception correspond with NGOs actual ability to get involved in the process?”, a case study will be conducted. A case study is a suitable research method for this type of research as it opens up the opportunity to analyze a specific context from several perspectives, is realistic, and opens up detailed information about a phenomenon. It is a good way to explore the uniqueness of a setting, while also gaining more understanding of how it is linked to its context. A criticism is that case studies cannot be generalized and that extrapolating findings is a difficult matter (Gustaffson 2017), which will be further elaborated on in section 4.6. Nevertheless, the N05-A project as a show-case also allows some generalization due to its relevance as being a marine project that allows studying the role of different stakeholders in such a project in general.

The strategy of this research contains that the methods are undertaken chronological and build on one another. In other words, the information collected with the first method is used for the implementation of the second method and so on.

4.2 Research Methods

For the case study, a mixed-methods approach is used, bringing together quantitative as well as qualitative data, to gather the information from the various stakeholders. This triangulation can strengthen the validity of the results and widen the understanding of the results (Olsen 2004). The fundament is laid out by an intensive literature review on the topic. From that, a stakeholder categorization framework for EIAs could be gained, which can be seen in figure 11. In the figure, the stakeholders, which are relevant in order to answer the research question are highlighted. In blue are those stakeholders whose perception is collected by a survey (the public/ local groups) and highlighted in green are the stakeholders who are interviewed with semi-structured interviews.

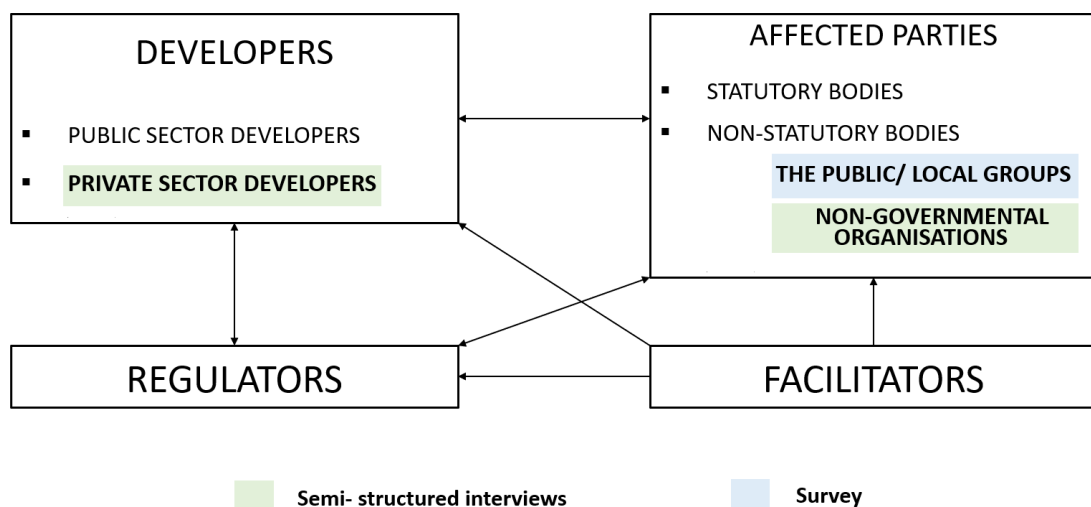


Figure 11: Overview of the key stakeholders in the N05-A project including research methods

The following methods are used within the case study research:

1. Document analysis
First, a document analysis is conducted on the communications from One Days B.V. on the public participation of the EIA; on the submitted statements of participating stakeholders; as well as the response note to the submitted statements. This makes it possible to identify the stakeholders involved in the participation process.
2. Survey
Secondly, to get the opinion of the public on the case under consideration a survey is conducted. The survey contains 29 questions in total (the specific questions are attached in the appendix). A quantitative survey makes it possible to collect a higher quantity of data, as well as it can show statistical relationships between certain variables and reveal patterns in the answers given. This method is therefore suitable to make generalizations of a larger population based on numerical data and present variables (Clifford et al. 2010). This is specifically useful when asking for the perception of the public, which (as explained in 2.4) consists of a variety of different individuals. To also allow the interviewed stakeholders to express their own ideas and opinions without influencing them too much by specifying answer options, an open question (Question 12) and five questions with an open answer option (Questions 5, 9, 18, 22 , 25) are inserted into the survey.
3. Semi-structured interviews
Thirdly, semi-structured interviews are conducted to also get the perspectives of the other relevant stakeholder, namely the developers and NGOs. In contrast to the questioning of the public, the perception of the developers and NGOs can be determined with a qualitative method, as these stakeholders don't act (and therefore answer the questions) in their individual interests, but in a representative manner for the interest of their respective organization. Qualitative research is useful to emphasize on the how and why of processes, and how they relate to their context (Kothari 2004). The semi-structured interviews are only held with people that were part of the EIA participation process of the N05-A project. The way semi-structured interviews are carried out, rather informal and face to face, opens up possibilities to introduce and highlight issues that are perceived to be important - from both, the interviewee as well as the interviewer (Longhurst 2010). The open questions that are asked include topics that are of importance to answer the research questions. In this way, a balance between structure and flexibility could be kept (Clifford et al. 2010). Also, questions and unclarity could be explained.

4.3 Data collection process

The respective data was collected as follows:

1. Document analysis

The document analysis includes a review of the following documents:

- Notification of the project: ‚Mitteilung über das Vorhaben: Umweltverträglichkeitsstudie Erdgasförderung N05-A‘ (One Dyas B.V. 2019)
- Reaction bundle: ‚Inspraak- en reactiebundel Zienswijzen en reacties op de mededeling voornemen milieueffectrapportage GASWINNING N05-A‘ (RVO 2019)
- Reply note: ‚Antwortnotiz Stellungnahmen: Mitteilung über das Vorhaben Umweltverträglichkeitsstudie Erdgasförderung N05 -A‘ (RVO 2020)

2. Survey

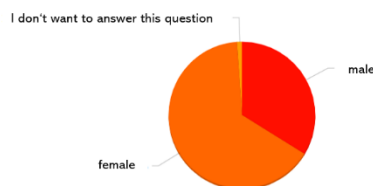
The created survey is shared virtually in Facebook groups about the islands adjacent to the project, namely Borkum, Schiermonnikoog and Ameland. The groups ‚Borkum's nette Nachbarn‘ with around 2170 members, ‚Borkumer Kommunalpolitik 2.0‘ with around 770 members and ‚Schiermonnikoog‘ with 3300 members are selected to share the survey, which is uploaded on September 19, 2021. As more German responses were received than Dutch responses, the island of Ameland with the Facebook group ‚Ameland op zijn mooist!‘ is added on September 20, 2021. All groups contain members who live on the island, stay there temporarily, or have a connection to the island. Before the participants are able to answer the survey questions they have to agree to the terms of data collection. The survey could be filled out in the language of the audience (German or Dutch).

A total of 281 surveys are filled out by a variety of different individuals, of which 185 questionnaires are completed. Only completed surveys are included in this research. During the data collection, care is taken to ensure that the relationship between the responses from German stakeholders and Dutch stakeholders is balanced and that the age structure of the completed survey roughly corresponds to the age structure of the population and the expected tourists on the island. Figure 12 shows the people who completed the survey in their distribution according to gender (question 1), the distance of one's own place of residence from the respective island (question 2), native language (question 3), and age (question 4).

Q1. WHAT IS YOUR GENDER?

Participants: 183

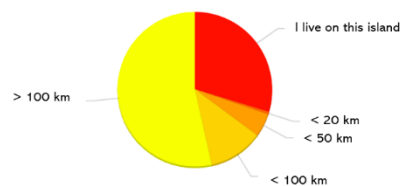
62 (33.9 %): male
119 (65.0 %): female
- (0.0%): others
2 (1.1%): I don't want to answer this question



Q2. HOW FAR AWAY FROM THIS ISLAND DO YOU LIVE?

Participants: 185

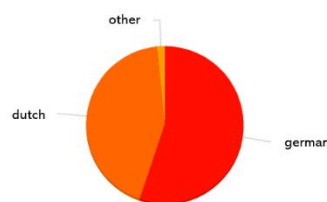
55 (29.7 %): I live on this island
- (0.0 %): < 5 km
- (0.0 %): < 10 km
1 (0.5 %): < 20 km
9 (4.9 %): < 50 km
21 (11.4 %): < 100 km
99 (53.5 %): > 100 km



Q3. WHAT IS YOUR NATIVE LANGUAGE?

Participants: 185

102 (55.1 %): german
 80 (43.2 %): dutch
 3 (1.6%): other



Q4. HOW OLD ARE YOU?

Participants: 185

2 (1.1 %): < 18 years
 7 (3.8 %): 19 – 25 years
 22 (11.9 %): 26 – 35 years
 23 (12.4 %): 36 – 45 years
 60 (32.4 %): 46 – 55 years
 50 (27.0 %): 56 – 65 years
 19 (10.3 %): 66- 75 years
 2 (1.1 %): > 75 years

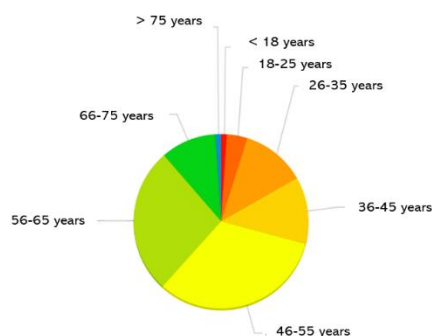


Figure 12: General survey results

The sample shows to have an over-representation of female as well as German participants, compared to the population. However, the age structure of the sample almost reflects the age distribution of ‘the islander-population’ which shows to have most people in the age between 46-55 years.

3. Semi-structured interviews

The semi-structured interviews are held with one Dutch NGO, one German NGO and the extracting company One Dyas B.V. The relevant representatives have been identified through the document analysis. The interviewees are contacted via email in November 2021. In advance to the interviews, consent is obtained as well as extensive clarification on the anonymization of the data, recording of the conversation, information on the topic and the survey process. An overview of the held interviews can be seen in table 2.

Interviewee	Function	Organization	Method	Length in min.	Referred to as
Julia Günther	Environment and nature conservation officer	Landesbüro Naturschutz Niedersachsen (LaBün)	Zoom	39	Interviewee 2 (I2)
Corine Toussaint	Communication manager	One Dyas B.V.	Microsoft Teams	61	Interviewee 1 (I1)

Table 2: Overview of interviewees

4.4 Data analysis

The Evaluation of the survey was conducted with SPSS and a qualitative content analysis (Mayring). The latter is also used to analyze the content of the semi-structured interviews.

Closed questions, survey:

After receiving the answered questionnaires, each answer sheet is given an ID number. For the evaluations, the data is entered manually in a database of the SPSS program. SPSS is a statistics and analysis software from the software company IBM. The software enables the creation of statistical and graphic analyses as well as effective data management. SPSS is used by many companies, in research and universities (IBM Deutschland GmbH, n.d.).

After entering the questions, variables and necessary properties in SPSS, the individual data records (one data record = one answered questionnaire) are transferred step by step into the system. Incorrect data is corrected in the process. This includes questions 23 and 24 on participation in the participation process. Although only 18 participants stated in question 23 to have participated in the EIA process, 38 participants answered the questions about the content of the participation process in question 24. The answers of the 20 participants who filled out question 24 incorrectly are deleted manually in order not to falsify the results.

Open questions, survey:

Since the questionnaire contains open questions and questions with an open answer option, it is necessary to create new variables. Specific categories are created that limit the range of answers, but still truthfully correspond to the content. This was necessary for questions 5, 9, 12, 18, 22 and 25. For this purpose, the qualitative content analysis according to Mayring was used, which is presented in further detail in the following subsection for the evaluation of the semi-structured interviews. Inductive category formation is used for the survey of this master's thesis. Table 3 shows the questions from the survey that were used for this procedure. A variable thus represents a category and allows coding in the software. As a result, the frequencies of the categories can be determined quickly.

Question	Number of inductive categories
Q5. What is the reason for your stay on the island?	2 categories for answer option 6
Q9. How do you perceive our oceans and coasts?	1 category for answer option 8
Q12. What are the reasons for your interest or lack of interest in planning activities at sea?	15
Q18. A gas production project is planned off the islands of Borkum and Schiermonnikoog in the North Sea (N05-A). Have you heard of that? If so, from	6 for answer option 2

where?	
Q22. There is a public participation process as part of the planned gas extraction project N05-A and the associated environmental impact assessment. Have you heard of the possibility of participation?	4 for answer option 2
Q25. Why didn't you participate	3 for answer option 5

Table 3: Overview of inductive categories

The semi-structured interviews:

Qualitative content analysis is a method for evaluating texts that are related to social science work. It is the most frequently used text analytical method and can deal with documents, files, Internet materials, newspaper articles, transcripts from open interviews and questions from standardized surveys. This type of analysis has qualitative interpretative properties and can still process large amounts of data in a quantitative way. In principle, the procedure maps categories and frequencies and analyzes them statistically. The entire process adheres to a set of rules and can be controlled intersubjectively (Mayring & Fenzl, 2014).

First of all, the interviews are transcribed. This enables the researcher to better remember the specific details, e.g. in the behaviour of the respondent. During the interviews, notes are taken to stress important aspects of the interview. The content-related components of the answers from the transcripts are divided into categories and coded. The deductive category application is used for this. This means that the categories are mainly obtained from the literature framework (Shribe, 2019).

4.5 Ethics and limitations

This subsection gives a brief insight into ethics and limitations of this research.

All participants voluntarily took part in the survey and the semi-structured interviews. Participation took place based on informed consent. In other words, the researcher gives sufficient information on the data collection process and the implications of a participation for the interview. This allows the participants to make a free and well-considered decision about their participation. Also, the interviewee has been assured that the collected data will only be used for research purposes and will be held confidential as for the identity of the interviewee with an informed consent form. Furthermore, it has been made clear to the interviewees that they can withdraw from the interview at any given moment and without any further explanation (Longhurst 2010). For the semi-structured interviews, it has also been asked whether the names and job title of the interviewees can be included in the research. At last, the interviewees have been offered a summary of the research after finalization to make comments.

A criticism on case studies in general is that they cannot be generalized, and that extrapolating findings is a difficult matter. There are also several limitations with regards to both, semi-structured interviews, and surveys.

In semi-structured interviews the interviewer possibly influences the answers that are given, by the way questions are asked and by the used non-verbal communication. Also, answers might have been given in a socially desirable way, might have been incomplete, or crucial information might have been confidential. To reduce this tendency, interview questions have been posed as neutrally as possible and follow-up questions have been asked to gain a picture as complete as possible. Another critical point is that with semi-structured interviews the amount of data that can be collected is limited (Onwuegbuzie and Leech 2010).

Surveys include the problem of impersonal transmission of the questions and thus scope for interpretation on the part of the respondents. A survey also does not record the emotional reactions of participants. Without these subtleties, useful data can be lost. In addition, lack of accessibility is always a problem. For example, surveys could be unsuitable for users with visual or hearing impairments or illiterate users and thus exclude important sections of the public. The choice of disseminating the survey via Facebook also potentially excludes participants who are not active in the aforementioned social media (e.g., certain age groups).

However, through the mixed methods approach, some of the limitations of the qualitative survey can be compensated for by the quantitative survey and vice versa.

5. Results

This chapter presents the relevant results derived from the mixed-methods approach, namely the document analysis, the quantitative survey, and the qualitative semi-structured interviews. The structure of this chapter is based on the secondary research questions to answer the main research question: *How do the stakeholders of the N05-A project perceive the role of NGOs with regard to securing procedural justice in the EIA process?*

As explained in 2.7, the conceptual model which builds the underlying framework for the methodology of this work can be divided into two 'paths', which are relevant to answer the main research question. Path 1 is connected to research question a) Can the public participate successfully in the EIA participation process of the N05-A project? Path 2 is connected to the research question b) Can NGOs successfully participate as representatives of the public in the EIA participation process of the N05-A project?

This chapter introduces the results by firstly presenting the general outcomes on the EIA participation process of the N05-A project from the document analysis as well as the survey. This lays the foundation for the interviewee selection for the survey and the semi-structured interviews. Secondly, the results of the document analysis, the survey, and the semi-structured interviews are presented in order to answer sub-questions a)-d). The results are presented with regard to the use of a mixed-methods approach in this research. Therefore, both, the answers of the semi-structured interviews and the survey will be described to compare, whether they show the same results.

5.1 EIA Public participation process of the N05-A project

The first notification of the environmental impact assessment for the N05-A project was available for inspection from Friday, August 9, 2019, to Thursday, September 19, 2019. Anyone could submit an opinion on the notice. Governments could respond. During the consultation period, a total of 803 comments were received (146 of which are unique). As can be seen in figure 13, these comments include eighteen statements of organizations, associations, or other non-individuals. Eight of the latter are responses from government agencies, five from ENGOs, one from a Dutch company, and four responses came from other associations or communities of interest. The comments and reactions are fully contained in an opinion package and have been answered by the Dutch government.

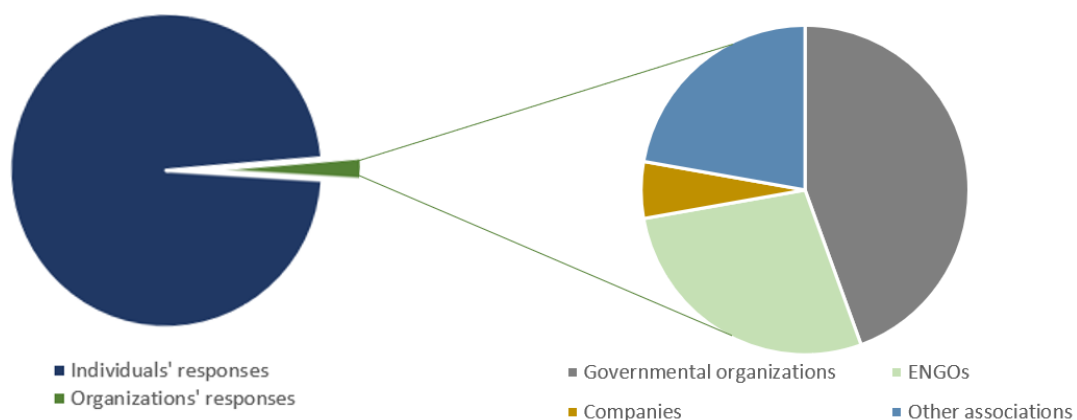


Figure 13: Participants in the first phase of the EIA participation process of the N05-A project

5.2 Results to sub-question a) on the involvement of the public

a. Can the public participate successfully in the EIA participation process of the N05-A project?

Research question a) is connected to path 1 of the conceptual model, as illustrated below. Research question a) unfolds in two subquestions: a1) about the factors of successful public participation and a2) about the impact of the marine context. The respective associated results are presented below.

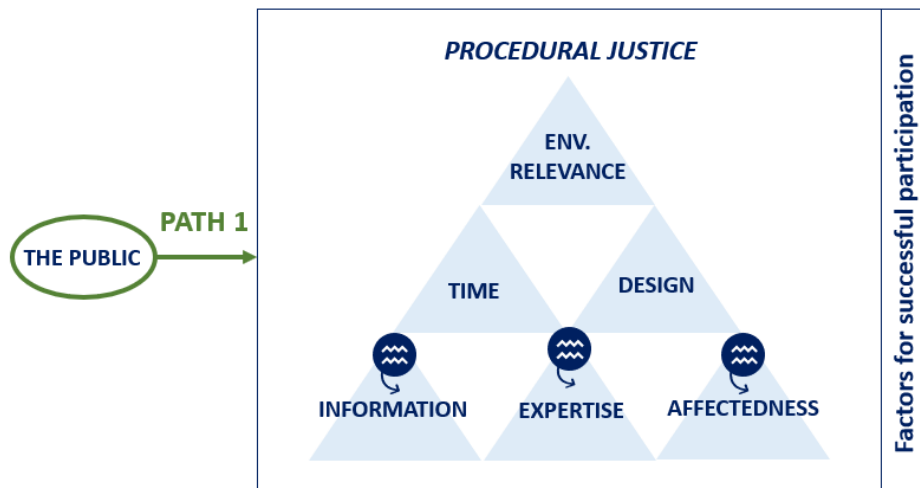


Figure 14: Conceptual Model – Path 1

a1) Does the interviewed public fulfill the factors for successful participation?

To find out whether the interviewed public is able to successfully participate in the participation process, the relevant results for the individual factors for successful participation, namely *environmental relevance*, *time*, *design*, *information*, *expertise*, and *affectedness* are presented regarding the public's participation.

Environmental Relevance

The reasons for the N05-A project being of high environmental relevance have already been discussed in chapter 3. Nevertheless, for one's individual decision to participate or to not participate, the own perception about the environmental relevance of a project matter. The latter can be rather subjective and can therefore highly support or hinder the willingness to participate in the project.

Question 21 addressed this perception of the environmental relevance by asking the interviewed public how they assess the environmental impact of the planned project. The majority of the surveyed answered that they think the N05-A project has dramatic impacts (37.8%) or impacts that worry them (45.4%) on the environment. This means that in total 83.2 % of the surveyed perceive the project to have an environmental relevance that at least worries them. While 4.9% of the interviewees from the survey also think that there will be minor effects on the environment, but that these can be justified under the purpose of gas extraction, only 2.2% think that there are no negative impacts of the planned project on the environment and 9.7% state that they don't know.

Q21. How do you rate the impacts of such a project on the environment?	N	%
I think such a project has a dramatic impact on the environment.	70	37.8
I think there will be impacts on the environment that worry me.	84	45.4
I don't know.	18	9.7
I think that there will be minor impacts, but they can be justified under the purpose of gas extraction.	9	4.9
I think that this will not have any negative effects on the environment.	4	2.2

Table 4: Descriptive statistics of question 21 (N=185)

Interviewee 2 thinks that the attitude towards nature conservation and the willingness to get actively engaged are important for participation behavior as she states,

“It always depends on whether you have the basic attitude of doing something for nature and the environment [...] if you are somehow a bit affine then I think you are very worried about what could happen there” (LaBün).

Questions 6 and 7 address the individual importance of nature protection and sustainability (Q6) and one's own engagement towards nature conservation (Q7).

Q6. Nature protection and sustainability is...	N	%
Not at all important to me.	2	1.1
Is less important to me.	2	1.1
I don't have an opinion about that.	1	0,5
Is rather important to me.	71	38.4
Is very important to me.	109	58.9

Q7. Are you involved in nature protection activities?	N	%
No, that topic is not important to me.	4	2.2
No, because others take care of that.	89	48.1
Yes, I am part of a voluntary initiative.	70	37.8
Yes, I am responsible for these topics in my company.	20	10.8
Yes, I am part of an NGO.	10	5.4

Table 5: Descriptive statistics of questions 6 and 7 (N=185)

Question 6 about the individual importance of nature protection and sustainability shows a clear trend. Only 2.2% of the respondents state that this topic is not at all or less important to them, while 97.3 % say that nature protection is rather or very important to them and just one person does not have an opinion on this topic. Interestingly, while except five respondents everyone agreed that nature conservation is an important topic to them, 48.1 %, so around half of those people, state that they themselves are not engaged in nature protection activities as they believe somebody else takes care of that. The other half is either part of a voluntary initiative (37.8%), responsible for these topics in their company (10.8%), or part of an NGO (5.4%). The other four people (2.2%) are not engaged as the topic is not important to them, which matches the amount of people in question 6, which answered that the topic is less or not at all important to them.

Interviewee 1 assigns a special meaning to the sensitivity of the special location in the participation process,

“It's a really big project in a sensitive area. [...] It is this way because of the location. As we always say: mother earth has chosen this place to put in a lot of gas and of course it would be better if it was hundred kilometers more towards the North Sea so far away from this sensitive area but well here it is and that realization is key” (One Dyas).

This leads to the question of how the public perceives this special situation of a gas extraction project next to a protected area, which is addressed by survey question 20.

Q20. The planned gas extraction field is located close to the protected Wadden Sea National Park. How do you feel about this situation?	N	%
I think the gas production should take place anyway, in order to guarantee the energy supply by gas.	10	5.4
That doesn't matter to me.	2	1.1
I think nature conservation should take priority over gas extraction in this case.	164	88.6
I don't have an opinion on that.	9	4.9

Table 6: Descriptive statistics of question 20 (N=185)

164 interviewees (88.6%) think that nature conservation should take priority over gas extraction in this case due to the project being located so close to the national park Wadden Sea. Ten people (5.4%) answered in favor of gas extraction at this location to meet the energy supply by gas, 1.1% don't care, and 4.9% don't have an opinion on that.

Time

This factor evaluates the time of the first participation process. From the document analysis it can be seen that the first participation process, where stakeholders were allowed to submit their views, was before the scoping phase of the EIA. This can be seen as an early point in the process.

Interviewee 1 states about the importance of early timing in this participation process

“I realized that most of the stakeholders were surprised that we came to them even before we started the permitting process. Later on, most of them realized there is a benefit to it because for instance if we receive the permits and after the permits you want to talk to us, the government has decided that this process will take place. Then it's too late to come up with solutions and fix it. And I received a lot of real positivity about our approach and so in a respectful way we disagreed about the role of natural gas or about whether these projects would be beneficial or not at this place, but that's fine” (Interviewee 1).

Design

From the document analysis it can be seen that the participation process contained the possibility for everyone to submit their view on the planned project and to make comments on it. On the other side the submitted statements were bundled and answered by the Dutch government. The gas drilling company One Dyas B.V. organized public consultation meetings on some of the nearby islands, as interviewee1 explains:

“We organized information markets for example on Borkum. We are not obliged to do it but we said yes we want to do it. We made a special project website in several languages and an information video” (Interviewee 1).

Interviewee 2 adds:

“I observed in such a way that the participation process, at least what has reached us, was fairly transparent with the individual steps. Regarding the participation process, I would now say that it went very well overall. So I think that it is not an obligation to offer such conversations beforehand, that was definitely meant well” (Interviewee 2).

The perception of the interviewed public on the design of the participation process is addressed with question 24, which was answered by those people who participated in the EIA participation process of the N05-A project. It can be seen that the majority of the interviewed participants (66.6%) was rather or not at all satisfied with the overall public participation process. The same number of people (66.7%) perceived the time period of the participation process as being too short. 61.1% found attending the participation process rather not or not at all easy, while 27.8 % perceived the participating as rather or fully easy. The majority (83.3%) of the interviewees that participated don't think that their participation has an influence on the project outcome, and on the other side only two people (11.1%) think that their participation rather has an influence.

Q24. If you participated in the N05-A participation process, please answer the following questions.	I don't agree at all. (-) 1	I rather don't agree. (-) 2	/ 3	I rather agree. (+) 4	I fully agree. (++) 5	arithmetic mean
I am satisfied with the way the public participation went.	4 (22.2%)	8 (44.4%)	1 (5.6%)	5 (27.8%)		2.38
I found the period for public participation too short.		4 (22.2%)	2 (11.1%)	10 (55.6%)	2 (11.1%)	3.55
I found the period for public participation too long.	6 (33.3%)	7 (38.9%)	4 (22.2%)	1 (5.6%)		2
I found attending the public participation easy.	4 (22.2%)	7 (38.9%)	2 (11.1%)	4 (22.2%)	1 (5.6%)	2.5
I think that my participation has an influence.	4 (22.2%)	11 (61.1%)	1 (5.6%)	2 (11.1%)		2.05

Table 7: Descriptive statistics of question 24 (N=18)

Information

From the literature review it can be seen that information is one of the most important factors for successful participation, as if this factor is not given, people simply don't know about their ability to engage in the process.

The responsible communications manager from the gas company One Dyas (Interviewee 1) states

“We really did it in another way then people usually did it, you know, we approached stakeholders up front and informed them about our project. I spoke to some people when we had our first information market. [...] I think we were there with 15 people in total and there were eight visitors the whole evening. So public participation wasn't that big this evening. I think people thought ‘okay this is something far far away in the North Sea’. [...] When we went to Borkum there were more people, I think about 20 or 30 and they really were surprised about the setup because they weren't used to an information market” (I1).

Questions 18 and 19 of the survey asked if the respondents know about the N05-A gas extraction project (Q18) and whether they have ever heard of the associated EIA participation process and the

possibility of the public to engage in that process (Q22). While 68.1 % stated that they have heard about the project, only 18.9 % have heard about the possibility to engage in the participation process, and with 81.1% the vast majority of the respondents didn't have that information. With the associated question of where the participants heard about the project and the opportunity to participate, a possible role of NGOs in the provision of information should be determined. Most of the interviewees said they had been informed through the media or islanders. This additional question therefore did not produce any meaningful results for the present work.

Q18. A gas production project is planned off the islands of Borkum and Schiermonnikoog in the North Sea (N05-A). Have you heard of that? If so, from where?	N	%
No, I have not heard of this.	59	31.9
Yes, I have heard of this.	126	68.1

Q22. In the context of the planned gas extraction project N05-A and the associated environmental impact assessment, there is a public participation process. Have you heard of the possibility of participation?	N	%
No, I have not heard of this.	150	81.1
Yes, I have heard of this.	35	18.9

Table 8: Descriptive statistics of questions 18 and 22 (N=185)

Affectedness

Like described in the literature review, affectedness results from the content of the plan and/ or the location of the planned area. The assumption is that when planning takes place in or adjacent to a residential area that there are more potentially affected stakeholders than far away from residential areas. Although the planned project is off-shore Interviewee 1 states about the most important stakeholders in the process,

“We call them our neighbors. We don't really have neighbors, but you have those close by that's Borkum or Schiermonnikoog, who are the closest by. So, the main stakeholders, we call them to the neighbors and then you have another layer of people who are involved and are interested in it and if somebody feels that he or she is a stakeholder then they're important too. That is the starting point of our project: it's like when your neighbor is building a shed in the garden next to yours, you want to know about it. So, you know we translated it to this project. So we really thought, well who are our direct neighbors? Because we are not an operator for onshore projects and it's quite common that you inform the people who live around the project site, so why not do that offshore as well although you don't really have any neighbors, but wildlife is also a neighbor” (I1).

Interviewee 2 has similar assumptions on the affectedness of public stakeholders,

“It depends on whether you live in the area. When something happens in Bavaria, I also often don't notice it, so I think that it mainly interests or better to say more affects the people who live closer by. So the motives to participate are probably your own concerns, e.g. Islanders who somehow have fears that something could happen gas pipes being layed” (I2).

Interviewee 1 explains the affectedness with the example of stakeholders from Borkum,

“They live on Borkum, they see it all in front of them and they think what is happening to our nature, why do we have to do this here, why now? And I guess I can understand that it's not something you want if you have a house or you have a view on the sea. Yes, I think the public who was involved and really was active or is active has a personal goal or something to lose. Because they live close by and it's in their backyard so it's understandable that they are against it.” (I1)

Interviewee 2 adds to the aspect of changes in the landscape,

“I think people are often not that enthusiastic anyway when something new comes along and there are optical changes in the landscape. But there is also protection for it. There are a number of protected assets in environmental impact assessment, such as animals, plants, biodiversity, water, air and so on and these are all objects of protection that have to be considered. The landscape is also an asset.” (I2)

Interviewee 1 regards the content of the project being a gas extraction case as a factor that increases the affectedness of public stakeholders especially in the Netherlands, as she states,

“It's not really about our project but it is from an emotional point of view ‘what is happening? why didn't we know about it?’. We have experienced in the Netherlands, not personally and not as a company, what happens if you don't listen to people when dealing with gas. [...] I guess in this time and age gas extraction can be done safely and responsibly because well we have really strict laws and regulations. But having said that, let's name the elephant in the room. We all know about Groningen and when you plan a new development people think there will be earthquakes because of Groningen.” (I1)

Taking a closer look at the respondents who stated that they participated in the N05-A participation process it can be seen that from n=18 people, 16 people (88.9%) live on one of the islands, either Schiermonnikoog, Borkum or Ameland. Noteworthy, one of the other two people who don't live on the island, has a second home on the island.

Expertise

The factor of expertise regards process knowledge, so in this case knowledge about the EIA, as well as content knowledge of the environmental problems. Question 16 asked the respondents whether they have heard about EIA before. 55.7% answered this question with ‘Yes, I have heard of this’. Nevertheless, knowing about EIA does not necessarily indicate expertise on the process, nor on the content of this case. Interestingly, in the open answer textboxes, expertise was mentioned by some

of the interviewees of the survey and will be shown in the next section with special regard to the marine environment.

Q16. Have you ever heard about Environmental impact assessment?	N	%
No, I have not heard of this.	82	44.3%
Yes, I have heard of this.	103	55.7%

Table 9: Descriptive statistics of question 16 (N=185)

a2) Does the marine context have an impact on the publics’ participation?

To find out whether the marine context has an impact on the public’s participation, or in other words, if it hinders successful participation of the public, it is closer looked at how the respondents perceive marine environments and what the reasons for not participating in the N05-A participation process are. From the literature review it is assumed that the marine context of the project has an impact on the *affectedness*, the *information*, and the *expertise* of public stakeholders.

Question 25 of the survey asked why the respondents didn’t participate in the N05-A participation process, to see what the reasons are that hinder the participation and if they match the assumptions.

Three-quarters of the respondents (75.9%) stated that they didn’t participate because they were not informed. From the other given answer options, 3.1% chose ‘it is not important to me’, 9.3% ‘I don’t have a lot of time’ and 5.6% ‘other people probably represent my interests’. From the open textbox answers 1.2% fall under the category ‘I live too far away’, which can be translated to the factor of *affectedness*, 3.1 % fall under the category of missing *expertise*, and 1.8% don’t think their participation has an impact on the participation process.

Q25. Why didn’t you participate in the N05-A participation process?	N	%
I didn’t participate because I was not informed.	123	75.9%
I didn’t participate because it is not important to me.	5	3.1%
I didn’t participate because I don’t have a lot of time.	15	9.3%
I didn’t take part because other people probably represent my interests.	9	5.6%
Open textbox: I live too far away.	2	1.2%
Open textbox: I don’t have the expertise.	5	3.1%
Open textbox: I don’t think my participation has an impact.	3	1.8 %

Table 10: Descriptive statistics of question 25 (N=162)

Questions 11 and 12 of the survey asked more specifically on the participants' interest or lack of interest in marine planning. The results of question 11 show that the vast majority (79.5%) is rather interested or very much interested in planning activities at sea. 4.3% don't have an opinion on this topic and 16.2% state that they are rather not interested or not at all interested in activities planned at sea. Question 12 adds on the previous results by unfolding the participants' reasons for their interest or their lack of interest towards marine planning activities, to find out whether the factors *information*, *affectedness* and *expertise* play a role here. The answer most often given is that the interest in the topic derives from a concern about environmental protection of the seas (36.8%). Second most common answers are 'I am affected by these topics because I live nearby' (7.6%) and 'I don't have an opinion on that' (7.6%). These are followed by a few answer categories who are very close by the number of replies, namely 'I don't have expertise on these topics' (5.9%), 'I am concerned about the right balance of ecological and economic needs' (5.9%), 'There is not enough information on these topics' (5.4%), 'I have a scientific interest in these topics' (5.4%), 'I have a personal interest in these topics' (4.9%), and 'I am not affected by these topics, because I live too far away' (4.9%). Other less named answer categories are about intergenerational justice (3.8%), a lack of time (2.7%), not thinking to have an impact (3.8%), that the oceans concern us all (1.6%), that this is not their concern (2.1%), and emotionally attachment to the sea (1.6%).

Q11. Are you interested in activities planned at sea?	N	%
No, it doesn't interest me at all.	18	9.7%
No, it rather doesn't interest me.	12	6.5%
I don't have an opinion on this topic.	8	4.3%
Yes, it rather interests me.	84	45.4%
Yes, it very much interests me.	63	34.1%
Q12. What are the reasons for your interest or the lack of your interest?		
Open textbox: I am concerned about environmental protection of seas.	68	36.8%
Open textbox: I am concerned about the right balance of ecological and economic needs.	11	5.9%
Open textbox: There is not enough information on these topics.	10	5.4%
Open textbox: I am interested as I am concerned about intergenerational justice.	7	3.8%
Open textbox: I don't have the time for it.	5	2.7%
Open textbox: I don't think I can influence decision-making on the sea.	7	3.8%
Open textbox: I have a personal interest in these topics.	9	4.9%
Open textbox: I have a scientific interest in these topics.	10	5.4%
Open textbox: I am not affected by these topics, because I live too far away.	9	4.9%
Open textbox: I don't have expertise on these topics.	11	5.9%
Open textbox: I am affected by these topics, because I live nearby.	14	7.6%

Open textbox: The oceans concern as all.	3	1.6%
Open textbox: That is not my concern.	4	2.1%
Open textbox: I am very emotional attached to the sea.	3	1.6%
Open textbox: I don't have an opinion on that.	14	7.6%

Table 11: Descriptive statistics of questions 11 and 12 (N=185)

Interviewee 1 argues in favor of emotions towards the planned area being a key driver for participation,

“The small fields are really really small and have a different risk which has to be studied and well if the studies are saying it's going to be done I think it's safe to say so. Nevertheless, you have science and you have feelings and emotions. Onshore you have a lot of emotions, also offshore, but the emotions onshore are even more present than for offshore I think” (I1).

Question 9 therefore asks how seas and coasts are perceived by the respondents, to see which emotions are brought to marine systems and also to check how their environmental relevance is perceived. Multiple answers were possible to this question. Question 10 follows by asking specifically about the perception of the North Sea, to see if there is a difference between marine systems in general and the North Sea as the 'home sea'.

Q9. How do you perceive seas and coasts?	N	%
I perceive them as very romantic places.	60	32.4%
I associate it with vacation and positive feelings.	121	65.4%
I perceive them as infinite.	80	43.2%
I associate them with natural disasters.	8	4.3%
I don't have very positive feelings about them.	4	2.2%
I see them as seriously threatened.	97	53.4%
I associate them with nature protection.	89	48.1 %
Other.	6	3.2%

Table 12: Descriptive statistics of question 9 (N=185)

The results of question 9 show that a big part of the respondents (65.4%) associate marine systems with vacation and positive feelings, 43.2% perceive them as infinite and around one third of the respondents (32.4%) perceive them as very romantic places. A minority of respondents associate them with natural disasters (4.3%), or don't have very positive feelings about them (2.2%). 53.4% see them as seriously threatened and 48.1% associate them with nature protection.

In question 10, the participants could only give one answer option so that they had to decide which of the possible answers applied most to their feelings about the North Sea. About half of the respondents (51.9%) perceive the North Sea therefore as a threatened ecosystem, followed by 24.3% who perceive it mainly as a nice area for vacation. 16.2% of the respondents perceive the North Sea as a highly used economic region and only 7.6% as a protected ecosystem.

Q10. How do you perceive the North Sea?	N	%
Nice area for vacation.	45	24.3%
Protected ecosystem.	14	7.6%
Threatened ecosystem.	96	51.9%
Highly used economic region.	30	16.2%

Table 13: Descriptive statistics of question 10 (N=185)

Interviewee 1 thinks that offshore gas extraction is more accepted by the public than onshore drilling,

“For our developments I think a lot of people, especially in the Netherlands, think okay when we need gas, and especially now with the high gas prices, we want to stop with gas, we have climate goals we have to meet, but in the meantime how do we make sure everyone stays warm? And then people think okay let's do it offshore because it's less demanding and it has less impact on the environment. I think most people perceive offshore gas as okay and sometimes even necessary so I think we're better offshore especially as it is in the North Sea - Wadden Sea is a different cookie” (I1).

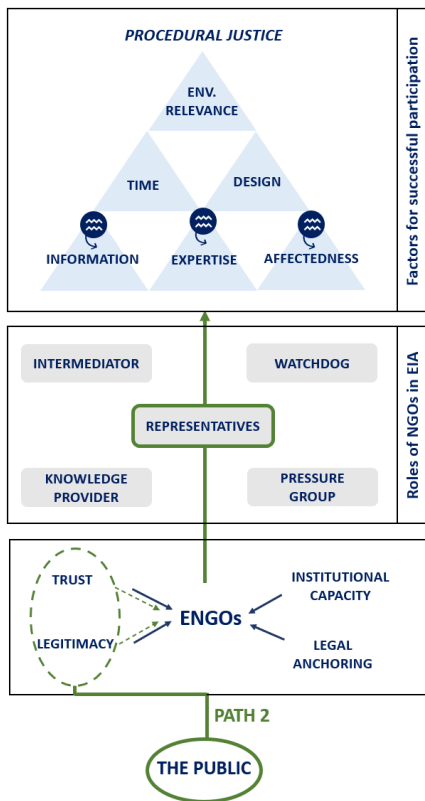
Question 15 of the survey asked for the perception of onshore in comparison to offshore energy production. A distinction has been made between renewable energies and fossil fuels. The arithmetic mean sums up nicely the general tendency of the respondents. The arithmetic mean for the expansion of renewable energy in the sea is 3.28, so slightly on the 'rather for it' side. In comparison, the expansion of renewable energy on land has its arithmetic mean at 3.82, so the respondents are a bit more in favor of expansion of renewable energy on land than they are on the sea. The results for the expansion of fossil fuels shows that the respondents are rather against it in the sea (arithmetic mean 1.78) and a bit less against it with an arithmetic mean of 2.16 on land. In other words, the results of question 15 show that the respondents are rather for renewable energy and rather against fossil fuels. For both cases they prefer the expansion on land slightly over the expansion on the sea.

Q15. How is your attitude towards the following things?	I am very much against it. (--) 1	I am rather against it. (-) 2	/ 3	I am rather for it. (+) 4	I am very much for it.. (++) 5	arithmetic mean	standard deviation
Expansion of renewable energy in the sea.	27 (14.6%)	30 (16.2%)	15 (8.1%)	91 (49.2%)	22 (11.9%)	3.28	1.28
Expansion of renewable energy on land.	8 (4.3%)	16 (8.6%)	19 (10.3%)	100 (54%)	42 (22.7%)	3.82	1.02
Expansion of fossil fuels in the sea.	87 (47%)	65 (35.1%)	22 (11.9%)	9 (4.9%)	2 (1.9%)	1.78	0.91
Expansion of fossil fuels on land.	56 (30.3%)	73 (39.5%)	30 (16.2%)	22 (11.9%)	4 (2.2%)	2.16	1.06

Table 14: Descriptive statistics of question 15 (N=185)

5.3 Results to sub-question b) on the involvement of ENGOs

a. Can NGOs successfully participate as representatives of the public in the EIA participation process of the N05-A project?



Research question b) is connected to path 2 of the conceptual model, as illustrated on the left. Research question b) unfolds in three subquestions, which are each connected to one of the three boxes of the conceptual model that belong to path 2.

Question b1) belongs to the bottom box about the factors enabling ENGOs to act in their roles in the EIA.

Question b2) belongs to the box in the middle about ENGOs in the role as representatives of the public.

Question b3) belongs to the top box and asks about ENGOs ability to successfully participate.

Figure 15 Conceptual Model – Path 2

b1) Are the factors enabling ENGOs to act as representatives of the public fulfilled?

The factors enabling ENGOs to act in their roles, e.g. as representatives of the public, are *trust*, *legitimacy* (these two are awarded from the public), *institutional capacity* and *legal anchoring*. The respective results are presented below.

Trust and Legitimacy

Interviewee 2 thinks that the public gives trust and legitimacy to ENGOs,

“NGOs have achieved a lot in the last few decades. For example, the WWF, Greenpeace or the BUND, they now have so many members. If people didn't have such confidence in the NGOs, I don't think we would have that many members either. Thanks to the NGOs, you always have an address that you can turn to if, for example, like now a drilling platform is to be built in front of your front door, where you think oh god, what are they doing there. And

then you can ask for example the BUND for their activities or if they can explain what's happening there?" (I2).

Question 29 asked the respondents of the survey to rate a number of statements, which all belong to how they perceive the role of NGOs. The arithmetic mean gives a nice overview of the general tendencies of the answers.

Q29. How do you rate the following statements?	I very much disagree. (--) 1	I rather disagree. (-) 2	I don't know. 3	I rather agree. (+) 4	I very much agree. (++) 5	/	arithmetic mean	standard deviation
The work of NGOs is important to me.	8 (4.3%)	1 (0.5%)	51 (27.6%)	63 (34%)	42 (22.7%)	20	3.79	0.99
I sometimes donate money to NGOs.	43 (23.2%)	17 (9.2%)	34 (18.4%)	35 (18.9%)	24 (13%)	32	2.87	1.45
NGOs represent my opinion about nature protection publicly.	6 (3.2%)	6 (3.2%)	72 (38.9%)	58 (31.3%)	22 (11.9%)	21	3.51	0.90
NGOs have the legitimacy to act on behalf of nature conservation issues.	7 (3.8%)	4 (2.2%)	59 (31.9%)	60 (32.4%)	29 (15.7%)	26	3.63	0.96
I have confidence that NGOs work in the interests of the general public.	6 (3.2%)	11 (6%)	59 (31.9%)	65 (35.1%)	26 (14%)	18	3.56	0.95
I think NGOs can help ensure justice in participation processes.	6 (3.2%)	2 (1.1%)	57 (30.8%)	79 (42.7%)	24 (13%)	17	3.67	0.87
I heard that NGOs were involved in the N05-A project.	19 (10.3%)	8 (4.3%)	97 (52.4%)	27 (14.6%)	10 (5.4%)	24	3.01	0.97

Table 15: Descriptive statistics of question 29 (N=185)

The work of NGOs is rather important to the majority of respondents (arithmetic mean (a.m.) 3.79). There is almost a balance between people who occasionally donate to NGOs and those who don't (a.m. 2.87). There can be seen a trend of the statements 'NGOs represent my opinion about nature protection publicly', 'NGOs have the legitimacy to act on behalf of nature conservation issues', 'I have confidence that NGOs work in the interests of the general public', and 'I think NGOs can help ensure justice in participation processes', having their arithmetic mean all between 3.5 and 3.7, which means that there is a tendency towards rather agreeing to these statements. 20% of the respondents also recognized the involvement of NGOs in the N05-A project.

Legal Anchoring

About the legal anchoring interviewee 2 states,

"Yes, that is definitely anchored. It is regulated by law that nature conservation associations have the right to get involved. These are the so-called participation rights and therefore it is a good right for nature conservation associations to comment on this or to get involved" (I2).

Institutional capacity

Interviewee 2 sees the institutional capacity as given for ENGOS,

"Yes, we have the capacity and otherwise we turn to other NGOs and ask for help. And NGOs then always have the opportunity to go to court and sue in such cases" (I2).

b2) How do the stakeholders in the N05-A project perceive ENGOS with regard to acting in the role of representatives?

The public's perception of ENGOS with regard to acting in the role of representatives is already answered in question 29. To the statement 'NGOs represent my opinion about nature protection publicly' only 6.4% rather disagreed or totally disagreed. In turn, 43.2% rather or totally agreed with the statement. To the statement 'I have confidence that NGOs work in the interests of the general public' 9.2% rather disagreed or totally disagreed, while 49.1% rather agreed or totally agreed to the statement. The rest didn't know or abstained from answering this question.

As a representative of the gas drilling company's perspective, Interviewee 1 argues,

"Well, I'm not sure if they could be representatives of the public, because that's so diverse. I think ultimately the government is the representative of the public because they are chosen by the public and they have the public's interests at heart. They do it in the best possible and objective way because they also have advisors and advisory bodies to look at for instance the environmental impact assessments. And NGOs have their own specific target group and their specific goals and sometimes NGOs have conflicting interests which is also sometimes difficult, so there's not just one environmental NGO. I think they represent a part of the public, but I wouldn't go that far to say that NGOs are representatives of the public because I have encountered a lot of different NGOs with different approaches. I think you have to always make up your own mind and your own opinion and sometimes NGOs have a really

specific goal to be against it also from a political or strategic point of view so it's on another level sometimes" (I1).

Interviewee 2 adds out of the perspective of an NGO,

"Yes, so first and foremost we represent people and animals and plants, i.e. the environment, so that it remains intact. Because without a healthy nature there is also an impact on people. That is also the task of environmental associations to ensure the preservation of nature and biodiversity. That is why I believe the associations speak for everyone and of course for themselves" (I2).

b3) Do the interviewed NGOs fulfill the factors for successful participation?

To find out whether ENGOS are able to successfully participate in the EIA participation process, as assumed in the literature, the relevant results for the individual factors for successful participation, namely *environmental relevance, information, expertise* and *affectedness* are presented regarding the ENGOS' participation. The factors time and design have already been addressed in 5.2 and as they regard the overall participation process they do not change when ENGOS participate in contrast to the public participating. Therefore, these two factors are not again listed in the results section for NGOs.

Environmental Relevance

Interviewee 2 states that the environmental relevance of this project is seen as very high also from the perspective of a NGO umbrella organization,

"How would I rate the general environmental relevance of this project? Well, very high. This is a cross-border project, so together with the Netherlands. The project is on the Dutch side, but it should also be drilled on the German side. There is the Lower Saxony Wadden Sea and that is a UNESCO World Heritage Site, so a nature reserve. And I see the impact on nature and the environment as very high, yes" (I2).

Expertise

Interviewee 2 argues that ENGOS have the expertise to deal with these topics as they normally have a partner NGO close by that they can contact in order to get local expert information,

"Yes, we normally have the expertise, but we also have to familiarize ourselves with the topic because we don't have to deal with natural gas extraction every day. But we always involve different associations, so the LaBün is an umbrella organization with various nature conservation associations. Depending on where the project takes place, in this case the Lower Saxony Wadden Sea, we then have associations close by. We write them and ask those responsible from the associations for assistance in making statements. Because mostly it is precisely those who have the expertise immediately and that's why we bundle everything together and then give joint opinions" (I2).

Affectedness

Interviewee 1 argues that from her experience ENGOs not always feel affected to deal with the project as they are too far away,

“Sometimes NGOs said ‘it was good you called us and you informed us but we have to make choices, this is far away from our projects so yeah send us an email but you know we won't be bothered” (I1).

Interviewee 2 in contrast states that, at least in their association with quite some members, they are affected,

“Well, we write statements on behalf of the associations, so the responsibility or the affectedness is just as big, I would say, as with local district groups. So of course, we are not on site, but we use statements to convey what is happening there and try to make comments on the procedures on behalf of the associations on site” (I2).

Information

As representative of the gas drilling company interviewee 1 says,

“I think it's about 50 organizations or governmental bodies we inform regularly, but we can't call every NGO about everything we do” (I1).

Interviewee 2 states on the information flow,

“We were informed first in August 2018 and then a year later again in 2019, there was then the participation in the EIA. So I think that went well” (I2).

5.4 Results to sub-question c) on procedural justice

c. How is the role and the presence of procedural justice perceived by the stakeholders of the N05-A project?

ENGOS' perspective

On the topic of procedural justice and whether it is really possible to stop planned projects, Interviewee 2 states,

“Now the situation on the water is such a special situation because there are sometimes not really responsibilities or property rights as strong as on land, which, conversely, would mean that actually everyone would have a right to participate. But in my opinion the larger environmental protection associations simply have more power and are more effective than small citizens' initiatives.[...] NGOs have the opportunity to take legal action to stop proceedings. It is available for private individuals of course as well, if something goes completely against the grain, but it is rarely used. Sometimes you see it in the media that a lawsuit goes through or is rejected. If you find something that is illegal then the chances are of course good. But most of the time it is the case that projects are not changed at all if they are not completely illegal” (I2).

One Dyas' perspective

Interviewee 1 argues that the process was open to all in a very early stage and procedural justice therefore is given,

“Yes, we involved the stakeholders at such an early stage. We had some criticism from people in the business who were wondering what are you doing to yourself, because now you're telling them and they can organize themselves and they can do everything they want in their power to stop it. But I think if you are realistic they will do it anyway but with much more anger and nothing in a constructive way. Now you can have a discussion and as a result of that we have made some changes to for instance to the platform design” (I1).

Some results of the previous accomplished survey were also presented to Interviewee 1, including that a majority of the respondents are against the project. Interviewee 1 answers on that,

“It was not a thorough survey and there are independent bodies who have assessed the N05-A project, so I think for the greater benefits and for the public interest people will see that it's beneficial to go ahead with this development. Also because it's better for the environment and I know sometimes people don't like it but it's better to have it close by than import it from Russia” (I1).

The publics' perspective

Question 27 and 28 asked for the respondents' perception of just involvement in the N05-A project.

Q27. Do you think it is important to have participation processes that are open to everyone?	N	%
Yes, that is very important to me.	80	43.2
Yes, that is rather important to me.	65	35.1
I don't know.	27	14.6
No, that is rather not important to me.	5	2.7
No, that is not at all important to me.	3	1.6
I don't have an opinion on this.	5	2.7
<hr/>		
Q28. Do you have the feeling that the opinion of citizens in this or a similar participation process is sufficiently integrated into the decision-making process?	N	%
No, I think they are not at all sufficiently included.	65	35.1
No, I think they are rather not sufficiently included.	63	34.1
I don't know.	48	26
Yes, I think they are rather sufficiently included.	8	4.3
Yes, I think they are very much sufficiently included.	1	0.5

Table 16: Descriptive statistics of question 27 and 28 (N=185)

To question 27 'Do you think it is important to have participation processes that are open to everyone?' the majority (78.3%) answered that this is rather important or very important to them. 14.6% answered that they don't know and 2.7% don't have an opinion on this. Only 4.3% stated that this is rather not important or not at all important to them. The answers to question 28 look quite similar. 69.2% think that the opinion of citizens in this or similar participation processes is rather not or not at all sufficiently included. The number of people who answered 'I don't know' grew to 26%. Only 4.8% think that the opinion of citizens are rather or very much sufficiently included.

5.5 Results to sub-question d) on the theory-practice comparison

a. Is the change to increasingly include collaborative and environmental planning, as described in the literature, reflected in the perception of the stakeholders about the practice of the N05-A project?

To check whether the trends identified in the literature review also match with the perception of the stakeholders of the N05-A project, the respondent's attitude towards involving environmental factors into decision making, namely including an EIA, was asked in question 17 of the survey. The results of this question speak a clear language, as 95.1% of the respondents think including an EIA is very important or rather important to them and only 3.7% think the opposite.

Q17. The Environmental Impact Assessment (EIA) is a precautionary instrument with the aim of investigating projects before they are approved to check for possible environmental impacts. Do you consider it as important to involve the potential effects of planned projects on the environment?	N	%
Yes, that is very important to me.	148	80
Yes, that is rather important to me.	28	15.1
I don't know.	6	3.2
No, that is rather not important to me.	1	0.5
No, that is not at all important to me.	2	1.1
I don't have an opinion on this.	0	0

Table 17: Descriptive statistics of question 17 (N=185)

According to the assumptions from the literature review, the importance of environmental protection has not only increased in planning activities but in overall society. Question 8 therefore asked the respondents whether their interest in environment and nature protection has changed in recent years. 81.6% of the respondents answered that nature protection has become rather more or much more important to them. 15.7 % state that it has remained unchanged and only 2.7% answered that it has become rather less or much less important to them. Question 13 follows up by asking whether the perception about the protection of our oceans has changed in recent years. The distribution of the answers looks pretty similar to the question before. In total, 80% of the respondents stated that the protection of oceans has become rather more or much more important to them, 18.9% answered that it has remained unchanged and only 1% said that it has become rather or much less important to them.

Q8. Has your interest in environment and nature protection changed in recent years?	N	%
It has become much less important to me.	1	0.5
It has become rather less important to me.	4	2.2
It has remained unchanged.	29	15.7
It has become rather more important to me.	106	57.3
It has become much more important to me.	45	24.3

Q13. Has your perception about the protection of our oceans changed in recent years?	N	%
It has become much less important to me.	1	0.5
It has become rather less important to me.	1	0.5
It has remained unchanged.	35	18.9
It has become rather more important to me.	83	44.9
It has become much more important to me.	65	35.1

Table 18: Descriptive statistics of questions 17 and 13 (N=185)

On the development of collaborative planning Interviewee 1 says,

“We try to be a frontrunner and make it an example of how we could also participate with others, listen to people and also to have a license to operate. Not in a direct sense but for society. And I think that was pretty different from what was usually the case. [...] You have to realize participation takes time. And once you have accepted that, there's room for engagement. Because if you don't, if you think let's do this quick and dirty or something like that, it won't work. And from the start even before I was in the company we decided we will do this differently than for instance other companies in this industry. [...] And of course there are still stakeholders against it and that's fine. But we're always open for discussion” (I1).

Interviewee 2 sees participation as a necessary evil for the company,

“Those who develop the project want it to go through. They earn a lot of money on such a project and have to adhere to these specific requirements and then of course hope that the NGOs don't get

to upset about it. But it's also not bad for them to include participation as they don't get into such big trouble with stakeholders, or at least predictable trouble" (I2).

As a conclusion of chapter 5, it can be seen that the mixed-methods approach provided enough results for all the sub-questions and even too much data, as not all survey questions are used in the results. Chapter 6 follows up with a discussion of the described results in order to answer the sub-questions and the main research question.

6. Discussion

This chapter brings the named results into the perspective of the relevant factors of the conceptual model, in order to answer the main research question 'How do the stakeholders of the N05-A project perceive the role of NGOs with regard to securing procedural justice in the EIA process?'.

6.1 Discussion of sub-question a) on the involvement of the public

This section gives an answer to sub-question a) 'Can the public participate successfully in the EIA participation process of the N05-A project?'. The goal was to determine whether the public can ensure procedural justice through their own participation in the process, or whether the assumption can be confirmed that the marine environment of the N05-A project hinders the public's successful participation in the process.

Factor for successful participation	Discussion of the results
Environmental Relevance	<p>Content Most of the respondents (> 80%) are concerned about the environmental impact of the N05-A project. This fits together with the general interest in environmental protection and sustainability, which 97.3% see as important or very important. Although the topic of environmental protection is of great importance to almost everyone, around half of the interviewed people refuse to commit themselves to taking care of the topic by arguing that somebody else will probably take care of it. This gives first possibilities for interpretation of the public's participation behavior. The topic being important/ relevant to most of the respondents does not necessarily lead to participation.</p> <p>Location 88.6% state that nature conservation should have priority before the economic use and especially gas extraction in the North Sea.</p> <p>For both, content and location, the results of the survey show a high perceived environmental relevance of the N05-A project.</p>
Time	<p>The document analysis showed that the timing of the involvement of stakeholders was very early in the N05-A project. Therefore, the factor time is for the public's involvement is sufficient.</p>
Design	<p>The document analysis and the interviews both show a transparent and open design of the N05-A participation process. Nevertheless, and although everyone could submit an opinion, this does not automatically mean that the submitted statements have an influence on the decision-making process. In the design it can be distinguished between one-way communication (e.g., the company informs stakeholders), two-way communication (e.g., stakeholders, in addition, have the possibility to submit views), and reciprocal communication (e.g., the company, in</p>

	<p>addition, includes stakeholder views in the decision-making). Only reciprocal communication can ensure procedural justice according to the definition used in this work based on informed consent. To find out whether the submitted statements of the N05-A project are sufficiently included in the decision-making process the collected document with all statements and the associated response note from the government would have to be analyzed. However, this goes beyond the scope of this work and is therefore suggested for further research projects.</p> <p>Noteworthy, among the respondents that actively participated in the N05-A participation process, there was generally rather dissatisfaction with the participation process. The main reasons that were determined in the context of the survey were, above all, the feeling that their involvement would not have an impact; that the participation period was too short; and that it was not easy to participate. Nevertheless, since there are only 18 participants, further studies would have to be carried out to prove the identified trends.</p> <p>In the N05-A project, it can be said that the design was open enough to ensure successful participation, but further research is needed to evaluate whether the design is sufficient to ensure procedural justice as defined in this work.</p>
Information	<p>While 68.1% of the respondents have heard of the N05-A project only 18.9% have heard of the possibility to participate. From this, it can be concluded that there is an information problem. The assumption was that the marine context could have a negative impact on the factor information. Looking at the numbers of why people did not participate, 75.9% said they were not informed. To determine whether these numbers connect to the project being in the marine environment, further studies comparing terrestrial and marine projects are needed that analyze how people are informed. This is clearly beyond the scope of this work.</p> <p>Other reasons for the 75.9% not being informed are, besides the marine context, that simply not everyone can be informed about every project. Nevertheless, the survey only included a relevant selection of people, namely those who have a connection to the island (tourists, locals, scientists, etc.) and not everyone.</p> <p>Since most respondents heard about the project from the media, one starting point could be better media communication that explicitly addresses the possibility of participation. In the case of N05-A, however, the results speak for themselves, that the factor information is not fulfilled for most of the respondents.</p>
Affectedness	<p>Location</p> <p>The two interviewees have similar assumptions about the factor affectedness, namely living close to a project increases the affectedness. That corresponds to the NIMBY theory. Interviewee 1 argues that living close to a planned project creates an emotional connection and therefore increases the willingness to participate. 94.4% of the respondents that took part in the participation process live on one of the islands or have a second home there. That is 17 of 18 people and only one person that participated and lives further away. This suggests that the affectedness due to the location plays a key role in the N05-A project. However, it must also be made clear that N = 18 is very little data from participants, which can hardly be generalized. Therefore, follow-up studies with more participants would have to be carried out.</p> <p>A negative impact from the marine context was previously assumed for the factor affectedness since fewer people live in the immediate vicinity of the project due to the location at sea. 7.6% said that they are affected because they live close by and in turn, 4.9% said they are not affected because they live too far away in the open text box answers of why they are interested or not interested in planning activities at sea. This indicates that affectedness at least partly plays a role in marine planning. Nevertheless, in the N05-A project, the drilling site is in the territorial waters and within sight of some of the adjacent islands. This may result in a higher level of concern of stakeholders and more immediate neighbors than in an offshore project. Here, too, follow-up projects with offshore cases would have to be carried</p>

	<p>out to determine significant connections.</p> <p>Content About the marine-related content 51. 9% of the respondents state that they perceive the North Sea as an endangered ecosystem. Interviewee 1 argues that gas drilling in the North Sea is an emotional topic, especially for the Dutch, so the content of gas could potentially affect the public more than other projects. Here too, comparative studies with other projects would have to be carried out to determine significant connections. Most respondents stated that they are interested in activities planned at sea because they are worried about intergenerational justice; environmental protection; the balance between ecology and economy; they have personal or professional interests; or they have emotional ties.</p> <p>Regarding the gas context, most of the respondents stated that they are more against fossil energies, both on land and on water, but in comparison, they prefer the expansion on land over the expansion on the water. Here one could also derive a content-related, possibly emotional affectedness about the sea. The question about how the sea is generally perceived also indicates largely positive or protective feelings, as a large part has positive feelings towards marine environments; sees them as nice places for vacation; perceives them as endless; protected areas or threatened ecosystems. In addition, when it comes to the question of whether the respondents are for or against the implementation of the project, with two-thirds, most people who took part in the survey are clearly against it.</p> <p>From the results, it can be seen that the affectedness by location seems to play a role in the N05-A project, unclear which role the marine context exactly plays. It also seems that the assumptions from the literature about the public's perception of marine environments potentially underestimate emotional attachments towards marine environments and therefore a reason to engage in favor of their protection.</p>
Expertise	<p>The public's expertise is the most difficult factor to clearly identify. The factor expertise can be divided in process expertise and content expertise.</p> <p>Process expertise Process expertise, in this case, is about the EIA and its functioning. From the survey, 44.3% of the respondents have never heard of EIA, which means that they for sure don't have expertise on the EIA procedure. On the other hand, only because 55.7% state that they have heard about EIA before, doesn't necessarily mean that they have process expertise.</p> <p>Content expertise In the question of why people did not participate 3.1% said that they do not have expertise on the topic. Nevertheless, that is not a significant number of answers. In addition, having expertise is very subjective and difficult to evaluate.</p> <p>For this factor, no clear answer can be given but a suggestion for further research about the role of expertise in the participation process, which needs to be examined in more detail.</p>

Table 19: Discussion – Factors for successful participation - Public

To sum up the results and give an answer to sub-question a, it can be concluded that not all factors for successful participation are fulfilled for the public's involvement in the N05-A project. Missing *information* has shown to be specifically relevant as the main barrier to why people did not participate. *Affectedness* as well seems to play a key role, as except for one person, everyone who participated in the N05-A project and took part in this survey lives on the island. Content-wise the gas drilling in the North Sea can be regarded as a topic that affects many of the respondents, potentially because of the earthquakes occurring from the Groningen gas field extraction in recent times. The factor *expertise* is underdeveloped in this study leaving quite some room for

interpretation but still, indicates that *expertise* is probably not sufficiently given for successful participation for about a minimum of half of the respondents.

In addition to the named factors, lack of time for participating and participation not being ones' area of responsibility was also named quite a lot. These factors in addition to the previously named insufficient factors make some kind of representation of NGOs reasonable, as basically, not everyone can participate in every project.

6.2 Discussion of sub-question b) on the involvement of ENGOS

This section gives an answer to sub-question b) 'Can NGOs successfully participate as representatives of the public in the EIA participation process of the N05-A project?'. After it was discovered that the public does not fulfill all factors for successful participation in the N05-A project, this section looks closer at whether ENGOS can act as representatives of the public to secure procedural justice.

b1) Are the factors enabling NGOs to act as representatives of the public fulfilled?

Factors that enable NGOs to act in their roles	Discussion of the results
Trust and Legitimacy	The results of the survey show clear results towards trust and legitimacy being awarded to NGOs by the respondents.
Legal Anchoring	In the Netherlands and Germany, the involvement of NGOs is clearly anchored, although there are current debates on tightening restrictions for NGOs. Accordingly, to be eligible to participate in an EIA in Germany, NGOs must have at least 100 members in the future and must also disclose their data. Nevertheless, for the N05-A project, legal anchoring for NGOs was given and widely used.
Institutional capacity	Although institutional capacity might vary between different NGOs, the interview with the LaBün showed that this is a factor that is usually fulfilled. If one NGO does not have the capacity, a big plus of NGOs is that they can work jointly together.

Table 20: Discussion – Factors that enable NGOs

In comparison to the study from Lai & Hamilton (2021) in Asia, it seems that NGOs in western European countries - at least in the N05-A project - fulfill the underlying factors that enable them to act in their roles. In other words, from what the results show, the public holds trust and legitimacy towards ENGOS. This might be the case, as interviewee 2 argues because ENGOS have proven themselves in recent years and decades. This includes good project work and independence from governments. In addition, the work of NGOs fits in with the socially widespread environmental protection values. In the Netherlands and Germany, the participation of NGOs is legally anchored, and it seems that NGOs have the institutional capacity as they can work jointly together.

b2) How do the stakeholders in the N05-A project perceive ENGOs with regard to acting in the role of representatives?

Whether NGOs can act as representatives of the public is seen as a bit controversial. Interviewee 1 names some of the criticism that could also be identified in the literature review, namely the public being too diverse, NGOs not being democratically chosen, and NGOs having their own specific goals. She argues in favor of people should make up their own minds about the specific problems. Interviewee 2 adds that NGOs do not solely represent the public but also environmental concerns and nature. Nevertheless, only 6.4% of the interviewed public stated that they rather don't or not at all think that their opinion about nature protection is represented by NGOs.

Of those people who clearly positioned themselves (so did not answer 'I don't know' or 'I don't have an opinion', the majority stated that they feel represented by NGOs in nature protection issues.

b3) Do the interviewed NGOs fulfill the factors for successful participation?

Factors for successful participation	Discussion of the results
Environmental Relevance	As assumed the factor of environmental relevance of the project is given for NGOs in the N05-A project.
Time	Same as public – fulfilled.
Design	Same as public – fulfilled.
Information	NGOs are seen as key actors and are therefore informed regularly by the company and the government. Therefore, the factor information is fulfilled.
Affectedness	<p>Location Although not every NGO is affected by every project in general it can be assumed that there is always NGO presence given (at least of local NGOs).</p> <p>Content As described above the gas content is very relevant.</p>
Expertise	The factor expertise is given, as the respective NGOs either familiarize themselves with the topic or ask for expertise from other NGOs

Table 21: Discussion – Factors for successful participation – NGOs

It can be concluded that ENGOs fulfill the factors for successful participation in the N05-A project.

To answer sub-question b) it can be argued that the factors enabling NGOs to act as representatives are fulfilled in the N05-A project. The representation of the public by NGOs is seen as a bit controversial. Nevertheless, and most importantly, it is legitimized by the respondents from the public. The results in addition show that ENGOs fulfill the factors for successful participation in the N05-A project. Synoptically it can be argued that the answer to sub-question b) is: Yes, ENGOs can successfully participate as representatives of the public in the EIA of the N05-A project.

6.3 Discussion of sub-question c) on procedural justice

This section gives an answer to sub-question c) 'How is the role and the presence of procedural justice perceived by the stakeholders of the N05-A project?'

As described in 6.1 the public has the possibility to participate in the N05-A project and this really involves the possibility for everyone. Nevertheless, most of the respondents of the survey don't have the feeling to have an influence on decisions being made. It is an important topic for the vast majority 78.3%, nevertheless, only 4.8% believe that their opinions are sufficiently included.

The results of this section show that although in theory, the public has the possibility to be just involved, this does not match their perception of the practice in the N05-A project. Interviewee 2 argues that larger environmental protection associations simply have more power and are more effective than small citizens' initiatives and that NGOs use the opportunity to take legal action to stop proceedings more widely than individuals from the public.

6.4 Discussion of sub-question d) on the theory-practice comparison

This section gives an answer to sub-question d) 'Is the change to increasingly include collaborative and environmental planning as described in the literature reflected in the perception of the stakeholders about the practice of the N05-A project?'

The change described in the literature can clearly be seen in the results of the survey, as 95.1 % of the respondents think including environmental issues in decision-making is important or very important. The majority (78.3%) also answered that this is rather important or very important to them to have participatory planning processes that include everyone. 81.6 % of the respondents stated that their interest in environment and nature protection rather increased or very much increased in recent years. With 80%, the numbers are similar for ocean protection 80%.

7. Conclusion and reflection

7.1 Conclusion

The central aim of this research is to study the role of environmental NGOs in the N05-A gas extraction process and whether NGOs can play a key role in marine environments by acting as representatives of the public and therefore secure procedural justice. The main research question to answer is 'How do the stakeholders of the N05-A project perceive the role of NGOs with regard to securing procedural justice in the EIA process?'. To answer the research question an extensive literature review was accomplished that addressed the most relevant theories and concepts on participation in EIA, particularities of marine environments and the roles that environmental NGOs can take in EIA participation processes. Afterward, the most relevant theories were brought together in a conceptual model, which also laid the grounds for the mixed-methods approach, consisting mainly of semi-structured interviews and a survey.

To give a better overview of the key results of this study and to get an understanding of what they can impose for the question of whether ENGOS can act as representatives in marine EIAs to secure procedural justice, a SWOT analysis is presented below. The latter shows strengths and weaknesses of the representation of the public by ENGOS, as well as opportunities and threats.

STRENGTHS	WEAKNESSES
<ul style="list-style-type: none"> - fulfill all factors for successful participation - while the factors for successful participation are very context-dependent for the public, they are very consistent for NGOs - NGOs have legitimacy and trust from the public, also with regard to acting as representatives - NGOs have more power, tools, and capacity than most parts of the public - can be especially relevant when most other public stakeholders don't fulfill the factors for successful participation (e.g., in offshore projects) - often have more and better expertise on contents and processes 	<ul style="list-style-type: none"> - are not democratically chosen - cannot represent all facets of opinions from the diverse public, but rather environmental protection goals - should not be seen as a complete replacement of public involvement, as local knowledge and intelligence building is important
OPPORTUNITIES	THREATS

<ul style="list-style-type: none"> - can potentially ensure procedural justice - can play a role in also informing and giving advice to public individuals - can jointly work together and collect expertise from other NGOs 	<ul style="list-style-type: none"> - are not legitimized by all other stakeholders - tightened rules for the participation of NGOs in participation processes
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Table 22: SWOT- Analysis to summarize the main results

This study has revealed that the respondents of the survey did not fulfill all factors for successful participation in the N05-A project. With the public's involvement it seems to be very dependent on the characteristics of the respective project whether the factors for successful participation are met. This justifies the involvement of ENGOS that could be constant representatives for public participation here, as they usually have more capacities, resources, and expertise to participate. In addition, they are seen as key stakeholders and therefore are usually regularly informed about ongoing developments. The results for the role of ENGOS show that they fulfill all factors needed to represent the public in participation process. They can especially represent people who cannot participate successfully, due to missing affectedness, information, time, or expertise. Nevertheless, they should not replace local knowledge but should rather be seen as a useful complement to the input of local or interested stakeholder. As shown, some of the results allow the assumption that there may be obstacles to public participation in marine environments, namely lack of affectedness due to living too far away and lack of information. Noteworthy, the N05-A project is located in the Dutch territorial waters. In other words, there are still quite some 'neighbors' around on the close by islands, compared to other far offshore projects, which could make the impact of the marine environment on participation clearer.

Concluding, general as well as project-specific knowledge can be gained from the results. Content and location seem to be decisive for the outcome of the public's participation, e.g., env. relevance and affectedness. Therefore, there might be a difference between gas developments and marine projects in general. In any case, the topic of gas is more omnipresent in public discussion than many other marine activities due to price increases and environmental incidents in Groningen. In addition, there are current decisions by the EU Commission, which wants to classify investments in gas as climate-friendly in the future. It would be interesting to see how this affects public opinion, participation, and the positioning of ENGOS in the debate. It can be assumed that as a representative, not only for the public but also for strong environmental protection, ENGOS positioning, and participation are subject to less fluctuations than large parts of the public's participation.

Unfortunately, this study was unable to grasp which of the insufficient factors are affected mainly by the marine context. Follow-up comparative studies between projects on land and on sea that can better identify a potential relationship would be useful here. Nevertheless, this research showed that there are quite some open questions with regard to marine spatial planning and participation that have to be addressed differently than on land.

7.2 Reflection

Methodological reflection

Many more participants than expected took part in the survey, which shows the great interest in environmental topics and the relevance of the N05-A topic. Some of the participants asked on Facebook whether they could use the results of the survey for their local strategies with the topic. Overall, there is a strong interest in this topic, especially from islanders. Corona had no negative effects as the survey could be done via Facebook. Although the survey sample showed differences compared to the population, the sample size was big enough that chance could play a role in the results. In addition, it was tested whether there appears a difference in the results if only looking at female or male answers, and there was no significant difference.

Although generalizations are mostly complicated to do with a single case study design, the N05-A project provides more information than solely on the project level. This case study shows the overall participation structures that appear for EIA projects in marine environments.

Unfortunately, towards the end of the work, the interview with the second Dutch NGO could not take place as the interviewee did not answer back anymore. The reason for not having found an alternative interview was a lack of time towards the end of work and the turn of the year 21/22, which made it difficult to find an alternative to the canceled interview. Nevertheless, the interviews with One Dyas and the LaBün were very helpful, especially since the LaBün, as an NGO umbrella organization, could provide insights into the work with several NGOs. In addition, this work is mainly about the perception of other stakeholders towards NGOs which could be reached with the high number of participants in the survey. Another point worth mentioning is that in contrast to the assumptions about the interview with One Dyas it went very well. The researcher was doubting before the interview whether commercial interests and environmental conflicts around the topic would hinder a fruitful conversation. While it might be a sensitive topic, the researcher was able to make the interviewee feel comfortable and willing to speak openly about the topic.

Another point that needs to be considered is the timing of the work. On the one hand, studies like this mostly only offer a snapshot of the current developments in this field, and, on the other hand, this master's thesis is completed before the EIA process of the N05-A project is finished. This did not allow to be followed through to the end and to see whether the relevant permits are granted for the gas extraction.

Theoretical reflection and contribution to planning theory and practice

Looking at the theoretical background of EIAs it can be seen that their origins come from a climate of rather rational- decision-making in the 1960s in the USA. Acknowledging the involvement of different parties, consensus-building, and communicative planning is something that shapes EIA in its more modern approach only for around two decades. In addition, the field of environmental planning for marine environments is still an emerging field that shows to have little experience with the particularities of participation in non-terrestrial environments.

The results of this work add to the existing literature by showing that marine environments should not be seen as extensions of terrestrial environments, neither should they be planned like this. This is particularly true as the results show that the factors for successful participation are not fulfilled for the respondents of the public. This also shows that although we are in the western context this doesn't automatically ensure procedural justice. Modern planning approaches for marine environments must see it as an independent field with its own particularities and revise participation procedures on the water with a view to procedural justice. As shown in this work, ENGOs could play a key role in this.

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Appendix 1: Interview Guide- Semi-structured interviews

1. Part: Your perception of participating in the EIA

What do you think are important factors for successful participation in EIAs?

- How do you perceive these factors for your participation in the process?
 - Information
 - Expertise: Content Knowledge und Process knowledge
 - Affectedness
 - Time
 - Design
 - Environmental relevance
- Factors enabling ENGOs to participate sufficiently overall:
 - Trust
 - Legitimacy
 - Institutional capacity
 - Legal anchoring

2. Part: Marine context particularities

- Marine context – do you think the participation differs as the project is in the marine context?
- Do you perceive your role/ functions differently in the marine context?

3. Part: The public

- How do you evaluate the role of NGOs as representatives of the public?
- How do you perceive the part of the public that is directly participating in the process and what would you say is their motivation to participate?
- Do you think NGOs can act as representatives of the public in EIA?

4. Part: Procedural Justice

- How important is it that everyone can have a voice, influence outcomes of the project, or refuse it overall?
- How do you perceive your role with regard to securing procedural justice?

5. Part: Survey results

- Two-thirds of the interviewed public is against the project, still, it looks like the project gets permission - what are your thoughts on this?

Appendix 2: Survey questions and results