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Transforming Energy Seascapes:

An Ethnography of Energy Infrastructure at the Wadden Sea

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Abstract

Preventing the urgencies that loom in the face of anthropogenic climate change requires a rapid and just transformation of the socio-energy system. Energy clearly permeates into maritime realms, as the case of energy imports to the Wadden Sea coast demonstrates. By conducting ethnographic research, the purpose of this thesis was to develop a profound understanding of coastal residents' perspectives on how maritime energy infrastructure transforms their local seascapes. In that context, the concept of "energy seascapes" was introduced, defined as seascapes that, over time, have significantly been shaped by the flows of energy derived from human energy demands. The findings of this thesis illustrate how contexts across different scales intertwine in the making of energy seascapes. Local perspectives on energy infrastructure at the Wadden Sea revealed how contesting imaginaries are invoked to make sense of how the energy seascape transforms. Employing a framework of justice further demonstrated how depoliticized transformations within the energy sector foster and obscure energy injustices at sites of energy production. Therefore, the findings of this thesis point to the need for a politicization of energy politics.

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1 Introduction

It is a sunny day in mid-October when I visit the migratory birds festival in Horumersiel, close to the shore of the Wadden Sea in Northern Germany. I remain outside for a while, since feeling the shafts of sunlight on my skin is a nice change of scenery compared to the usually rather grey and rainy weather. Given that I grew up in a nearby small town, I am very familiar with how rough the sea and shore region can be. Later today, I will go inside the guest house, where several environmental NGOs, artists, and optic companies have put up their information and exhibition stands, most of them offering some activities for children as well. Inside, I will encounter stories about the destruction of local biotopes, about neocolonial exploitation, and about Russian spies. But for now, I am staying in the sun for a little longer. In front of me, there is a small stage, whose foundation is made entirely of bricks. The roof of the stage is carried by some wood trusses, which creates a rather rustic appearance. Behind me, some people sat down on the few wooden benches, that were placed on the green grass, to watch the performance that is just about to start. The group that will provide musical accompaniment for the bird festival are the Netzwerk Singers – a choir that was formed as an alternative form of protest, that centers on community care and expressions of gratitude towards the more-than-human world. Contrasting the jolly melodies of their songs, the singers, in their lyrics, condemn the import of US liquid natural gas and bemoan the dying of fish because of import structures. They recount how they were not included in decision-making processes. However, the singers are adamant that not for all the money in the world, they would be willing to barter the local birds for industry.

The reason for the formation of the choir lies in the Höegh Esperanza – a Floating Storage and Regasification Unit (FSRU), whose purpose is the import, storage and regasification of liquid natural gas (LNG). Prior to the Russian invasion of Ukraine in 2022, that triggered a massive reorganization of global gas markets (Holz et al., 2023, p. 1), more than half of the gas consumed in Germany was imported from Russia via pipeline (Fischer & Küper, 2022, p. 5). Imports of Russian oil and coal were then terminated following EU-sanctions (Holz et al., 2023, p. 1). Russia, on the other hand, gradually reduced its gas exports to Europe. In September 2022, Russian gas imports to Germany completely ceased, when explosions rendered the Baltic Sea Nord Stream pipelines no longer usable. Several measures were taken by the German government to cope with missing gas supplies. Apart from lowering gas consumption, the import of LNG from other countries – for which the LNG Acceleration Act (LNGG) laid the legal groundwork – played a pivotal role for dealing with the scarcity of gas (Holz et al., 2023,

p. 2). In that context, the leasing of several offshore floating gas terminals was initiated, so that the Höegh Esperanza was put into operation in December 2022 as the first FSRU in Germany (Deutsche Energy Terminal [DET], 2024b, pp. 4, 6). In 2025, the LNG-ship was then joined by the Excelsior, the second offshore terminal that is located on the Wadden Sea coast (DET, 2025, p. 2).

Wilhelmshaven, the city where both LNG terminals are sited, is a port city in Lower Saxony, that lies on the shore of the Central Wadden Sea. Due to the pronounced tidal cycle, the water of the Wadden Sea completely disappears twice a day, unveiling a vast mud flat (Reise et al., 2010, p. 11). What is more, the Wadden Sea biotope is composed of a lively and dynamic assemblage of a plethora of different plant, animal, and fungi species (Reise et al., 2010, p. 9). Apart from the "multispecies muddle" (Haraway, 2016, p. 31) of the thousands of beings that permanently inhabit the local ecosystem, over 10 million migratory birds pass the Wadden Sea each year (Reise et al., 2010, p. 9).

In line with Pungetti's (2022) understanding of a seascape as a "combination of abiotic, biotic and human features developed over time in a place between land and sea, which can be perceived with its own unique character" (p. 12), also the coast of the Wadden Sea has evolved over centuries in a close interplay between human and more-than-human forces. Land reclamation and dike construction, for instance, significantly shaped the local seascape (Quedens, 2003, p. 6). This is also taken up in the construction of regional, Frisian identities. Illustrated by the common saying "Gott schuf das Meer, der Friese die Küste" – which translates to "God created the sea, the Frisian created the coast" –, the regions of Frisia have been shaped by their centuries long history of adaptation to the North Sea (Petersen, 2018, pp. 62, 66).

Furthermore, the local seascape around Wilhelmshaven has been significantly affected by industrial influences from energy and chemical plants. The city of Wilhelmshaven was founded in the latter half of the 19th century, as a naval base (Eiben, 2019, p. 260). In the beginning of the 20th century, industrial settlements started in Wilhelmshaven – at that time mainly centered around coal power (Janßen, 2003, pp. 32-34). After World War II, Wilhelmshaven was grappling with military demobilization and war-related destruction (Eiben, 2019, p. 260). Nevertheless, regional industries, such as the shipbuilding- and oil industry, started flourishing again in the face of post-war upswing (Wöhler, 2023, pp. 27-29; Eiben, 2019, pp. 260-261). Moreover, apart from an office machine manufacturer – that constituted one of the largest employers in the region – the eventual reopening of the naval base contributed to economic

upswing (Eiben, 2019, pp. 260-261; Fornahl et al., 2011, p. 3). Despite that, Wilhelmshaven was struggling with tax revenue deficits, which is why the city initiated the onset of capital-intensive corporations from the chemical and extractive industries sector from the 1970s onwards (Eiben, 2019, pp. 261-262). In this context, some areas of diked land – today known as Voslapper Groden – were reclaimed with the intention of industrial use (Maasland, 2022). Notably, it was also at that time, that the construction of a liquid gas terminal – although not actualized back then – was first discussed (Eiben, 2019, p. 264). Industrial settlements were outspokenly criticized within the environmentalist movement for the endangerment of the local Wadden Sea ecosystem (Eiben, 2019, p. 263). However, the economic situation soon began to turn due to the oil crisis, and Wilhelmshaven entered economic downturn (Eiben, 2019, pp. 260, 266). The recession was accompanied by high unemployment rates, fiscal poverty and population decrease (Eiben, 2019, pp. 271-272). Under huge protests, the office machine manufacturer closed down (Wöhler, 2023, pp. 33, 40-42), and also the shipbuilding sector entered economic decline (Fornahl et al., 2011, p. 3). In addition to that, one of the coal power plants was shut down, and the navy reduced their personnel (Janßen, 2003, pp. 37-38; Koop & Mulitze, 1997, p. 215). Industrial settlements on the newly reclaimed diked land held off as well. As a consequence, several diverse biotopes emerged in the areas of Voslapper Groden over time, among which, today, many are protected by German nature protection law (Maasland, 2022). In the hope of reducing the still high-remaining unemployment rates, a containership port was built in Wilhelmshaven in 2012 (Holocher, 2019, pp. 35-36). However, the construction of the port earned sharp public discontent as it persisted over almost two decades and amounted to high economic costs.

Considering the regional context, it becomes clear that the construction of the LNG terminals subsumes in a larger industrial history. At the same time, the local seascape represents an important site of cultural heritage, and is hallmarked by a unique ecosystem, that is inhabited by a myriad of different species. Therefore, it is crucial to develop a profound understanding of how local residents experience and make sense of these energy infrastructures. This is particularly the case in the wake of current efforts, that target a further intensification of industrial settlements. More precisely, the construction of a port-oriented energy park is being planned in the environmental protection site of Voslapper Groden Nord (Hanrieder, 2025, p. 13). The planned energy park is supposed to be centered around green energy carriers such as hydrogen.

Zooming away from the regional context, studying LNG infrastructure on the Wadden Sea is particularly relevant to understanding how site-specific conditions and larger global processes produce conditions that facilitate the expansion of fossil capital. However, preventing the urgencies that loom in the face of anthropogenic climate change requires a rapid transition towards an economic system based on renewable energies. In addition to that, studying this case further reveals how injustices and unequal relations of power persist within a transition to renewables when underlying social relations remain untouched.

By conducting ethnographic research, I aim to develop a profound understanding of coastal residents' perspectives on how infrastructures for maritime energy imports transform their local seascapes. By asking: "What do coastal residents' perspectives on maritime energy infrastructures reveal about the making of energy seascapes?", this thesis is located within the fields of both energy anthropology and maritime anthropology. Energy, in anthropology, is not only understood as the mere flow of electrons. Rather, it is apprehended to be deeply entangled with social and political relations. While energy has been a relevant topic in anthropology for a long time, the intensity of attention that anthropologists have devoted to energy has varied over the decades (Rogers, 2015, p. 366). More recently, in the wake of the urgencies posited by anthropogenic climate change, there has been a reawakening of anthropological interest in energy (Rogers, 2015, p. 366). Given that this thesis targets important questions about fossil energies and the transition to renewables, it can be contextualized within the latest upsurge of energy anthropology. More precisely, by adopting a framework of justice, I intend to show how power relations can materialize in maritime infrastructures for energy imports. In addition, I will illustrate how these power relations are locally negotiated and contested. By doing that, I will show how current developments in the energy sector are depoliticized, thereby fostering global energy injustices at sites of energy production. This also applies to the import of hydrogen, that is being endeavored on the Wadden Sea coast. Recently, hydrogen has received increasing attention in academia (Tunn et al., 2025). This study contributes to upcoming research on this topic by showing how hydrogen imports are depoliticized in order to obscure neocolonial tendencies of hydrogen transport chains.

Maritime anthropology, on the other hand, has traditionally engaged in "the study of human groups and their seaborne practices" (Roszko, 2021, p. 299). Understanding the ways humans imagine and interrelate to the sea are central topics within the discipline (Roszko, 2021, p. 303). Therefore, by exploring how coastal residents make sense of energy induced transformations of their local seascape, this thesis contributes to maritime anthropology as well. More precisely,

I will show how shared interpretations of current developments contradict or reaffirm certain ways in which the local seascape is imagined. In addition to that, in order to account for the distinct lived realities in spaces where the terrestrial and the aquatic meet, I will introduce the concept of "energy seascapes" to anthropology. Specifically, I define energy seascapes as seascapes that, over time, have significantly been shaped by the flows of energy derived from human energy demands.

This thesis can also offer valuable insights to actors outside of academia. Developing just energy policies demands a profound understanding of local perspectives and underlying power dynamics. A transition towards renewable energies must consider the ways in which energy permeates into political and social realms. Furthermore, I hope that this study can help local resistance movements to repoliticize struggles around energy, shifting the focus from technocratic arguments to the underlying social relations that are touched by energy.

In the following, I will elaborate more profoundly on my theoretical framework. After explaining the methodology of my research, I will present my main findings. These will then be discussed and connected with the theoretical framework in a subsequent chapter. Lastly, I will conclude with a summary of my work.

2 Theoretical Framework

2.1 Maritime and Energy Anthropology – a Brief Review

By putting maritime energy infrastructure in the center of my research, this thesis adds to the literatures of both energy anthropology and maritime anthropology. In the following, I will therefore briefly elaborate on the history of both traditions before touching on the theoretical concepts relevant to my thesis.

In anthropological literature, three main waves of anthropological energy studies can be distinguished (Rogers, 2015, p. 366). In the 1940s, anthropological interest in energy first emerged within the paradigm of cultural evolutionism essentially defined by Leslie White's works (Rogers, 2015, p. 366; Smith & High, 2017, p. 3). White attributes to energy a power of cultural development (White, 1943, p. 345). Thus, according to White, culture develops as the amount of energy that can be produced, as well as the efficiency, with which energy is harnessed, increases. Initially, humans entirely relied on energy from the human organism. Over the course of history, they additionally were able to harness energy from non-human sources, such as steam or coal (White, 1943, pp. 345-346). Thus, with the subsequent increase of available energy, humans were capable of producing more goods and services to serve their needs, leading to the evolution of culture.

Notably, White's anthropological interest in energy was significantly influenced by his concerns about the scarcity of oil and coal reserves (White, 1943, p. 350). In a similar vein, the energy crisis in the 1970s sparked the second wave of anthropological research on energy (Rogers, 2015, p. 366). Anthropological contributions from that period started contextualizing the issue of energy into larger debates around resource extraction and exploitation, environmental impacts, and Indigenous rights (Boyer, 2014, p. 313). Laura Nader's works on energy policy and energy expert culture constitute some of the most influential contributions to the second generation of energy anthropology (Smith & High, 2017, p. 3; Boyer, 2014, pp. 314-135). Through participatory observations at several US conferences and projects on energy systems and energy transition, Nader (1981) exposes how certain views and assumptions contribute to the rejection of solar energy or energy conservation measures (pp. 99, 104). Furthermore, she identifies a lack of diversity among the predominately male and white energy experts as well as fundamental methodological shortcomings, in the sense that analysis of future scenarios relied exclusively on calculations and numbers and did not account for human behavior and relations (Nader, 1981, p. 100). Therefore, Nader points out the need for an anthropological study of energy.

More recently, in the wake of the urgencies posited by anthropogenic climate change, there has been a renaissance of anthropological interest in energy (Rogers, 2015, p. 366). By targeting questions about fossil energies and the transition to renewables, this thesis can be contextualized within this latter stream. Many topics already brought forward in the second wave remain highly influential within the third generation of energy anthropology (Boyer, 2014, p. 313). More recent contributions to the discipline include the introduction of energopower and energopolitics, as an extension of Foucault's concepts of "biopower" and "biopolitics" (Boyer, 2014, p. 322). According to Boyer (2014), energopower poses a "genealogy of modern power that rethinks political power through the twin analytics of electricity and fuel" (p. 325). Energopolitics, on the other hand, is defined as "power over (and through) energy" (Boyer, 2011, p. 5). Timothy Mitchell's (2011) *Carbon Democracy*, in which he establishes an interrelation between the rise of coal power and democratic politics, arguably has been one of the most influential analyses of energopolitics (Boyer, 2014, p. 323). More recent works have also drawn inspiration from posthumanism (Boyer, 2014, p. 318). Implications derived from posthumanist schools of thought inherently require anthropologists to move away from anthropocentric propositions. Rather, anthropology must recognize "ecological interdependency and interresponsibility" (Boyer, 2014, p. 319). With respect to energy, anthropologists have therefore put increasing attention to interrelations between energy and the more-than-human (Howe, 2019, pp. 4-5).

Maritime anthropology, on the other hand, has traditionally engaged in "the study of human groups and their seaborne practices" (Roszko, 2021, p. 299). The subdiscipline of anthropology has emerged in reaction of the historical dominance of terrestrial-oriented studies, that failed to account for the "analytically […] distinctive seaborne and sea-oriented human experience" (Roszko, 2021, p. 299). Initially, anthropologists interested in maritime communities and environments have predominantly concentrated their research on fishing communities (Roszko, 2021, p. 306). Early anthropological studies concerned with coastal communities and seaborne practices of life include the works from Bronislaw Malinowski, Raymond Firth, and Margaret Mead (Roszko, 2021, p. 299). However, maritime anthropology was not fully institutionalized until the 1970s, when several European and North American research groups and an own journal for maritime studies were created (Roszko, 2021, p. 300).

Maritime and marine have often been conceptualized as dialectical dimensions in maritime anthropology (Roszko, 2021, p. 300). While the former refers to "human seaborne activities and practices […] that usually take place on sea surface but of course involve connections with

the land" (Roszko, 2021, p. 298), the latter describes "the organic life and inorganic materials and movements under the sea surface […], involving non-human life in and maritime extraction of resources from the sea" (Roszko, 2021, p. 298). When anthropological interest in ecological and environmental influences on human life augmented in the 1970s, also discussions around the introduction of marine anthropology as yet another subdiscipline to anthropology emerged (Roszko, 2021, p. 300). Marine anthropology, as proposed by Asahitarō Nishimura, had a narrower focus on relations between environmental and ecological factors and technological equipment, especially for fishing. As for today, marine anthropology is not recognized as a subdiscipline of anthropology on a global scale. However, marine anthropology has been more influential in Japan, since Akifumi Iwabuchi in the 2000s reproposed the introduction of the subdiscipline. Marine anthropology, in the way it has been conceptualized by Iwabuchi, overarches the branches of "maritime anthropology", that was more terrestrial- and nautical-oriented, and "marine culturology", that was concerned with "human adaptation to the marine environment" (Roszko, 2021, p. 300).

Fishing has remained an important subject of anthropological inquiry from the 1970s onwards (Roszko, 2021, p. 300). Anthropological studies, at that time, were increasingly concerned with fishing rights and began targeting questions of fishery management (Roszko, 2021, pp. 300-301). In that context, a large part of maritime anthropological scholarship around that time was primarily oriented towards marine policy development. This "managerial turn", however, has earned pronounced criticism within the subdiscipline (Roszko, 2021, pp. 301-302). Maritime anthropologists, therefore, started questioning the propositions of neoliberal ocean policies more fundamentally and extended their scope of research towards questions around mobility and identity construction of fishers.

With the oceanic turn, that took place in the 1990s, the historical dominance of terrestrial-oriented studies was addressed – not only within the discipline of anthropology, but within the social sciences more generally (Roszko, 2021, p. 302). Contributions located in that context aim towards the deconstruction of land-sea as well as human-nature binaries. Using ethnographic data from both anthropological and archaeological research, several contributions in King and Robinson's (2019) volume *At Home on the Waves*, for instance, challenge the binary conceptualization of land and sea. Particularly, the editors emphasize "the continuity with which people live and enliven their surroundings" (King & Robinson, 2019, p. 2). In addition to that, with the oceanic turn, researchers increasingly examined the influences of the more-than-human of the sea within political, social and economic spheres (Roszko, 2021, pp. 302-303). In

that context, Stefan Helmreich's (2009) *Alien Ocean* constituted one of the most influential contributions to maritime anthropology (Roszko, 2021, p. 303). Helmreich (2009), by placing a focus onto the microbial world of the oceans and deep sea (p. 28), shows how marine microbiology can challenge commonly held perceptions and beliefs about the ocean (pp. x-xi). Marine microbes, according to Helmreich (2009), bridge the dual imagination of the sea as either familiar, in the sense that it provides "the ecological context within which we and other living things originated an persist" (p. x), or the strange other, that is "an entity with a force and logic that might endlessly overwhelm or wash away our attempts to represent or control it fully" (p. xi).

More recently, maritime anthropology has begun targeting an array of issues surrounding maritime labor (Roszko, 2021, p. 306; Dua, 2024, pp. 171-172). Several anthropologists have pointed out how the maritime industry heavily relies on precarious and invisible maritime labor (Leivestad & Markkula, 2021, p. 2; Bailey & Winchester, 2025, p. 7). A growing body of work has also been concerned with seafarers' experiences with piracy (Roszko, 2021, p. 306; Mannov, 2015; Dua, 2024, p. 169). In addition to that, contemporarily, an increasing number of maritime anthropologists are critically engaging with the newly emerging "blue economy" (Roszko, 2021, p. 308). Similarly to the terrestrial "green economy", the blue economy or blue growth approach argues that economic growth can be promoted in accordance with environmental protection (Schutter et al., 2021, pp. 1-2). Historically, anthropologists have traced back the blue economy approach to the influential juridical concept of "mare liberum", that was coined by Hugo Grotius (Roszko, 2021, p. 307). The imaginary of a mare liberum posits that the oceans are inexhaustible and free to use by all, which laid the foundation for the colonial exploitation of oceanic environments. I will return to discussing the blue economy approach at a later point, when I introduce the concepts of "blue justice" and "blue resistance" to my theoretical framework, which I will present in the course of the following pages.

2.2 Energy Seascapes

In this thesis, I aim to illuminate coastal residents' perspectives on how infrastructures for maritime energy imports transform local seascapes, understood not only in a physical sense but also as socially and politically constructed. In the following, I will therefore depict different anthropological notions of scapes, touching on seascapes as well as, more specific to energy anthropology, the notion of energyscapes.

Predated in academic literature by the terrestrial landscape, the concept of seascapes was developed in an attempt to overcome land-sea-divisions (Cobb & Ransley, 2019, p. 18-20).

According to Pungetti (2022), seascapes are a "combination of abiotic, biotic and human features developed over time in a place between land and sea, which can be perceived with its own unique character" (p. 12). Notably, seascapes are "undeniably a cultural construct, and a sea without people would merely be a sea and not a seascape" (Pungetti, 2022, p. 20). Anthropologies of seascapes have touched on issues ranging from customary marine tenure to the cosmological construction of the seascape (McNiven, 2025, p. 794). Cordell (1989), for instance, in his volume *A Sea of Small Boats*, explores traditional fishers' relation to the sea, also touching on issues around customary sea tenure. Seascapes, according to Cordell (1989), therefore, are both "blanketed with history and imbued with names, myths and legends, and elaborate territories that sometimes become exclusive provinces partitioned with traditional rights and owners much like property on land" (p. 1). Cobb and Ransley (2019) criticize the concept of seascapes for perpetuating the land-sea binary, as seascapes, as their argument goes, demand a classificatory boundary of where the seascape ends and the landscape begins (p. 21). McNiven (2025), on the other hand, argues that seascapes, if not rigidly equated with the sea but understood to include terrestrial seascapes – which are the "culturally defined extension of seascapes to adjacent inland regions" (p. 794) – still have "considerable analytical value in understanding how maritime peoples both past and present constructed their world and identity" (p. 795).

Based on Appadurai's study of globalization, the concept of scapes has also found its way to the field of energy anthropology (Apostoli Cappello, 2024, p. 40). Arjun Appadurai (2005) introduces five dimensions of global scapes: the ethno-, techno-, finance-, media-, and ideoscape, with which he describes different kinds of flows that in juxtaposition augment globalising and localising processes (pp. 17, 33; Ibrahim, 2015, pp. 50-51). The framework of energyscapes has been added as a further dimension to Appadurai's global scapes in order to describe the flows of energy through both physical and social realms, causing transformations across local, national, and global contexts (Strauss et al., 2013, p. 11). In the process, energy changes "its cultural, social, economic, and technological values as it flows from one domain to the next" (Strauss et al., 2013, p. 11). While this is one understanding of energyscapes, the term has several definitions in broader academic literature. Howard et al. (2013), for instance, define energyscapes as "the complex spatial and temporal combination of the supply, demand and infrastructure for energy within a landscape" (p. 19).

In a similar vein, Pasqualetti and Stremke (2018) introduce the term "energy landscape" to refer to a specific type of cultural landscape, a term that is used by geographers to describe physical

landscapes that evolved as a product of human influences on the environment (p. 95). Energy landscapes, then, are cultural landscapes whose transformations were induced by human energy demands, or in other words "observable landscapes that originate directly from the human development of energy resources" (Pasqualetti & Stremke, 2018, p. 98). Often, energy landscapes are directly shaped by one or more elements of the energy system, for instance extraction, production, transport, or storage (Pasqualetti & Stremke, 2018, p. 95). Energy landscapes can be categorized along three characteristics: on a substantive level, energy landscapes can be distinguished by the type of dominating source. Spatial characteristics of energy landscapes can vary from energy infrastructure constituting a distinct spatial entity to being one of many components of a landscape. Lastly, temporally, energy landscapes can differ in their degree of permanence and reversibility (Pasqualetti & Stremke, 2018, p. 99).

Following Pasqualetti and Stremke (2018), whose notion of energy landscapes implicates a more land-based orientation, I will introduce the term "energy seascape" in this thesis. Referring to energy seascapes will allow me to account for the distinctiveness of lived realities in spaces where the terrestrial and the aquatic meet. More specifically, I define energy seascapes as seascapes that, over time, have significantly been shaped by the flows of energy derived from human energy demands.

2.3 Spatial and Transition Imaginaries

To more precisely understand how maritime energy infrastructures and the spatial transformations induced by them are interpreted by different actors, the term imaginary offers a powerful tool of analysis. The imaginary has become popular in anthropology as an alternative to the concepts of culture and cultural meanings and beliefs, that have gone out of favor for their connotations with homogeneity, rigidity and otherness (Strauss, 2006, p. 322). Jaques Lacan, Cornelius Castoriadis, Benedict Anderson, and Charles Taylor have all contributed to shaping the meaning of imaginary in anthropology (Strauss, 2006), the latter defining a social imaginary as "the way ordinary people 'imagine' their social surroundings" (Taylor, 2004, p. 23). Imaginaries are often held among larger groups of people and enable common practices and "a widely shared sense of legitimacy" (Taylor, 2004, p. 23) among them. Noteworthily, the term imaginary has had a long tradition in the field of cultural geography as well, where spatial imaginaries describe collectively held social perceptions of places and spaces (Driver, 2005, p. 246). Several types of spatial imaginaries are differentiated in cultural geography, such as "place imaginaries", that refer to shared ideas about supposed unique characteristics of a place (Watkins, 2015, p. 512). "Idealized spaces" constitute another type of imaginary, that captures

generalized kinds of places that can have positive or negative associations. “Spatial transformation imaginaries”, on the other hand, represent ideas about the transformation of places through generalized processes (Watkins, 2015, p. 513). For instance, processes such as gentrification, industrialization, or globalization constitute spatial imaginaries in the sense that they represent shared understandings of “how places have, should, or deterministically will evolve” (Watkins, 2015, p. 513).

Imaginaries have also found application in energy studies. Jasanoff and Kim (2009), for instance, introduce the term “sociotechnical imaginaries” to refer to “collectively imagined forms of social life and social order reflected in the design and fulfillment of nation-specific scientific and/or technological projects” (p. 120). Lis-Plesínska et al. (2024) explore energy transition through the lens of a “transition imaginary” defined as “a discursive effect of state work to strategically select and reconfigure landscape pressures and national sociotechnical imaginaries for the sake of legitimizing particular sustainable transition projects” (p. 1). Other works have traced how top-down policy-driven energy transition may diverge from temporal and spatial imaginaries of energy futures of local communities (Apostoli Cappello, 2024, p. 237).

2.4 The Post-Political

Following Žižek (1999), I argue that contemporary energy politics is pervaded by a managerial approach to government, that signals a state of post-politics and post-democracy (as cited in Swyngedouw, 2011, p. 266). The term post-political refers to the reduction of the political sphere to a form of consensual, techno-managerial, and administering governing and policymaking under which underlying social relations are maintained (Swyngedouw, 2011, p. 266). Swyngedouw (2011) posits that the post-political entails “no contestation over the givens of the situation, over the partition of the sensible; there is only debate over the technologies of management, the timing of their implementation, the arrangements of policing, and the interests of those whose stake is already acknowledged, whose voice is recognized as legitimate” (p. 267). Clarke and Flannery (2020) account for different interconnected modalities that characterize the post-political condition (p. 170). According to Clarke and Flannery (2020), policy solutions, under the post-political condition, remain within a neoliberal and technocratic-managerial framework, while local actors who challenge neoliberal hegemony are excluded from participation as their critique is deemed illegitimate (pp. 172-173). These processes of post-political governance are obscured behind a curtain of choreographed participation and create an illusion of progressive change (Clarke & Flannery, 2020, p. 174). Furthermore, post-

political decision-making often imposes pressing time limitations that foster path-dependencies rather than allowing for the consideration of alternative solutions. Clarke and Flannery (2020), in their work, illustrate how these modalities of the post-political condition permeate marine governance and advocate for a re-politicization of Marine Spatial Planning (p. 180).

Similarly, researchers occupied with energy have on many occasions called for a politicization of the energy system. According to Healy and Barry (2017), this entails the exposure of supposedly objective and neutral technocratic top-down approaches to decision-making, in order to lay open power dynamics, actors, and interests which shape the whole energy system (p. 453). In a similar vein, Miller et al. (2015) contend that energy policy must be informed by a socio-energy systems approach, that goes beyond questions of energy supply security, economic costs, and isolated environmental goals such as reduction of CO2 emissions (p. 31). Rather, energy policy must recognize the complex assemblages of technologies, people, and organizations that constitute the socio-energy system. Hence, energy policy must account for the interrelations between energy across the whole energy cycle and respective social, cultural, and political contexts and dynamics, acknowledging for social relations and inequalities. Applied to energy transition, these demands translate to the need of a complete restructuring of the current socio-economic system (Healy & Barry, 2017, pp. 453, 455). Rather than simply lowering carbon emissions while underlying power dynamics are left untouched, the energy system must be transformed towards energy democracy and greater citizen participation.

2.5 Blue Justice and Energy Justice

Adding to the concepts discussed so far, I argue that adopting a framework of justice can help disclose how power relations materialize in maritime infrastructures for energy imports. In addition to that, applying a framework of justice can demonstrate how these power relations are locally negotiated and contested.

Energy justice has been a pivotal concept within the existing body of literature addressing social concerns around energy. Building on environmental justice research (Healy et al., 2019, p. 221), energy justice seeks to introduce justice principles to questions related to energy across the whole energy system (Jenkins et al., 2016, p. 175). Jenkins et al. (2016) identify different dimensions of energy justice: “distributional justice” makes up the first principle of energy justice and refers to the equal distribution of costs and benefits, including not only costs and benefits related to the location of energy infrastructure but also the access to affordable energy (p. 176). “Recognition-based justice” is further identified as a key tenet of energy justice, that refers to the fair representation of individuals, in the absence of physical threats and under the

possession equal and full political rights (Jenkins et al., 2016, p. 177). Recognition-based justice therefore looks at "processes of disrespect, insult and degradation that devalue some people and some place identities in comparison to others" (Walker, 2009, p. 615). Lastly, "procedural justice" is concerned with the inclusion of all stakeholders in decision-making processes, requiring appropriate participation and complete disclosure of information (Jenkins et al., 2016, p. 178). Contemporary energy policies tend to exclude local communities and diminish participation, for instance through reduced possibilities and timing of public feedback and engagement (Miller et al., 2015, p. 37). In addition to that, sometimes, local communities feel that supposed levels of expertise are required to participate in discussions surrounding energy. Procedural injustices can therefore directly be linked with the afore-mentioned condition of the post-political, where validation of planning works through result-oriented, output-centered legitimization, rather than focusing on participation- and input-centered legitimization (Clarke & Flannery, 2020, p. 173).

Since its emergence, the concept of energy justice has also earned severe criticism, leading to a further development of the energy justice framework. Energy justice principles have primarily been informed by Western theorists and philosophers, and their application has overwhelmingly exhibited a strong anthropocentric bias, excluding the non-human world from energy justice (Sovacool et al., 2017, p. 678). Sovacool et al. (2017) therefore propose the application of non-anthropocentric theories to energy justice, referring to animal-centric, biocentric, or ecocentric approaches to justice (p. 682). Healy et al. (2019) propose another reconfiguration of the energy justice framework by introducing the term "embodied energy injustices", in order to trace energy injustices alongside the transboundary trajectory of energy resources – from production or extraction to disposal (p. 220). The researchers criticize the existing body of energy justice scholarship to prevalently conflate environmental harm imposed by the energy system on rather affluent communities in the Global North with the disproportionate suffering that marginalized communities in the Global South face, for instance, at extraction sites (Healy et al., 2019, p. 221). For that reason, embodied energy injustices offer a way to link injustices across boundaries along different places, while still accounting for their disproportionality.

Justice principles – through the term "blue justice" – have also found their way into maritime anthropology. In this thesis, I draw a connection between energy justice literature and blue justice scholarship, since both overlap in spaces of maritime energy infrastructure. The term blue justice was first introduced in 2018 by Moenieba Isaacs on the Third World Small-Scale Fisheries Congress in Thailand (Blythe et al., 2023, p. 2). From then on, academic engagement

with the concept has increased rapidly. Blue justice refers to the "recognition, meaningful involvement, and fair treatment of all coastal people with respect to how ocean and coastal resources are accessed, used, managed and enjoyed" (Blythe et al., 2023, p. 3). Similar to the concept of energy justice, blue justice has its roots in the environmental justice movement, and therefore "recognizes the inherent right of all people and communities to a healthy, productive, and sustainable marine environment" (Blythe et al., 2023, p. 3). In the beginning, the notion of blue justice primarily focused on the inclusion and equitable participation of small-scale fishers in the blue economy, countering rights violations and exploitation (Blythe et al., 2023, p. 2). Although there is a long history of resistance to maritime injustices by coastal communities (Blythe et al., 2023, p. 2), the notion of blue justice only evolved with the emergence of the blue economy approach, which argues that economic growth can be promoted in accordance with environmental protection (Schutter et al., 2021, pp. 1-2, 6). Similarly to the terrestrial "green economy", the blue economy approach supports notions of ecological modernization – a technology- and innovation-driven approach to environmental policy, that relies on marked-based solutions (Schutter et al., 2021, pp. 1-2; Jänicke, 2008, p. 557) and thereby much resembles the aforementioned post-political condition. The blue economy has been interpreted as an expansion of the hegemony of capitalism towards ocean realms, facilitating the accumulation of capital (Schutter et al., 2021, p. 2). The notion of blue justice, therefore, evolved as a counter-hegemony movement to the blue economy (Schutter et al., 2021, p. 6). Moving on from its initial exclusive engagement with small-scale fisheries, blue justice scholarship has proceeded to include other types of injustices that are experienced by marginalized coastal communities (Blythe et al., 2023, p. 3). Like energy injustices, blue injustices, defined by Blythe et al. as the "inequitable exposure of oppressed or marginalized people to coastal and marine harms, as well as their cultural and political exclusion from marine decision-making" (Blythe et al., 2023, p. 3) have been explored along the lines of distributional, recognition-based, and participatory injustice. Blue injustices have been connected to a variety of concerns, including the degradation of marine and coastal environments, that can adversely affect fundamental ecological processes, or impede flood protection and hazard mitigation (Bennett et al., 2021, p. 5). In addition to that, blue injustices can undermine coastal communities' livelihoods, which often rely on maritime ecosystems for food or water supply, and lead to the loss of heritage or recreational values. The latter particularly affects coastal communities, for whom the sea often holds a deep cultural meaning due to historical interrelations with the sea (Bennett et al., 2021, pp. 6-7). Conflicts between economic development and other sectors on which coastal communities rely, such as tourism, have also

been related to blue injustices, as they are argued to constitute a loss of marine resources. What is more, the notion of blue injustice also touches on the distribution of economic benefits connected to ocean-based development. Often, the blue economy does not benefit local communities, and few jobs are held by local residents. Lastly, as with the paradigm of energy injustice, exclusion from decision-making constitutes a form of blue injustice as well (Bennett et al., 2021, pp. 9-10). Top-down approaches to ocean governance are likely to impede local participation by keeping public communication and transparency short, withholding of information and producing staged, tokenistic participation processes that only serve to justify already preordained decisions. By hindering public participation, these mechanisms foster dissatisfaction with decision-making processes and social impacts that are related to ocean development.

Blue justice scholarship has also looked at grassroots movements that reject blue injustices, referred to as "blue resistance". More precisely, blue resistance can be defined as "processes of collective action that are sustained across space and time, that reflect grievances around perceived injustice, and that constitute a pursuit of alternative agendas by coastal people" (Blythe et al., 2023, p. 3). Such resistance can take on various forms, such as protests, legislative, and institutional tools, as well as everyday practices (Blythe et al., 2023, p. 7). In a similar vein, also energy justice scholarship has recently expanded its focus towards bottom-up-perspectives to energy injustices, acknowledging for the agency of social movements (Antadze & Gujaraidze, 2021, p. 1).

2.6 International Political Economy

As already indicated with the notion of embodied energy injustices, energy injustices occur in a disproportionate way along the whole energy cycle (Healy et al., 2019, p. 221). Therefore, it is crucial to identify the larger international political economy in which energy infrastructures are embedded.

Fossil fuel extractivism can often be contextualized within a history of imperialism (Healy et al., 2019, p. 222). With the expansion of neoliberalism and the subsequent intensification of globalization, energy injustices have augmented, facilitating "the geographical expansion of capital from the global north to the global south" (Healy et al., 2019, p. 222). The term "neocolonialism" is often used to describe such continued subjugation of regions in the Global South, supported by debt traps, neoliberal free trade, and Structural Adjustment Programs (Hamouchene, 2023, p. 31). Additionally, also US fracking practices have been theorized through a lens of neocolonial resource extraction (Bratman et al., 2022, pp. 473-474).

According to Bratman et al. (2022), agglomerations of fracking industries often engage in the subjugation of indigenous communities through destruction of land, loss of property and erasure of heritage (pp. 473-474).

In recent years, hydrogen has also received increasing attention in academia. On the one hand, current hydrogen efforts have been criticized for offering oil and gas corporations a loophole for continuing fossil extraction (Hamouchene, 2023, p. 39). Besides, hydrogen production has been analyzed through the lens of green colonialism (Tunn et al., 2025, p. 1) – a term that refers to the expansion of colonial relations of dispossession, despoliation, and dehumanization to renewable energies (Hamouchene, 2023, p. 30). Their socio-environmental costs, therefore, are placed onto peripheral regions and communities whose demand for energy is disdained to the benefit of another region (Hamouchene, 2023, p. 30). For instance, Tunn et al. (2025) employ a framework of green colonialism to German hydrogen imports from Namibia, identifying neocolonial tendencies along the dimensions of externalization, enactment, expansion, exclusion, and empowerment. Not only are social, ecological, and economic costs, benefits, and risks unevenly distributed between the two countries (Tunn et al., 2025, pp. 5-6, 9). The authors also suggest that German efforts to pioneer green hydrogen imports indicate expansionist tendencies on an economic, financial, and political level, indicating direct continuities of German imperialist efforts altogether. Similarly, Hamouche (2023) argues that the European hydrogen transition is carried by countries of the Global South on the expense of their own energy access and transition, enabling the EU to strengthen its position in the global green high-tech economy (p. 40). Therefore, hydrogen transportation chains demonstrate how energy policy must follow a socio-energy systems approach as advocated by Miller et al. (2015). Only when energy policy accounts for the interrelations between energy across the whole energy cycle and respective socio-political contexts and dynamics, energy injustices can be mitigated or avoided (Miller et al., 2015, p. 31).

3 Methodology

3.1 Research Design

The research design of this thesis was based on a prior version of a research proposal developed in a seminar in orientation to *The ethnographer's way. A handbook for multidimensional research design* by Kristin Peterson and Valerie Olson (2024). Following Peterson and Olson (2024, p. 195), I drafted a main scoping question that captures the overall framework of my research, which was: "What do coastal residents' perspectives on maritime energy transport infrastructures reveal about the making of energy seascapes?".

The objective of this research project was to develop a profound understanding of how infrastructures for maritime energy imports are locally interpreted and made sense of, drawing on the Wadden Sea as a case study. Therefore, ethnographic fieldwork was used as a research method. Brewer (2000) defines ethnography as "the study of people in naturally occurring settings or 'fields' by means of methods which capture their social meanings and ordinary activities, involving the researcher participating directly in the setting, if not also the activities, in order to collect data in a systematic manner but without meaning being imposed on them externally" (p. 10). In other words, ethnography requires researchers to engage in the field from the inside, in order to study how people act in real-life situations and interpret the world around them (Brewer, 2000, p. 18).

In line with Peterson and Olson's approach (2024), initially five data-gathering questions were defined to answer the main scoping question (Table 1). Respectively, each of the data-gathering questions focused on the topics of 1. "Politics and Political Participation", 2. "Energy and Energy Transition", 3. "Labor and Socioeconomic Restructuring", 4. "Environmental and Ecological Change", and 5. "Meaning Making and Spatial Imaginary".

Table 1 Data-Gathering Questions

Topic	**Data-Gathering Question**
Politics and Political Participation	What political attitudes and conflicts arose around the construction of the LNG terminals in the Wadden Sea?
Energy and Energy Transition	How do the terminals in the Wadden Sea fit into the broader history of energy in the coastal region of Frisia and how does that relate to Germany's general goal of energy transition towards renewable energy because of climate change?

Labor and Socioeconomic Restructuring	What role do broader socioeconomic trends in the region such as rural decline or high levels of unemployment play for local residents?
Environmental and Ecological Change	What impact do the terminals have on the greater ecosystem of the Wadden Sea and human relationships with other species?
Meaning Making and Spatial Imaginary	How do locals spatially imagine the Wadden Sea and its coastal region and how does the construction of the terminals contradict or affirm these imaginaries?

Oriented to these data-gathering questions as well as to Lareau's (2021) *Listening to People. A Practical Guide to Interviewing, Participant Observation, Data Analysis, and Writing It All Up*, I then developed interview guidelines, which were meant to provide an overall framework for in-depth interviews. The planned construction of an energy park and imports of hydrogen were revealed to be relevant only during field research. Therefore, interview guidelines initially only targeted the two LNG-terminals.

Before starting field work, interlocutors were roughly divided into four groups: environmentalists, local residents, employees working in or adjacent to the energy sector, as well as local politicians. For each group of interlocutors, interview guidelines were slightly adapted. Sometimes, interlocutors belonged to more than one group, for instance, interlocutors who were both in the environmentalist movement and lived close to the terminals. In that case, questions of both interview guidelines were combined. For interlocutors that I met in the field at a later point, who did not belong to any of these four groups, guidelines that fit best were used as an overall orientation. In line with the ethnographic approach, where "data collection is flexible and unstructured" (Brewer, 2000, p. 18), guidelines provided only a framework for interviews and were not strictly adhered to. Therefore, follow up questions were posed in reaction to information given by interlocutors, using the interlocutors' wordings as often as possible. In the following, I will discuss the questions that constituted the interview guidelines. The specific interview guidelines used for each group can be found in Appendix A.

Following a general introduction, questions were grouped into five clusters. For residents, questions that circled around *Politics and Political Participation* included a question about how well they felt informed about the construction of the LNG-terminals. If applicable, questions about their participation at information events were asked. Environmentalists were generally

asked about their own activist background, and how they found out about the terminals for the first time. In addition to that, environmentalists were asked why they became active against the terminals, if they could narrate some explicit experiences, and what reactions to their engagement they notice. Employees in the energy sector were asked about encounters with local residents as well as what kind of opposition – if any – they face with regards to their work. Politicians were asked to elaborate a little on their political background and their role with regards to terminal construction. Moreover, they were asked what conflicts they perceive to exist around the terminals, and if there were any conflicts within their own party. Initially, all interlocutors I interviewed were also asked about their perceptions of media coverage around the terminals. However, that question was dropped at a certain point since it did not really generate data relevant to the data-gathering questions.

Targeting the topics of *Energy and Energy Transition*, all interviewees were asked about their thoughts on the LNG terminals, also considering energy transition. Later on, when I realized that the energy park and concomitant hydrogen imports were important as well, I added a question about the planned transition to hydrogen in the region. Local residents were furthermore asked about how they experience the LNG terminals in their everyday life.

In the *Labor and Socioeconomic Restructuring* cluster, local residents, as an icebreaker, were asked about their everyday life in the region. Similarly, employees in the energy sector were asked about their everyday working life. What is more, politicians were at a later point asked to identify regional problems. In addition to that, all interviewees were asked about expected changes in the region that could be linked to the LNG-terminals and the regional general developments regarding the energy sector.

Lastly, within the *Meaning Making and Spatial Imaginary* cluster, all interviewees were asked about their associations with the coast and the Wadden Sea.

After asking whether the interlocutors would like to add something else that they hadn't said so far, the interviews ended with a couple of *demographic questions* that were asked in order to better contextualize the interlocutors' responses. Collected data included gender, year of birth, citizenship, country of origin, parents' country of origin, marital status, education, and average monthly household income, as well as number of persons in their household. Information on the average monthly household income was gathered using an income card (Appendix A), so that interlocutors would be more comfortable disclosing that information.

3.2 Field work

In total, 22 semi-structured, anonymous interviews – of which 20 were recorded – were conducted from the end of September 2025 until the beginning of November 2025. In order to identify interlocutors who were either politically involved, lived close-by the shore, were connected to the industrial energy sector, or otherwise affected by energy infrastructure, purposive sampling was applied. Interviewees were also identified during participant observations and via snowball sampling. Gaining field access was facilitated by my personal connection to the field area due to which I already possessed prior local knowledge of the region. Growing up in a nearby small town and having had my own experiences with political activism enabled me to study this case from an insider perspective. However, my own positionality of a white woman from a German, middle-class background is reflected in a sample bias, as migrant and working-class perspectives were underrepresented among my interlocutors. Interviews were conducted with residents who lived close-by to the area who were both politically active or inactive, environmentalists from local activist groups, employees and professionals from the energy- and port industry, and local politicians. In addition to that, an employee at a regional institution for economic development, a member of a pressure group for maritime industrial interests, a farmer, a person working in a gastronomic establishment on the beach, and a longtime camper were interviewed. The shortest interview lasted 13 minutes, the longest took 1 hour and 24 minutes. The average length of interview accounted for 43 minutes. Interviews were either held in person or via phone or video call, depending on the interlocutor's preference. All interviews were conducted in German. Quotations mentioned in the following have been translated to English. Their original language versions can be found in Appendix B. Moreover, pseudonyms were used in place of the interlocutors' names.

In addition to the interviews, several participant observations were conducted, during which extensive field notes were taken. In the scope of my research, I attended a lecture at a festival, visited a local museum, participated at a climate protest, and attended an event at the local university of applied sciences. Furthermore, I participated in environmentalist meetings of two different environmentalist groups, attended information events carried out by the industrial energy sector, and took part in several guided tours. Field work also included participation at a festival for migratory birds, a visit to a hydrogen lab organized by environmentalists, as well as participation in an online information event organized by the local environmentalist movement. Participant observations were conducted from June 2025 until January 2026, though most observations happened in the months of September and October 2025.

3.3 Data Analysis

The recorded interviews were transcribed using noScribe, a local computer software that was created for academic use. Through inductive coding using MAXQDA, both interviews and participant observations were then systematically analyzed. Data analysis was carried out following Udo Kuckartz and Stefan Rädiker's (2020) directory *Fokussierte Interviewanalyse mit MAXQDA. Schritt für Schritt.* Though initially considered, document analysis was not carried out systematically, so as not to go beyond the temporal scope of this thesis.

In line with Kuckartz and Rädiker (2020, p. XX), all interviews were first explored through intensive reading, memo writing and the drafting of short summaries. In a second step, a coding frame was developed to first carry out basic coding. Categories were developed in orientation to the interview guidelines, considering insights from data exploration. In the process, it was made sure that quality standards of a coding frame, as defined by Kuckartz and Rädiker (2020), were taken into account, so that codes would be exhaustive, selective, well-formulated, comprehensible, and related to the research question (p. 34). It was also made sure that super- and subcodes were not mixed up, and that all taken together, codes would form a coherent framework. In the end, the six categories that made up the coding frame for basic coding were "Politics and Political Participation", "Legal Framework", "Energy Transition and Socioeconomic Restructuring", "Relations to the Region and its More-than-Human World", and "Connection to the Global". Each basic code was attributed to a data-analysis question, that, taken together, were aimed at illuminating the social meaning of infrastructures for energy imports on the Wadden Sea coast (Table 2).

Table 2 Data-Analysis Questions

Basic Code	**Data-Analysis Question**
Politics and Political Participation	What political attitudes and conflicts arose around the construction of the LNG terminal in the Wadden Sea?
Legal Framework	What legal frameworks shape how energy projects unfold and are experienced?
Energy Transition and Socioeconomic Restructuring	How do interlocutors think about regional energy projects and general economic developments, especially considering Germany's general goal of energy transition, and how is that related to the broader industrial history of the region?

Relations to the Region and its More-than-Human World	How do residents relate to the non-human, and more-than-human world of the Wadden Sea and its coastal region, and how do regional energy projects impact these bonds?
Connection to the Global	How are maritime energy projects connecting local history to the global?

In addition to that, a code for quotable passages as well as a code for other passages, that were not relevant to the research question but still interesting, were added. A more detailed explanation of the basic coding frame can be found in Appendix C. After basic coding was applied to both interviews and participant observations, I proceeded with fine coding. The coding frame for fine coding was developed inductively from data under consideration of the data-analysis questions, which is further elaborated in Appendix C.

In line with Kuckartz and Rädiker (2020), data analysis aimed at creating a systematic presentation of aspects, dimensions, and positions that would be relevant to develop a profound understanding of how infrastructures for maritime energy imports are locally interpreted and made sense of (p. 82). Findings are presented in the following. Further interpretation and connection to academic literature is undertaken in the discussion.

4 Key Findings

4.1 Local Perspectives on Changes of the Energy Seascape of the Wadden Sea

4.1.1 Supply Security and Imagining LNG on a Temporal Scale

The air already has a late October chill when I am meeting some employees from one of the companies engaged in LNG imports. At the time, I was refused the access to our family car, which is why I took the bus to the scheduled interview – something that I've done around here for the first time in my life only when I started field research. What would usually take about 20 minutes by car, is therefore extended to a bus ride of an hour, that ends at the touristic beach, and then another 25-minute walk. My arrival is complicated even more by some construction work, which I end up having to sneak through. When I finally arrive at the industrial plant, I am immediately welcomed by an alarm going off from the direction of the shore – something I am later assured is only related to the testing of new fuels and presents no serious issue. For the moment, I stand before a barbed wired fence, and I am a little clueless about how to proceed, as I can't find any bell to ring. I still vividly remember the first time I tried to visit, which was a couple of weeks ago. Back then, I was without an appointment and hence rejected very quickly. Security staff at the time vigorously made me reassure, that I was not a climate activist trying to sneak into the plant. Today, however, I am luckier than the first time. Finally, a person from security sees me and, after thoroughly questioning the motifs for my visit, opens the gate for me.

When I go inside one of the white containers that lie behind the fence, the employees are still on their lunch break. I have coffee with them, and we do some informal, friendly chatting. I notice that although a little less than ten people are working on the team, there is only one woman among them. After a while, one of the employees accompanies me to a separate conference room and starts presenting a power point that is titled "Versorgungssicherheit für Deutschland", which translates to "Supply Security for Germany". Generally, I found that among all interlocutors I encountered in the field, by far the most salient argument regarding LNG imports revolved around the necessity to ensure security of energy supplies, referring to the physical availability of energy, after deliveries of Russian gas had ceased. Often, interlocutors related LNG imports to their own private gas consumption, referring to their need for heating in the winter. For that matter, the import of LNG was in many cases perceived as without an alternative. Silas, a 45-year old man working in a gastronomic establishment, for instance, told me about conversations he regularly has with tourists: "[...] when people started complaining in some way, I always, I always said that they also want to be warm in the winter,

so we just have to do it this way now." (Silas, interview, October 2025, author's translation). In a similar vein, Manuel, a retiree and local politician from the liberal party, explained: "[...] we don't want to have cold feet. And industry must also keep running. For that, a lot of gas is needed at reasonable, competitive prices. Otherwise, nothing will work. And yes, that's somehow necessary." (Manuel, interview, October 2025, author's translation).

Security of energy supplies was often connected to diversification of energy sources. Many people, with whom I spoke, condemned Germany's dependency on Russian pipeline gas, seeing LNG terminals as a way to diversify energy imports. On the other hand, interlocutors who were more critical of LNG-imports worried about the creation of new geopolitical dependencies, especially in relation to the US.

Generally, interlocutors, especially those that criticized the LNG ships, frequently pointed out that the terminals do not run at full capacity or only make up a small amount of gas used in Germany. While most of my interlocutors initially recognized a need for liquid gas imports in order to secure gas supplies, by the time the second terminal was built, many of them strongly questioned the necessity for two import terminals on the Wadden Sea coast and criticized the extension of LNG infrastructure in Germany for creating overcapacities.

Some people I talked to felt like their fear of gas shortages had been utilized to legitimize a fast construction of the LNG-terminals. When I had coffee with Andrea, a nearby resident in her 50s, who I already knew before starting my fieldwork, she told me:

> [...] I think they played on our fears a little bit. I can somewhat remember that it was like, well, we must do this now, because otherwise [...] we won't have enough gas here at some point to cover everything... It's not just... Heating is what concerns you personally, but actually it is also hospitals. Or other things that must keep running. That there wouldn't enough energy for that anymore, right? (Andrea, interview, October 2025, author's translation)

In a similar vein, also Johanna, a local resident and environmentalist in her late 60s, who I met at the migratory birds festival, stated:

> […] it was just extremely shocking that it was pushed through so quickly, with this thing of, like, 'your living rooms will be cold if we don't do it, and we have to save Germany and get these things off the ground in record speed'. (Johanna, interview, October 2025, author's translation)

The accelerated speed of construction, that sat uneasily with many residents, was made possible by the LNG Acceleration Act (LNGG). The LNGG enabled the suspension of legal regulations, that would normally be imposed by the Environmental Assessment Act (Kment & Fimpel,

2022, p. 601). Therefore, the construction of floating gas terminals and connected infrastructure measures could be executed without the assessment of environmental impacts and under restriction of public participation. In the law, this is justified with the need to secure gas supplies due to gas shortages. Besides, LNG imports to the Wadden Sea coast have been facilitated by the fact that the construction of LNG terminals had repeatedly been discussed in the region since the 1970s, long before the Russian invasion of Ukraine (Bukold, 2022, p. 23). However, these plans had been dismissed in the past for financial reasons, since Russian pipeline gas was much cheaper. Shortly before the Russian invasion, plans to establish LNG imports on the Wadden Sea coast had again resurfaced– as one of the economic engineers explains to me in the conference room in the white container building –, which allowed the company that is now responsible for the first terminal to revisit and implement their plans in an extraordinarily short period of time.

Especially among environmentalists, the LNG Acceleration Act was outspokenly criticized for it enables the omission of environmental assessment. In addition to that, many people contrasted the speed of terminal construction to their own personal encounters with German bureaucracy, which in their experience tends to work rather slowly. Hence, the accelerated speed of construction yielded suspicion among many interlocutors. People in favor of the terminals, on the other hand, were often positive or even proud about the velocity with which the German state reacted to the gas crisis. In that context, Federal Chancellor Olaf Scholz (2023) coined the term "Deutschlandgeschwindigkeit" (p. 3), that translates to "Germany speed" and has widely been picked up in public debates.

Talking to locals, I found that many residents initially believed that the terminals would only stay on the Wadden Sea coast for a period of two years. Under these conditions, they were willing to accept a short-term operation of terminals due to the gas shortages. However, contracted charter periods of the Excelsior and Höegh Esperanza amount to respectively five and ten years (Deutscher Bundestag, 2023, p. 11) –, which could potentially be extended up to the year of 2043 (Bundesverwaltungsgericht, 2023). Some interlocutors, therefore, described feeling shocked or lied to when they later found out about the longer charter periods. Ursula, a retired local resident who participates in the Netzwerk Singers choir, described to me her experiences with the LNG terminals:

> [...] but then I as well said, 'Okay, that's for two years then,' I mean, we weren't asked, we didn't vote on it. So, I said: 'Maybe we'll just have to put up with it as a temporary solution, and we'll have this silly ship lying here on our doorstep for two years, and then something better will come along,

> or so', right? But this 'something better' has only gotten worse, and the ship wasn't chartered for 20 years [sic], it was chartered for 20 years [sic]. (Ursula, interview, October 2025, author's translation)

In addition, views also drastically differed on the terminals' role for energy transition. Within industrial circles, the import terminals were sometimes referred to as "bridge technology", a term broadly used in the public debate. From that perspective, gas imports provide supply security until low carbon technologies are established. This view was also shared by Oliver, a highly skilled employee in the energy sector. Oliver and I met right at the beginning of my field research, when I visited an information stand about LNG, that was set up in the local mall for a couple of days. The stand was composed of two high-tech screens, that displayed some general information about the LNG terminals, and a model of an LNG ship, that roughly explained the several components of an FSRU. Besides, there was a small table for children with a coloring book and several colored pencils. The stand also offered some key chains and tote bags, that the stand personnel insisted for me to take home in the end. When Oliver and I sat down in one of the mall's small bakeries, he argued that the terminals could provide a foundation for a successful energy transition to renewables. According to him, "[...] we need to ensure supply security now and today. To achieve this, the floating terminals are installed at relatively short notice, in transition. That provides sufficient tranquility or a good basis for a transformation to take place" (Oliver, interview, September 2025, author's translation).

Interlocutors from the environmentalist movement, on the other hand, condemned the "bridge technology" narrative as fossil propaganda. Rather, LNG imports were interpreted as a cementation of fossil structures, that would impede a transition towards renewable energies – representing "just the last uproar or yet another uproar of the fossil fuel industry" (Ursula, interview, October 2025, author's translation). Along with that, environmentalists frequently pointed out the regular occurrence of methane leaks. In some of the public discussions I visited, methane leakage was even visually underlined with some undercover footage from an infrared camera. For that reason, Deike, an environmentalist in her 40s, who I met in a meeting of one of the local environmentalist groups, stressed:

> Clean gas is a dirty lie. I can break it down like that for now. There's a lot of window dressing going on. It's no more environmentally friendly than other fuels. Nor is it a transitional technology. At the moment, it's cementing fossil structures. (Deike, interview, November 2025, author's translation)

Additionally, in many cases, the economic costs of chartering the ships were brought up by interlocutors, criticizing them as too expensive. Many people I spoke to suggested the money

should have rather been invested in renewable energies, indicating that LNG imports slow down a transition to renewables.

4.1.2 Regional Transition Towards an Energy Hub

While LNG imports constituted the origin point of my research, I soon realized that current developments in the region could not be sufficiently grasped without also inquiring about the planned import of hydrogen. Therefore, in October, I make my way to a local showroom, that has been established by one of the companies seeking to introduce hydrogen imports to the region. Inside, I am welcomed by a very friendly man who offers some beverages to me. Except for him, I am the only person here, and admittedly, the showroom is not visited by many people. When I express my interest in hydrogen, he happily explains to me the contemporary hydrogen endeavors in the region.

Currently, the construction of a port-oriented energy park is being planned on the Wadden Sea coast (Hanrieder, 2025, p. 13). Over time, the planned park is supposed to be centered around green energy carriers such as hydrogen. In that context, different models for hydrogen imports are being discussed, that all inherently rely on the transportation of hydrogen attached to other carrier molecules. Hydrogen in its elemental form cannot be easily transported since either high pressure or extremely low temperatures need to be maintained (Yang et al., 2023, p. 210). Hence, the first model consists of the import of hydrogen derivates in the form of ammonia, for which the construction of a commercial ammonia-cracking-plant is being planned (Uniper & Thyssenkrupp, 2025, p. 1). The other model works with the establishment of a “Green Cycle” (Tree Energy Solutions, n.d.), in which first, renewable energy is used to produce green hydrogen by splitting water into hydrogen and oxygen – a process that is called electrolysis. The hydrogen molecule is then combined with CO2 to create e-NG, also known as synthetic methane. E-NG has the advantage that, on a molecular level, it is identical to natural gas. Because of that, e-NG can be transported and used with the same infrastructure as fossil gas. E-NG can also be converted back to green hydrogen. In the process, carbon capture facilities are meant to collect the released CO2, which will then be returned to the Green Cycle.

Proponents of hydrogen imports emphasized to me how hydrogen could be used for energy storage, which would once again contribute to security of energy supplies in the future. In addition to that, the energy park is meant to make a significant contribution to energy transition. As the general argument goes, this would enable the region to take up a pioneering role on the path towards climate neutrality, along with contributing to regional upswing (Hanrieder, 2025, p. 13). Hydrogen is presented as a “Leuchtturmprojekt” (Hanrieder, 2025, p. 13) – a „lighthouse

project“ –, that is meant to represent a model for a successful energy transition and decarbonization of the economy. Especially employees in the energy sector, like Oliver, attributed to hydrogen the position of an energy carrier of the future, that would be necessary for a decarbonization of the economy:

> [...] at our sites in Wilhelmshaven, Brunsbüttel, and in the future also in Stade, there are also projects for land-based terminals. They all have different strategies but are always on the path to climate-neutral gas. Whether that's hydrogen, whether that's derivatives such as ammonia, for example, or whether that's synthetic or bio-LNG. All of them start out with classic LNG imports and will then gradually convert their terminals. So, regarding the import of renewable gases, the land-based terminals will take up the most important roles of transformation. (Oliver, interview, September 2025, author's translation)

Interlocutors who did not engage in political activism in many cases did not know about the planned development of hydrogen infrastructure in the region. When first hearing about planned hydrogen imports, many people reacted rather positively, indicating that the imaginary of hydrogen as an energy carrier of the future resonates in many people. Hydrogen was perceived by many interlocutors, even those who were against the creation of an energy hub, as at least somewhat part of energy transition. Luna, a climate activist in their 20s, told me that "[h]ydrogen can be part of the solution and must be considered accordingly, especially when it comes to energy transition in heating, and how we can move industries away from gas, like natural gas" (Luna, interview, September 2025, author's translation).

However, the optimism that many industrial actors held towards the energy park was not shared by all interlocutors. While I found that the construction of an energy park on the coast was most frequently criticized for it is planned in a Natura 2000 bird protection site (Hanrieder, 2025, p. 13) – which I will come back to at a later point – the energy park's role for a transition towards renewables is also strongly debated. Especially within the environmentalist movement, many people pointed out that the energy park most notably envisages the construction of an onshore LNG terminal (Planungsgruppe Grün, 2025, p. 277). The energy park, from that perspective, is part of a fossil lock-in of an industry that should, in their view, belong to the past.

In addition to that, interlocutors from many various backgrounds were also very skeptical about hydrogen and commented on the low efficiency and the high economic costs connected to it – something which renders the usage of hydrogen on a larger scale an unrealistic scenario. In some cases, there were also concerns about the security of hydrogen use due to its chemical properties. Generally, many people I spoke to doubted that hydrogen would play a significant

role in the future. Silas, for instance, told me: "[…] at the moment, I think this hydrogen thing is still a bit too much of a pipe dream." (Silas, October 2025, interview, author's translation). In a similar vein, Volker, a nearby resident and local politician, proclaimed: „I always hear the term 'bridge technology' and so on, right? And then they want to import hydrogen, green hydrogen, which doesn't even exist yet. And I believe even less that it will ever come [...]" (Volker, October 2025, interview, author's translation).

Especially people from the environmentalist movement were very critical about the technological feasibility of the transition from current gas infrastructure to hydrogen. Alexandra, an environmentalist in her 50s, who I coincidentally met at a festival in June, told me:

> They always say that the pipelines that are being built today are hydrogen-ready, and that's a lie. Because sleeves and seals have to be converted for hydrogen, and they first want to proportionally feed hydrogen into the methane network for some time, so we will be paying much more for heating in the winter. (Alexandra, September 2025, interview, author's translation)

In many cases, the centralization of energy was regarded with pronounced skepticism. Several interlocutors voiced strong concerns about potential terrorist attacks on regional energy infrastructure sites. This fear was often supported by the increasing number of drone flights that lately have been spotted in the region, circling around important points of energy infrastructure. Deike, who I met in a meeting of one of the local environmentalist groups, directly connected a centralization of energy to an increased risk for internal security:

> It is a matter of internal security and security politics if an energy hub is actually created here. Because then we are no longer decentralized. In other words, it is one point that needs to be attacked, and already, as in other places, the lights may really go out. We are making ourselves dependent on one major point, which, as has been shown in Ukraine, is not a good idea at all. Like, every nuclear power plant [...] is an easy target and a vulnerable target. (Deike, interview, October 2025, author's translation)

When asked about what specific actors might be interested in attacking energy infrastructure, most interlocutors, like Andrea, who is a nearby resident to the LNG terminals, replied that their concerns were particularly directed at Russia:

> I don't want to put it like that, like something along the lines of Putin or so, but I could well imagine, given the current situation, that someone is bound to escalate things, right? They're all relatively overstrung at the moment, they're coming up with ideas, and I think that right now only one spark

> just has to somehow come about and we'll have a huge catastrophe here. And then, in Germany, you will somehow be caught up in the middle of it, because you're a NATO partner. So yes, I am a little concerned about that. (Andrea, interview, October 2025, author's translation)

Suspicion of Russian influences, at some point, even interfered with my field research, which surfaced during my visit at the migratory birds festival in October. Sauntering inside the guest house, where several information and exhibition stands had been put up, I run into Miriam, who is an active member of one of the local environmentalist groups. A couple of weeks ago, at the start of my field research, I had sent an email to the group, asking if they'd like to do an interview with me. However, I had never received an answer from them. When I introduce myself to Miriam, she laughs and tells me how during one of their campaigns, they had been approached by some journalists from a Russian state-controlled television network, asking for detailed information about the two LNG terminals. In the aftermath of that experience, the group became more suspicious towards interview requests and decided not to answer my message.

Besides the centralization of energy, many interlocutors connected the creation of an energy hub to a larger industrialization of the region. "Industrie folgt Energie", which translates to "industry follows energy", was a phrase that interlocutors often used in that context. Karl-Heinz, who works at a regional institution for economic development, expected the energy hub and following industrialization to bring regional upswing, especially considering current socioeconomic struggles in the region:

> And anyways, we hope that we won't be at the end of Germany's industrialization anymore, at least in economic terms, right? As you may know, we have 401 districts and urban municipalities, and in many respects, Wilhelmshaven is number 401, right? (Karl-Heinz, interview, October 2025, author's translation)

Generally, job creation was named by many interlocutors as a positive effect that the creation of an energy hub in the region likely could have. I found that the hope of labor opportunities, if not immediate then at least in projections of the future, resonated with many people, even those who did not work industrial jobs.

On the other hand, many interlocutors strongly opposed further industrialization of the region. I frequently found that, especially among environmentalists, regional developments were feared to create a second Ruhrpott – which is a heavily industrialized region in Germany with a long history of coal exploitation. Deike, who has some relatives in the Ruhr region, told me:

> Like, it's a transformation of the entire environment, of my space of well-being, that's coming, because it doesn't just end with the LNG terminals, but there are somewhat 14 or 15 projects in the entire region that will then form a strip that for me looks similar to the images I know from North Rhine-Westphalia. (Deike, interview, October 2025, author's translation)

Often referring to current experiences with LNG imports, opponents of current developments voiced severe doubts about benefits for local businesses or the creation of accessible and well-paid labor opportunities. Rather, economic benefits were mainly attributed to external actors such as international corporations:

> And we ourselves, so to speak, don't benefit from it at all. And if I ever bring up the subject with other people, it's always about jobs. Nobody gets a job out of this. The ship is manned by some poor Filipinos who are at times allowed to go home for two weeks every six [months]. The pipes were mainly laid by De Römer from the Netherlands. There were some local transport companies that either brought in or took away silt, and a few supply vehicles. But that's not exactly the great promise that we'll get well-paid jobs in an economically underdeveloped region, is it? (Ursula, interview, October 2025, author's translation)

As indicated by Ursula, the ships are crewed with foreign workers responsible for operation and maintenance works. While I was doing fieldwork, labor migration connected to the FSRUs was only seldomly brought up and even when mentioned, interlocutors did not know much about the lived realities of crew members. While I did not manage to speak to any crew members directly, two people told me about their encounters with them. Additionally, the hiring of foreign workers was confirmed in conversations I had with employees from the energy sector. Both FSRUs are only chartered, which means that the companies responsible for operational and technical management of the import terminals are not involved in onboard operation. Hence, the FSRUs are sailing under the Norwegian and Belgian flag so that, respectively, Norwegian and Belgian laws apply onboard. Interlocutors told me that the ships are crewed with approximately something between 30 to 38 people with different crew levels who temporarily live on the ships. Higher crew level workers on the FSRUs are often from Croatia, for lower crew level jobs mostly Filipino seafarers are employed. Interlocutors reported that labor performed by the latter include cooking, painting, cleaning, and "jelly fishing", which refers to the removal of impinged jellyfish from the intake screens of the FSRU. Shifts officially amount to eight hours a day and crew members have access to bikes through which they sometimes visit the beach (DET, 2024b, p. 5).

4.1.3 Conflicts with Other Sectors

Time and again, interlocutors also mentioned how industrial settlements influence other economic sectors in the region. The touristic sector was often brought up as one example. However, opinions on whether regional energy developments harm or benefit the touristic industry were largely divided. Especially interlocutors from the energy sector frequently emphasized the peaceful coexistence of energy industry and tourism. Silas, who works in a gastronomic business on the beach, confirmed that view, as he did not observe any negative changes since the terminals' construction:

> [...] you can practically [...] see that when there are few guests [in my bar], there are generally few guests in Wangerland as well. [...] And if that was directly related to some structure that was put here, [...] then, well, I would say it's because of the ship. But basically, I can say that nothing has changed. So, the ship has no negative impacts [...] on tourism. That's my impression. (Silas, interview, October 2025, author's translation)

Rather, he suggested that LNG terminals might have a positive impact on tourism, since many tourists expect and enjoy seeing ships on a beach:

> And when the ship arrived, I thought to myself, and I believe I can somewhat speak for the tourists as well, that it's actually rather positive when you're on the beach and you see ships, because it's somehow part of the experience, just looking at the ship itself. (Silas, interview, October 2025, author's translation)

On the other hand, many people I spoke to worried about the implications of larger developments in the region for the touristic sector. For Deike, the creation of an energy hub would imply

> […] a complete transformation of landscape, that hasn't been considered yet. I was there at a meeting. There, they told us: 'Yes, then the gastronomic industry can start preparing and maybe use industrial romanticism as an advertising brand'. Yes, I'm worried to death, because I'd rather like to have my peace and quiet here. The wide landscape, sheep on the dike. And then they tell us, 'Think about industrial romanticism.' Like, who doesn't know the much sought-after vacation spots in North Rhine-Westphalia, touted for their industrial romanticism? (Deike, interview, October 2025, author's translation)

Conflicts also pervade into the Frisian hinterlands, where the agricultural sector is affected by extension of gas infrastructure at multiple levels. On the one hand, pipeline construction often goes through agricultural land and can influence soil fertility (Minea et al., 2025, p. 646). In

addition to that, construction work can destroy the soil structure, especially when soil layers get mixed up, which is what interlocutors have reported to me has happened in the past.

What is more, the storage of imported natural gas and hydrogen poses a problem to many farmers as well. Since the 70s, salt caverns have been used in East Frisia to store fossil fuels (Eickemeier & Schäfers, 2016, p. 5). Over time, cavern storage causes a reduction of volume in individual caverns due to the properties of salt rock, that is further transferred to the ground surface, leading to the formation of subsidence basins. Salt caverns are often created under agricultural land, so that affected farmers face problems with soil wetness due to the ground surface subsidence. When Renke and I had a phone call – throughout which, as we spoke, he casually worked the field on his tractor – he explained to me:

> [...] let me put it this way, I have some areas that, if I lower them by just 30 or 50 centimeters, I won't be able to farm them anymore. They'll be flooded. Because we live close to water here. We just don't have enough gradient to drain water off the land. Every centimeter counts. And if I fill this all up and end up turning it into a bowl, then the water here won't run off anymore, and I'll have to start pumping. And then I'll be burdened for eternity, in my opinion. (Renke, interview, November 2025, author's translation)

He tells me that the Federal Mining Act (BBergG, §149ff.) defines some conditions under which old rights and treaties are being sustained. Farmers' influence on whether their agricultural land is being used for fuel storage therefore depends on old mining laws, so that farmers with contracts that were concluded under Prussia have more rights than farmers on whose land Oldenburgian mining laws used to apply (Niedersächsisches Ministerium für Wirtschaft, Verkehr und Bauen, 2014):

> [...] the East Frisians own their land right down to the center of the earth, to put it bluntly, and I only own the meter on top of it, and I may still be allowed to extract things like gravel and sand with a permit, but everything else belongs to the state of Lower Saxony. (Renke, interview, November 2025, author's translation)

Lastly, the planned construction of an energy park in a Natura 2000 area indirectly influences the agricultural sector as well, since compensation measures are taking place on agricultural land. Farmers in that case are losing their EU subsidies for those areas. Generally, the planned construction of the energy park has earned substantial criticism for how it will impact the more-than-human world of the local seascape, which I will discuss in the next chapter.

4.2 How Energy Imports Influence Local Relations to the More-Than-Human

4.2.1 Liquid Gas Imports and the Wadden Sea Ecosystem

To explore how contemporary developments in the energy sector relate to the more-than-human world of the Wadden Sea, I want to return to the sunny day in mid-October for a moment, when I visit the migratory birds festival and watch the Netzwerk Singers perform. The Netzwerk Singer choir was formed as an alternative form of protest, that centers on community care, and expressions of gratitude towards the more-than-human world. Following their performance, I find that many songs directly address the environmental impacts LNG imports have on the local ecosystem. In the melody of "The Yellow Submarine", the singers express their concerns about chlorine discharges, light and air pollution, or the impingement of fish.

Doing field research, I generally found that from an environmental perspective, chlorine discharges from the first LNG-ship were criticized most frequently. In order to prevent the growth of biota within the open loop regasification system of the Höegh Esperanza, chlorine is produced through electrolysis from seawater (Mitchell et al., 2021, pp. 73, 75). Discharged seawater from the FSRU still contains residual amounts of chlorine, that when released back could further react to CPO, namely hypobromite ion and hypobromic acid. Although chlorine is only discharged in small concentrations, the long-term release into the sea is still considered to result in chronic toxicity (Mitchell et al., 2021, pp. 78-79). Studies on residual chlorine from LNG import terminals in other countries indicate negative impacts on aquatic life (Li et al., 2023, p. 1; Boudjellaba et al., 2016, p. 398; Franzosini, 2025, p. 1). In addition to that, the sea water used to regasify the LNG has decreased in temperature when released back into the sea (Mitchell et al., 2021, pp. 83-85). Impacts of temperature changes on marine biota and cold-water impacts on chlorine and CPO discharge are not adequately understood. Due to the higher density of discharge plumes, the cooler water released back into the sea is likely to descend to form a "pancake" of discharge (Mitchell et al., 2021, p. 74).

The Crib Point Jetty constitutes an important case, that was cited by many interlocutors I spoke to. Due to its environmental impacts, the Höegh Esperanza – that now lies on the Wadden Sea coast – has been denied permit to operate on the Australian coast (Wynne, 2021; Deutscher Bundestag, 2022, p. 54). Similarly to the Wadden Sea, the Australian Western Port Bay consists of intertidal mudflats that hold significant importance for migratory birds and are protected by Ramsar and UNESCO (Mitchell et al., 2021, p. 13). The most significant argument against permission for the FSRU to run on the Australian coast was the chlorine discharge into sea water (Mitchell et al., 2021, p. 75). Residual chlorine was suspected to severely impact marine

biodiversity and general functions of the Western Port Bay ecosystem, rendering an admission of the project unacceptable. Many residents on the Frisian coast, even in case of general support of liquid gas imports, therefore, criticize the onset of the terminal. Local politician Volker, who has worked as an engineer on the construction of other LNG-terminals before has told me:

> [...] Of course, as an expert, I got involved right away. When I looked at the documents from Australia, I said: 'This can't be true'. Down there, they're rejecting the ship, and here they want to put this thing into operation with limits a hundred times higher than in Australia. I couldn't put up with that. (Volker, interview, October 2025, author's translation)

While monitoring revealed that discharges of the Höegh Esperanza have had no measurable adverse impacts on water quality (Rahlf et al., 2023, p. 36), many of my interlocutors strongly criticized monitoring techniques. Criticism that was voiced included that not enough testing points were monitored, the velocity of flows at the ships was too fast to ensure reliable monitoring, and monitoring was not exercised at the "pancakes" of cooler sea water.

The open loop system is not only criticized for its chlorine discharge but also entrainment and impingement due to the intake of seawater impose risks to marine species (Mitchell et al., 2021, p. 95). Impingement refers to the collision of marine species with the intake screens of water intake structures because of the velocity of water flow (Jager & van Walraven, 2020, p. 19). Mostly it is fish and larger invertebrates that are affected and often killed by impingement. Entrainment on the other hand refers to the intake of marine species after filtration (Jager & van Walraven, 2020, p. 29). Entrained species often suffer various types of damage and stress (Jager & van Walraven, 2020, p. 5). Many environmentalists I talked to, like Alexandra, expressed strong concerns about impingement of local fish and criticized insufficient monitoring and restricted access to data:

> And the squish is scraped off, and then the NLWKN proclaims the biomass is disposed of on land. They don't tell us which fish species, what quantities, what sizes, how many, small ones, nothing is told to us. And if there is just one FFH species in there, a flora-fauna habitat species, such as the lamprey... That's a saltwater-freshwater migratory fish. Actually, there should be this installation, because they are highly endangered. But the fish are not being examined because no environmental impact assessment had to be carried out due to the LNG Acceleration Act, right? (Alexandra, interview, September 2025, author's translation)

The second most often expressed environmental concern – even voiced by respondents who generally supported the import terminals – related to the light emissions of both floating gas terminals. Ecological light pollution can severely impact aquatic and avian species as well as

the general functioning of the Wadden Sea ecosystem, due to sensory and physiological influences as well as impacts on natural and biological rhythms (Haarman, 2022, 41). While the operating companies have already reduced light emissions by a large part (DET, 2024a), many people I spoke to still bemoaned the loss of complete darkness. Johanna, a local resident and environmentalist, told me:

> [...] then, of course, there's the light pollution too, because they're well brightly lit. I don't know if you were there at the beginning when it arrived, that polluter, the big, the first one? It was so brightly lit that you'd think a big city had landed on the pier. It's unbelievable how bright it was, and it was like a big cathedral shining there in the distance. You could see it from everywhere. And I know, when I go out for a ride at night on my boat, I'm not in any way allowed to have any lights on, because that's just very important for animal welfare. And then there's this factory sitting there, shining there, and now it's a little less bright, but that's just, for safety reasons it must be brightly lit. And you can imagine that that's not exactly good for the animals in the sea, or the birds, and also the animals on land. Not to mention the people and their sleep. (Johanna, interview, October 2025, author's translation)

Several people I spoke to also mentioned air pollution connected to the LNG ships, sometimes referring to self-propelled fine dust measurements. While the Höegh Esperanza uses dual fuel engines as combustion engines, small quantities of marine diesel are used for auxiliary firing (Staatliches Gewerbeaufsichtsamt Oldenburg, 2022, pp. 53, 56). According to the State Industrial Agency Oldenburg, emission limits are not exceeded. The same applies to the second LNG-ship, the Excelsior (Staatliches Gewerbeaufsichtsamt Oldenburg, 2024, p. 63).

Sometimes, interlocutors expressed strong concerns about the terminals' influences on porpoises. Firstly, during the construction processes, severe underwater noise was emitted (IBL Umweltplanung & BioConsult, 2022, p. 2; Niedersächsischer Landesbetrieb für Wasserwirtschaft, Küsten- und Naturschutz [NLWKN], 2024, p. 14). Porpoises are very sensitive to underwater noise as they use ultrasound to orient themselves, communicate, and hunt underwater (IBL Umweltplanung & BioConsult, 2022, p. 9). Construction noise can potentially irreversibly damage their hearing system. To minimize adverse effects on porpoises during the construction processes, several measures were taken, so that porpoises could evade construction noises (IBL Umweltplanung & BioConsult, 2022, p. 10; NLWKN, 2024, pp. 22-24).

In addition to that, the Excelsior terminal uses ultrasound to prevent marine biota from growing inside its pipes instead of electrolysis. Ultrasonic antifouling systems may have negative

impacts on marine mammals such as porpoises (Machado Querido et al., 2025, pp. 16-17; Trickey et al., 2022, p. 1), which was also brought up by some of my interlocutors. Proponents of the terminals, like Elias, who works in the industrial and energy sector, often referred to the strict monitoring of environmental impacts:

> The second terminal uses a different cleaning method, the ultrasonic method, which can potentially harm marine mammals, porpoises, because they are of course very sensitive to sound waves. However, there are also procedures in place to virtually warn the animals, giving them an advance signal so that they can flee and be at a safe distance when the pipeline is cleaned using ultrasound. So, both are potential environmental impacts, but they are closely monitored and so far, there have been no complaints from the regulating authorities. (Elias, interview, October 2025, author's translation)

Overall, I found that monitoring techniques and general transparency surrounding the FSRUs constituted a major issue of dispute. Employees from the energy sector overwhelmingly exhibited a strong trust in monitoring institutions, and monitoring results were drawn on to legitimize industrial activities in the Wadden Sea. On the other hand, many interlocutors perceived the terminals as private and closed-off, and criticized the refusal of handing more concrete information to residents. Environmental consequences and insufficient monitoring were sometimes openly attributed to profit-maximizing business models.

4.2.*2* The Energy Park in Voslapper Groden Nord

Again, coming back to the Netzwerk Singers' performance at the migratory birds festival for a moment, not only do I notice that the group directly addresses the two LNG terminals. The choir also has a song called "Dialog mit dem Wesen des Voslapper Grodens" – in English "Dialogue with the More-than-Human Beings on the Voslapper Groden" –, in which they express solidarity with the more-than-human world of Voslapper Groden Nord. The song starts with the singers imitating some bird noises. In the melody of "The Lion Sleeps Tonight", the group proceeds to sing of interspecies reciprocal care, enunciating that not for all the money in the world, they would turn over the local birds to industrial investment.

As already broached at an earlier point, the planned construction of a port-oriented energy park was most frequently criticized for it will be situated in Voslapper Groden Nord – a protected Natura 2000 area on the coast of the Wadden Sea. The Voslapper Groden is a polder, that was reclaimed in the 70s, originally intended for industrial use (Maasland, 2022). Over time, when no industries settled down, several diverse biotopes emerged from the different ground structures and sediment distribution. Today, many of these biotopes are protected by German

nature protection law. More than 50 bird species use the Voslapper Groden as a breeding site. Several of these bird species as well as some plant species that inhabit the Groden are legally protected by the Federal Nature Protection Act. In the wake of the construction and operation of the energy park, a complete devaluation of the EU bird protection site is to be expected (Planungsgruppe Grün, 2025, pp. 273, 299). Furthermore, the creation of the energy park will likely cause considerable damage and disruptions to the living environment of many strictly protected species, such as breeding birds and bats. During field research, I found that many environmentalists, like Ursula, expressed grief and were outraged by the potential loss of the bird protection site, for the Natura 2000 Area is important to many endangered species that would lose their habitat if the project was exercised (Planungsgruppe Grün, 2025, p. 61):

> [...] and then, what really touches me or disappoints me, makes me sad and angry, is that they're now getting the Voslapper Groden for it. For an industry that doesn't even exist in that form yet. Right, if it were at least something technically mature, where you could say it would be something that would reduce our impact on the earth for sure. Then, I would be the last person to say 'no' to it. But there's no evidence of that yet, right? And why do we have to give up a nature reserve? Voslapper Groden is huge. There are other areas that have already been developed for industry, that, as far as I understand, have also been shut down for the time being. Why not use those areas? Why do we take the part where our fellow creatures live, who have their homes there, and who are also on the red list? I mean, [...] how daft can you be to destroy the silverware that we hold for the future? And these are just things [...] that's just inconsiderate right now, right? No matter what kind of technology it is. (Ursula, interview, October 2025, author's translation)

If the construction of the Natura 2000 area takes place, the legal framework demands compensatory measures to be taken (Planungsgruppe Grün, 2025, p. 273). Many people I spoke to argued that no compensation area can substitute the loss of habitat that would be induced by the operation of an energy park. The system of compensating areas is frequently criticized by interlocutors as a tool of deception, that permits the destruction of a nature protection site. Renke, on his tractor, explained to me:

> I generally find the system of compensation areas very difficult. Sure, as a farmer [...] I may be a little biased, but I think the whole compensating areas system is pretty stupid because it's just window dressing, because the area I've nuked will be gone nonetheless. Just because I'm ecologically enhancing another area, or rather, as I said, agriculture keeps the land clear. [...] [W]hether you then put or write 'nature' on it, ultimately, it's just a lot of paperwork. Is it compensated then? Is that really compensated, or is it just that one area has been slightly enhanced, while another one has been destroyed nonetheless? And therefore, I take a critical view. And especially with Voslapper Groden

> Nord. [...] [T]hose (pasture areas) are not the kind of locations for any specialized plants [...] that need nutrient-poor locations, where at times there is also some open piece of land or something, where [inaudible] birds and what not can all live together. (Renke, interview, November 2025, author's translation)

In many cases, employees in the energy sector framed the construction of the energy park as a conflict of interest between nature and climate protection goals. However, many environmentalists denounced that narrative, since also an expansion of fossil infrastructure is planned in the energy park (Planungsgruppe Grün, 2025, p. 277). According to the Federal Nature Protection Act, projects which adversely affect Natura 2000 sites can only be approved for reasons of overriding public interest when reasonable alternatives do not exist (Hanrieder, 2025, p. 84). Therefore, by positing maritime hydrogen imports as a necessary brick to a decarbonization of the economy – which constitutes an overriding public interest – the destruction of the bird protection site is legitimized. While the loss of habitat for endangered species is bemoaned by environmentalists, I also found that many of them feared the energy park could set a precedent (Deutsche Umwelthilfe, 2026), which could generally threaten other protection sites as well.

4.2.3 How Current Energy Imports Relate to Local Imaginaries of the Wadden Sea Seascape

Pasqualetti and Stremke (2018) point out how energy landscapes differ with regards to their spatial appearance (p. 100). Arguably, energy infrastructure on the Wadden Sea coast far from represents a distinct spatial entity, around which distinct physical boundaries can be drawn. Rather, energy components exist in between and in very close proximity to other constituents of the local seascape. This becomes very clear to me when Alexandra invites me to her Tour du Gas, a guided tour organized by the local environmentalist network, that follows different gas infrastructure sites in the region. When I meet Alexandra on a sunny October morning, right at the shore of the sea, our gazes rest on the horizon for a moment, where a V-shaped flock of birds glides towards our direction. Alexandra points out how at the moment, a multitude of different bird species – which unlike me she all knows to identify – cross the Wadden Sea on their way South. Apart from Alexandra and I, three other people participate in the Tour du Gas. Among them is also Ashraf, a researcher and activist from Bangladesh, who is visiting several places in Germany before heading to the COP in Brazil. We start the tour at a sea funeral memorial place, that happens to be located right between the local naval base and a coal power plant, where just now, we can see white smoke leaving the chimney. As we continue by car, we

pass a couple of other industrial sites as well as Voslapper Groden Nord, until we arrive at the LNG terminals. Since the first FSRU, the Höegh Esperanza, lies only a couple hundred meters away from the touristic beach, it is right in plain sight for everyone who is visiting the beach. Over the course of the day, we will visit several other gas infrastructure sites in the region, until our tour ends with a tea ceremony in East Frisia. However, for now, I will stay closer to the Wilhelmshaven coast and illustrate how locals contextualize the materiality of energy infrastructures within their spatial imaginary of the Wadden Sea.

4.2.3.1 The More-Than-Human and the Sense of Heimat

Generally, when asked about what interlocutors associate with the Wadden Sea and its coast, there were some specific physical characteristics that were often brought up, such as the clean, salty air, the tides, a high biodiversity, or the flat, wide land. Sometimes, associations were made on a more sensory level, describing how something smells or feels. Often, interlocutors referred to the strong wind: "[...] you should go stand on top of the dike in wind force 12 sometime. It's absolutely amazing." (Volker, interview, October 2025, author's translation) but associations were also expressed on other tactile levels: "[...] actually, it is hair that I associate with the sea, hair that's a little stringy, you can somewhat feel the air in your hair when you're at the beach." (Andrea, interview, October 2025, author's translation).

For many interlocutors – especially those living close to the sea – personal health played a big role for how they related to the Wadden Sea, for many times, interlocutors referred to the clean air or reported using mud from the Wadden Sea to cure dermatological diseases. Especially with regards to the clean air, industrialization was often perceived as a negative influence. Though Silas was generally in support of LNG imports, he admitted to potential negative influences of further industrialization in the region:

> [Why] do tourists spend their vacation at the sea? Well, they want the sea, they want fresh air, they want to experience the countryside and its people, they want to relax, or maybe they've been ill, with a respiratory disease or whatever. And I think that industries are always a bit counterproductive in this regard, because they always produce emissions. (Silas, interview, October 2025, author's translation)

In contrast to more urban regions, the absence of lights and general tranquility were often highly valued. Many people I spoke to, therefore, lamented the loss of total darkness because of the LNG terminals. Volker, for instance, who used to watch the stars in the sky at night through his telescope, was deeply upset about the light pollution caused by the FSRUs:

> For example, you could read the newspaper at night without having to turn on the lights. So, the two terminal ships have a lighting effect that is horrendous. Like, the island of Spiekeroog, for example, is an island about which people used to say that you could see the starry sky better than almost anywhere else in Germany. And that's gone now. Even 40 kilometers away, you can still see the cone of light from both ships. And here it's just extreme. (Volker, interview, October 2025, author's translation)

A couple of times, local residents used fire metaphors, that underlined the contrast to the sea. The terminals were described to look "[...] like a fireball, a bit reddish, you can definitely see that the ship is always lit up." (Andrea, interview, October 2025, author's translation). "You should see it for yourself or see photos of it to believe it, you'd think there was a fire out at the harbor. But it's just the lights." (Volker, interview, October 2025, author's translation).

In addition to that, the Wadden Sea was declared to hold some particular characteristics that distinguish it from other seas. As already mentioned at an earlier point, land reclamation and dike construction significantly shaped the local seascape (Quedens, 2003, p. 6), which is also taken up in the construction of regional, Frisian identities. The common saying "Gott schuf das Meer, der Friese die Küste" – which translates to "God created the sea, the Frisian created the coast" –, illustrates how the regions of Frisia have been shaped by their centuries long history of adaptation to the North Sea (Petersen, 2018, pp. 62, 66). This saying was even printed in a large font on one of the walls of the local Wadden Sea museum, that I visited during my time in the field. Accordingly, I found that interlocutors specifically admired the "friesisch herbe", austere nature of the Wadden Sea, that was also transferred to the locals' characters. Although many interlocutors referred to the beauty of the North Sea, some openly admitted that the Wadden Sea were not the prettiest place on earth. Nonetheless, they admired the local seascape for precisely its uniquely "herbe" nature. Johanna, whose partner grew up in the region but who herself only moved to the Frisian coast a couple of years ago, told me how she initially perceived the Wadden Sea:

> [...] At first, I thought: 'Oh, that is a brown sea or something, right?' But the Wadden Sea is so unique. The tides and, well, all the life that depends on this sea being there, right? And that really moves me, you know? Yes, it's, like, this rugged Frisian landscape here, also in human terms. [...] But I also like it, I don't know, it's not cold, it's not cool, but it's kind of edgy. [...] The Wadden Sea is a sea, almost a bit like a working sea. Like, it's not this turquoise blue sea where you sit down and sip your cocktail and say: 'How wonderful', but when I see the children or the dogs or whatever jumping around and collecting shells, and when I watch the birds, I think: 'Wow'. (Johanna, interview, October 2025, author's translation)

Interlocutors repeatedly pointed out the Wadden Sea's uniqueness with regards to the extremely high biodiversity, often also referring to the UNESCO world heritage status of the Wadden Sea. Because of that, many people I spoke to voiced a strong fear for the local environment and species. Chlorine discharges from the first LNG-terminal were perceived as particularly threatening. One person even reported forgoing swimming since the first ship was put on stream. Sometimes, interlocutors also worried about potential accidents that could harm the local environment. When Andrea and I sat down at her kitchen table, she confided to me:

> But ultimately, it's a small chemical plant [...] in the water. Yes, and that's why I'm actually a bit torn sometimes, because I always hope that all maintenance work is done properly so that nothing ever happens, that there is no accident or anything like that. Because ultimately, this is our coast here, our trove, right? And I think I would find it quite dramatic if something ever happened here, right? (Andrea, interview, October 2025, author's translation)

In addition to that, I found that many people I spoke to during participant observation had a profound knowledge of local species. For instance, at one of the environmentalist meetings I visited, in the beginning, everybody had to introduce themselves by saying their names and their favorite animal. Quite a few people named some specific local bird species as their favorite animal, that I, personally, had never heard of before. Also in interviews, many interlocutors – especially those that grew up in Frisia – exhibited some profound regional knowledge about local species, the tides, navigating walking in the mud, or the Frisian islands. Often, the feeling of "Heimat", which closest translates to "home", was central to how interlocutors related themselves to the coast. Many nearby residents were bothered by having energy infrastructure "right on their doorstep". Sometimes, interlocutors explicitly voiced a need to preserve their Heimat for the following generations, which industrial activities would impede. The materiality of energy infrastructure was therefore perceived as a threat to the intimate relation interlocutors have to the coast and sea. For example, when I asked Ursula what she associates with the Wadden Sea and its coast, she replied:

> What do I associate with it? Heimat. This is my Heimat. [...] It is the piece of land where I have returned and where I would like to be indigenous. Because indigenous means nothing more than being connected to the land and being a keeper of this land. And I like the smell of the mudflat. I prefer the North Sea to the Baltic Sea. Yes, this is home for me. Home, with all the creatures, most of them I don't even know, right? In fact, I should train as a mudflat guide sometime. But this fascination with the sea and the place where two elements, [...] where water and earth meet, that's also a liminal space, as they say in English, a very special place of transformation, even now, right? And I could, if I wanted to, I could move away from here, but I would be very reluctant to do so.

> And I also moved back here, even though it was rather unexpected, but [...] this is my home. And it's important to me that my home is a beautiful place. [...] I've seen a lot, and it's by no means the most beautiful coastline I know, because this whole coastline has always been heavily used by us humans, right? Because the sea and the water are simply an immense fortune for us. And yes, I want to do my part to ensure that the creatures that live here also have a home, the more-than-human relatives that I have, and that the people who come after me might still be able to say, 'This can be my home'. And I think that this industry is a mechanism of destruction. (Ursula, interview, October 2025, author's translation)

4.2.3.2 How Specific Imaginaries Justify Energy Imports on the Wadden Sea Coast

On the other hand, not all interlocutors felt this kind of environmental fear and threat to Heimat with regards to the LNG terminals. For instance, many people I spoke to reported not noticing the LNG ships at all. Since the offshore terminals appear from the outside just like regular ships, for some locals, the terminals were, if anything, a source of fascination and interest. For instance, Anja, a local resident in her 40s, who is originally from the Ruhr region, told me:

> Yes, in everyday life, especially in the evenings, I actually think it's really nice when we drive along the dike in the car, [...] because it's just impressive when you see everything lit up in the dark and how this huge ship, when it's lit up in the evening, somehow it looks like a cruise ship, at least to me. And then it's just somehow fascinating to see, and you imagine how it all works and how the ship's technology works. (Anja, interview, November 2025, author's translation)

In addition to that, boats, in some cases, were perceived as an inherent part of the beach, so that the offshore terminals seamlessly fit into the spatial imaginary of the Wadden Sea. In that context, Silas told me about his encounters with tourists:

> And then I always tell one thing to guests that ask: 'Oh, that ship, what is it doing there?' I say: 'Ships are part of the coastline and the harbor'. And people want to have something to look at. And when a ship arrives and departs and the tugboats come, it's more of a nice change than a disturbance. (Silas, interview, October 2025, author's translation)

Furthermore, there were some specific imaginaries that supported the extension of maritime energy infrastructure in the region. Interlocutors from the industrial sector repeatedly stressed that this particular part of the Frisian coast holds the only deepwater port in Germany. In that view, the Wilhelmshaven coast appeared almost destined for maritime imports. However, this narrative was often countered by environmentalists, who pointed out that deepwater was far from nature-given. Rather, deepwater constituted the result of a lot of excavation work, that is necessary maintain the depth needed for large ships. When I called Alexandra, she told me that

> […] we have enormous amounts of dredging to do, and this deep-water port, Jade-Weser-Port, is a lie. We have to dredge it. It's the deepest site we have in Germany for large ships to come in. But it's not automatically deep, it has to be dredged, it's jarring. (Alexandra, interview, September 2025, author's translation)

The Wadden Sea with its tidal movements is arguably incredibly dynamic. In industrial narratives, this dynamic nature was sometimes acknowledged and consulted to justify industrial pressures on the Wadden Sea. Speaking with employees in the energy sector, they often told me that the tides would sufficiently mix the water, so that chlorine discharges from the FSRU cannot be detected by their monitoring systems anymore and subsequently wouldn't harm the Wadden Sea environment. Sometimes, it was pointed out that change constitutes an inevitable part of nature, so that transformations induced by energy infrastructure were not per se a bad thing. For instance, Karl-Heinz, who works at a regional institution for economic development, criticized environmental protectionist movements for their rigidity in this regard:

> With the coast and the Wadden Sea? Yes, of course, in the truest sense of the word, nature, nature that regularly changes though and that is constantly changing due to natural processes. [...] And that's also the case with the Voslapper Groden, for example, if you consider that in the mid-1970s, all these dike land areas [...] were washed up and that within a relatively short time, well, it took years, but in succession, of course, a lot has ultimately unfolded again, nature has gathered there again, has become, in my view, a refuge or something like that, and has regenerated and regenerated in a way that we didn't have before. Yes, and I always think that people miss out on that a bit when they say: 'Yes, but we absolutely have to preserve that.' If you look at the Jadebusen, as far back as I can remember, the Jadebusen has by now shrunk by about a third, or rather, it has turned green in the meantime, which is not a bad thing, but simply a natural development. (Karl-Heinz, interview, October 2025, author's translation)

Furthermore, I noticed that people more adjacent to the energy industrial sector sometimes dissolved the human-nature-binary in order to relativize industrial pressures on the Wadden Sea and its coastal realm. Karl-Heinz, for instance, explained to me:

> So, and then I often notice, like now for example, I don't know if you've been following it, the wild boars in Voslapper Groden Süd, right? Well, in a way, that's also nature, and well, that they're not necessarily, let's say, wanted there, because they don't fit into that biotope, as I can imagine very well. But what I'm trying to say is to question how we deal with nature, especially in our region here, where there aren't really any natural areas left, because they've all been turned upside down at some point, right? So now, on the one hand, these die-hard ideological conservationists expect everything

> to stay the same as it was 150 years ago or to go back to how it was 150 years ago. That's not going to happen, is it? (Karl-Heinz, interview, October 2025, author's translation)

As I outlined throughout this chapter, there are different ways of weaving the materiality of energy infrastructure on the Wadden Sea coast into the local seascape. Delving into the Netzwerk Singers' performance for one last time, it is one line, that particularly catches my attention: "Niemand hat uns je gefragt, denn wir hätten ‚Nein' gesagt". The lyrics, that loosely translate to „Nobody's ever asked what we think of our own, because we would have turned them down", illustrate how closely the local resistance movement relates the issues of environmental impacts and political participation. Therefore, the next chapter will put a closer focus onto the latter.

4.3 How Energy Imports Reach into the Political Sphere

4.3.1 Impeding Political Participation

Overall, I found that public participation in how energy unfolds on the Frisian coast was strongly hindered. Many of the opponents, be it to liquid natural gas or hydrogen, reported obstacles to participate in political decision-making. Members of local environmental organizations complained to me about facing difficulties when objecting to the construction of an energy park in the Natura 2000 area, for instance reporting short times of reply to large documents. Volker, who I have already mentioned a couple of times throughout this text, told me how he has been systematically excluded from meetings of the Federal Budget Committee. Due to his dissatisfaction with local politics, Volker founded his own voters' association a couple of years ago. Though he does not fundamentally oppose liquid gas imports – as an engineer he has even worked on the construction of several FSRUs himself – the chlorine discharges of the Höegh Esperanza into the local Wadden Sea were unacceptable to him. Despite the Federal Budget Committee's decision in 2023 to grant some money to the conversion of the first FSRU from electrochlorination to ultrasound (Niedersächsisches Ministerium für Umwelt, Energie und Klimaschutz, 2024), the Höegh Esperanza still uses chlorine from electrolysis of seawater to prevent the marine biota growth within the open loop regasification system. Thus, Volker decided to get in contact with the Federal Budget Committee in order to reinitiate a debate about the conversion of the Höegh Esperanza to ultrasound. However, shortly before the Budget Committee's meeting started, Volker reported to me, chlorine discharges were put off the agenda again. Since the committee's meetings are not held publicly, the Federal Budget Committee agreed to let him participate as an intern. Nonetheless, participation was ultimately denied to him.

Besides, many interlocutors strongly criticized public events that happened. Events that took place were often perceived as mere advertisement for already preordained decisions, rather enabling participation in decision-making. Thereby, local politicians that participated, in the eyes of many residents, only functioned as mere speakers of industrial interests. Ursula described her participation at an information event surrounding the import of LNG to me as follows:

> [...] I had really hoped that we would get some good answers there, but it was actually a purely political event designed to pitch the whole thing to us, because every other word, or in every other sentence appeared the words 'war', 'crisis', 'we don't have enough'. (Ursula, interview, October 2025, author's translation)

In addition to that, many times, people I spoke to criticized the professionalized air that surrounded many industrial actors. Corporate actors usually have more financial resources, procedural and legal knowledge, and time than regular citizens, so that many residents felt stark asymmetries of power. “David vs. Goliath”-metaphors were used to capture these unequal positions in the conflict. Deike, for instance, pointed out that the parties of conflict, in many cases, are unpaid environmentalists against paid business employees. Sometimes, further dimensions of social inequalities were included, as perspectives that held authority in the conflict were predominately white and male dominated. Deike told me how, almost three decades ago, she lost her job as an electronic technician when she became pregnant as a single mother. Therefore, in our interview, she was very careful to always include a feminist perspective, when talking about the local conflict:

> These people only had one topic, which made the whole thing much, much easier than if you were lined up more broadly. These people had a specific goal, and you could tell they had received rhetoric training. They selected people who would come across as charming as possible to the target groups, meaning they chose old white men for old white men. Of course, you would much rather listen to them, because if they had put a sweet, little woman there, I assume there would have been questions about her competence. Like, it was terrific how they played with those gender stereotypes. It is full-time paid employees promoting this product, against volunteers who are trying to somehow reconcile everything [...], since, well, the entire climate movement is made up of NGOs. (Deike, interview, October 2025, author’s translation)

Deike’s experiences were mirrored by my own, when I visited a citizen dialogue about the extension of energy infrastructure. Entering the room, I immediately realize that – being in my early twenties – I am by far one the youngest people and one of the only women in the exclusively white audience. Most of the men I see are dressed rather formally in a sack coat or shirt. One of them personally welcomes me. Next, I am invited to help myself at the buffet in the back of the room. Though I am assured they offer some vegetarian appetizers as well, the buffet seems to be predominately composed of meat options. At some point, we all sit down and three men start presenting a power point.

Konstantin, a highly skilled employee in the energy sector, who I had a video call with, described to me his experiences with situations like that. He openly acknowledged the asymmetrical positions at these events, where experienced professionals stand vis-à-vis to “Oma Erna” (Konstantin, interview, November 2025):

> [...] I always told my colleagues that as for me, when I give a presentation in front of 50 or 100 people, I'm someone who is used to that, someone who has done that many times before in his life. It's no longer the case that that is something that makes me say: 'Oh, now I'm starting to shake'. But when you see Oma Erna stand up in front of a group like that and ask a question in a trembling voice, then you know what an effort it takes to stand up in front of your neighbors, in front of your fellow residents in that village, and ask a question like that. And maybe on top of that this question is really silly, and the others already know the answer. And then I said, 'Guys, first and foremost, have respect for the people who dare to ask such a question'. (Konstantin, interview, November 2025, author's translation)

Although not explicitly mentioned, the notion of "Oma Erna", that represents a stereotypical, old, German grandmother, again indicates how these asymmetries run along the lines of gender. In our interview, Konstantin proceeded to tell me how he intended to lower the barriers for participation in public events. For that reason, an open table concept was introduced where questions were not asked in front of the whole audience but after the main presentation, in smaller groups. This was also the case at the citizen dialogue I attended, where participants were offered the opportunity to ask questions both in front of the whole audience as well as afterwards in smaller groups. Konstantin described the implementation of the open table concept to me as follows:

> And the second point was that we said: 'Well, maybe we can reduce inhibitions a little so that people can ask questions more easily'. And that was this open table concept, where we then said: 'Well, if someone, there is a table with three, two or three nice people, and the neighbor is standing next to them, and so on. And they also have a laptop in their hands and a few brochures, and then you can ask a question, but it's not in front of a large audience.' And personally, I think this was really successful, because inhibitions were much, much lower. (Konstantin, interview, November 2025, author's translation)

At the same time, I found that the open tables concept was specifically criticized by interlocutors for separating participants from each other, thereby also increasing difficulties for journalists. In that view, the concept was perceived as a corporate strategy to enhance rather than dismantle asymmetrical positions.

Unequal positions were also stressed in conflicts between the energy and agricultural sector. Interlocutors noted that farmers in these conflicts have far less knowledge about their rights than experienced corporate deputies, who in the past used to negotiate contracts with every farmer individually. As a strategy to gain more power in negotiations, farmers can join the

peasantry union, so that bargaining is performed by union representatives instead of individual farmers.

Generally, I found that the power to influence decisions around construction measures on farmland was perceived as very limited. The failure to properly include farmers in decision-making processes was interpreted as missing appreciation and served as a catalyst for anger. In my interview with Renke, he explained that he felt like agricultural land was often utilized to keep ecological value of land low, so it could easily be taken, if needed for energy infrastructure measures. However, he remarked that the farmers themselves were approached with only little respect, as they virtually have no say in these processes. For Renke, the most pressing issue consisted of the destruction of property value. In this context, compensation fees were perceived as generally too low and not accounting for decades of land damage. Furthermore, low compensation, in that respect, was directly blamed on corporate strategies for profit maximization.

4.3.2 Fostering an Environment of Political Distrust

Bennett et al. (2021) assert that top-down approaches to governance are likely to impede local participation by producing staged, tokenistic participation processes that only serve to justify already preordained decisions (pp. 9-10). Thereby, top-down governance can foster general dissatisfaction with politics. During my time in the field, I found that especially environmentalists expressed a strong dissatisfaction with politics. Generally, this was fed with perceptions of dishonesty among politicians as well as strong influences of fossil lobbyism. In our interview, Alexandra told me: “It stinks of fossil fuels, it stinks of lobbying, big lobbying, it stinks to high heaven.” (Alexandra, September 2025, interview, author’s translation). In a similar vein, Ursula attributed to the political system systemic shortcomings:

> Power is addictive, right? Just like money and stuff like that. And most politicians don’t necessarily act from their hearts or their consciences, but from what will secure them votes in the next election, right? And I think that’s just our system, right? (Ursula, October 2025, interview, author’s translation)

Luna, a climate activist, who I met for a cup of coffee in a local café, criticized the tight connection between politics and the economy, especially regarding the current Federal Minister for Economic Affairs and CDU politician, Katherina Reiche:

> [...] the fact is, we have someone in the Ministry for Economic Affairs who is currently in charge, who comes from the gas lobby and is in this position as a gas lobbyist. And they’re not even trying to hide it, the gas lobby is literally at the head of the Ministry for Economic Affairs right now. And

> that's what it looks like in Germany right now, and that's why this energy transition is being so drastically reversed and turned back. (Luna, September 2025, interview, author's translation)

Apart from Katherina Reiche, the SPD and, in particular, state politician Olaf Lies were sometimes subjected to direct criticism. However, political dissatisfaction was most notably directed towards one specific political party: the Greens. Due to the proximity between the Green party and the environmentalist movement – historically and on a personal level – the Greens' leading role in terminal construction provoked a strong disappointment in many local environmentalists. Frustration was exceedingly pointed towards Robert Habeck in particular, who was the Federal Minister for Economic Affairs and Climate Action at that time. Robert Habeck – "[...] we always say that's Habeck, his port." (Silas, October 2025, interview, author's translation) – in many cases was perceived as the main person responsible for terminal construction. Coming from Schleswig-Holstein, some interlocutors thought of him as an advocate for porpoises, until he, in their view, turned his back on the water mammals. For Johanna, who invited me to her house for an interview, this was a crucial factor in her disappointment with the Green party:

> And also, let's say, pushed by a Green politician whom I actually liked quite a bit before, and who actually finds porpoises to be really great and even very moving. And then, to hear him say, 'Well, the porpoises have to take a back seat for now, [...] in the interests of national security'. And that's when I realized what was happening, that the fossil industry had, so to speak, hijacked everything. (Johanna, October 2025, interview, author's translation)

Johanna went on to tell me that Robert Habeck, for her, was an embodiment of her estrangement with the Greens. In the past, the party was perceived to successfully maintain a balance between industrial interests and environmental protection. In the view of many interlocutors, however, the Greens seemed to have dismissed their values of environmental protection and social justice, for their political actions were now more screwed towards industrial interests.

Interestingly, it seemed like no other party was able to take on the dissatisfaction with the Greens. In fact, many interlocutors felt like the Greens were virtually the only party they could vote for, which, correspondingly, left them with a feeling of despair. The radical right – though also contesting chlorine discharges due to terminal operation (Sichert, 2024) – was firmly condemned among many of my interlocutors. Luna, for instance, told me how the local chapter of the climate movement excluded the AfD from political events they organized, due to the party's non-recognition of anthropogenic climate change. Sometimes, also the German historical past was referenced with regards to the AfD. On the other hand, however, die Linke,

the German left party, that champions social justice issues (Syrovatka, 2025, pp. 794-795), did not play a significant role among local environmentalists either.

Within industrial circles, engagement of local environmentalists was often defamed as mere "Not In My Backyard"-tendencies. Nonetheless, I found that many residents actually were willing to accept terminal operation for a short period of time in order to help secure energy supplies. According to many interlocutors, initial expectations of a timely transition to other, more sustainable sources of energy have not been met. Therefore, many interlocutors subsumed the latest developments on the Wadden Sea coast in a larger regional history of industrial compromises and promises. Some locals mentioned to me that industrial settlements, in fact, did bring some benefits to the region. Silas, for instance, pointed out how in the 70s, a swimming pool was built in exchange for industrial settlements on the coast (Abeldt, 2023a). In addition to that, some interlocutors valued the industrial sector as a provider of secure and well-paid employment opportunities. Andrea, whose husband worked in an industrial plant, did voice some concerns about the LNG terminals. However, she was reluctant to oppose the terminals, since the industrial sector for a long time constituted an important source of income for her family:

> [...] who would I be, if I said: 'Chemistry is completely stupid'? Really, I can't do that. After all, they spent 30 years taking care of or paying money or paying [my husband]. And he enjoyed working there. Really, as I said, I'm not the absolute opponent here or anything, who says: 'Nah, that doesn't work at all, it makes me sick. Seeing that ship, I can't sleep at night because of the bright light', or anything like that, not at all. [...] Well, that would be very hypocritical. If I suddenly said, 'No way, no chemistry here or anything like that'. That would be nonsense. (Andrea, October 2025, interview, author's translation)

On the other hand, many interlocutors spoke to me about unfulfilled promises that were made to the local population in exchange for industrial investment. Something that was mentioned a couple of times was the construction of a mole, that was supposed to reconcile touristic and industrial interests (Abeldt, 2023b). This was also brought up in my interview with Andrea:

> And I also know that […] it was always an issue that Hooksiel had been granted a mole in compensation for industrial settlements, in order to prevent beach erosion or to slow it down a little. And this mole was never built. I think the people of Hooksiel always [...] felt a bit led up the garden path, [...] along the lines of it was promised to them, but it was never carried out. (Andrea, October 2025, interview, author's translation)

In addition to that, many interlocutors referred to me the book *Dreckiger Sumpf* (Handlögten & Venske, 1983), in which two journalists trace how corporate profit-interests and political corruption left a mark on the industrial history of the city. Ursula told me about how she experienced these developments in her youth:

> [...] in the 70s, when I was young, they made a decision, whether to turn Wilhelmshaven into a white city, in other words, to continue developing the touristic sector, or to go for industry. And back then, in the 70s, the Voslapper Groden was reclaimed. For that, an entire village was flattened. The people were resettled. And I remember, when I was young, there was an industrial plant engaged in aluminum processing, and people always had a lot of asthma and lung diseases when another wave of chlorine came across the dike. And then what happened? After the industries had received trade tax cuts for ten years, they left again. Right? And now, what are they doing with us? It'll be the same thing all over again. (Ursula, October 2025, interview, author's translation)

In that view, current extension of energy infrastructure on the Wadden Sea coast is interpreted as an iteration of regional history. Therefore, distrust in the industrial sector is rooted in past experiences with industrial settlements.

While this chapter generally presented the local political economy on the Wadden Sea coast, local developments are related to larger global processes as well. Accordingly, in the following, I will contextualize the expenditure of energy infrastructure within the larger international political economy.

4.4 How Local Developments Relate to the International Political Economy

4.4.1. The Environmental Injustices of Fracking

Healy et al. (2019) emphasize how negative impacts caused by energy industry occur in a disproportionate way along the energy cycle (p. 221). Therefore, in the following, I will discuss the larger political economy, into which energy infrastructure on the Wadden Sea coast is embedded. To do that, I will place my focus upstream the energy chain and inspect the origins of imported gas. In 2025, 95% of gas that arrived at German LNG terminals were imported from the US (Bundesverband der Energie- und Wasserwirtschaft, 2025, p. 20). Beyond that, the remaining 5% were imported from Norway, Equatorial Guinea, and Trinidad and Tobago.

Liquid gas from the US is to a large part produced through hydraulic fracturing (Pressentin et al., 2025, p. 21), more colloquially known as fracking – a method of gas extraction that causes severe damage to the environment and the living beings that reside in it (Brittingham et al., 2014, p. 11034; Meng, 2017, p. 953). Notably, almost all my interlocutors sharply condemned fracking practices. Even people who fundamentally supported LNG imports admitted to the environmental harm inflicted by fracking. What is more, many environmentalists emphasized the disproportionate, adverse effects of fracking on nearby, often marginalized communities. Residential proximity to fracking sites is commonly associated with adverse effects on the human health through drinking water contamination and air pollution (Srebotnjak & Rotkin-Ellman, 2014, p. 2; Adgate et al., 2014, p. 8307; Hill & Ma, 2022, p. 1). In many conversations, interlocutors referred to the “Cancer Alley” – an area along the Mississippi River, that features an agglomeration of petrochemical industries and exhibits disproportionally high cancer rates among residents (Castellón, 2021, p. 15). Sometimes, interlocutors also evoked images of flammable tap water from nearby residences. Notably, fracking is often practiced in areas with higher poverty rates (Ogneva-Himmelberger & Huang, 2015, p. 173) and disproportionally affects Indigenous and Black communities (Meyer, 2021, p. 89; Zwickl, 2019, p. 202). When I first meet Johanna at the migratory birds festival, we sit next to each other at an outdoor table of the restaurant where the Netzwerk Singers decided to have pizza after their performance. In our conversation, she categorizes fracking as a colonial practice, referring to indigenous land grabbing. A couple of days later, when I meet her again for an interview, she told me:

> [...] what horrifies me the most is this whole fracking business in the States, and the human tragedies that are caused by that on massive scale. Almost always, it affects people with a background that isn’t necessarily white, male, and rich, but rather indigenous, right? Cultures that can’t necessarily afford a big house somewhere in a nice location. And suddenly a fracking industry pops up in their

> schoolyard, releasing these toxic, carcinogenic gases, and their children have virtually no chance of being anywhere else. They can't move away. They are being poisoned, so to speak, where they live, right? And no one cares because it's the poor population anyway, and b) you can make so much money with this fracking gas. (Johanna, October 2025, interview, author's translation)

As indicated by Johanna, an environmentalist critique of fracking was often combined with a general critique of capitalist corporate logics. Many environmentalists criticized that large-scale corporations accept tremendous harm at extraction sites to increase their profits.

4.4.2 Hydrogen Colonialism

While I noticed that fracking, among my interlocutors, was condemned by and large, human rights violations connected to hydrogen were not recognized to the same extent. In the German public debate, hydrogen trade is commonly framed as a win-win-situation, where both the importing as well as the exporting country benefits from (Tunn et al., 2025, p. 1). This was also the case in many conversations I had with employees from the energy sector. In addition to that, I found that a recurring argument surrounding the imports of hydrogen lied in the necessity of energy imports to meet decarbonization. In my phone call with Konstantin, he told me about prior experiences he had with renewable energy projects. In his view, missing local acceptance to establish hydrogen production in Germany – which he referred to as the NIMBY-syndrome – would pose too big of an obstacle to meet the hydrogen demands needed for decarbonization:

> [...] if you go outside and say: 'Yes, we want to build eight or ten times as many renewables in the next few years', you have to expect considerable pushback. So, based on the issue of acceptance alone, I would consider it difficult to completely establish renewable energies here in Germany, not to mention the issue of storage, so our thesis is: Germany will continue to be an energy-importing country. (Konstantin, November 2025, interview, author's translation)

In this narrative, local resistance and demands for participation are put forward to justify operations in other countries, often in the Global South. In addition to that, renewable energy is needed to produce green hydrogen, which – as the argument goes – can be done cheaper and more efficiently in countries with a lot of sun, even with transportation costs considered. Desert spaces were frequently given as an example of imaginable production sites, as they hold a lot of uninhabited and, therefore, empty space, as industrial actors liked to put it. Hence, in their view, desert spaces could easily hold a large number of solar panels. In addition to that, employees in the energy sector told me that exporting countries would also benefit from hydrogen production. For instance, they could use part of the energy produced for themselves and would also profit financially from exporting hydrogen.

While sometimes, environmentalists explicitly highlighted the neocolonial tendencies inherent in hydrogen imports, I found that many interlocutors indicated they didn't know enough about hydrogen to have a clear opinion on the matter. Furthermore, hydrogen in many cases was perceived as, at least to a certain degree, part of decarbonization, so that views in that regard were more nuanced. Perspectives on hydrogen imports, in that respect, stood in stark contrast to imports of LNG.

4.4.3 Transboundary Solidarity of Movements

Within the environmentalist movement, many interlocutors drew a connection between local struggles and the ecological and social harm at energy productions sites, especially when it came to fracking. In that context, Alexandra told me:

> And when you string together stories and moments like these, you realize what a shitty business it is. It's shitty here, and where they steal the gas from the earth it's even shittier, because there, you're living in an environment where the air you breathe is actually deadly. (Alexandra, September 2025, interview)

Therefore, emanating from the local environmentalist movement, transboundary relations of solidarity have emerged on the Frisian coast. The local network of environmentalists holds many international connections, for instance to people from the Cancer Alley in the US. To spread awareness about the negative consequences of gas extraction, residents from fracking zones in the Golf region have visited the Wadden Sea coast in the past.

Not only were there relations of solidarity to the regions where fossil gas is exported from, thereby connecting struggles of resistance that occur upstream or downstream of the energy supply chain. What is more, transboundary solidarity was also practiced with other LNG import regions. When the Netzwerk Singers end their performance at the migratory birds festival, Ashraf, a Bangladeshi activist and researcher, is called up to the rustic stage. Currently, Bangladesh is massively expanding LNG import structures (Fossil Free Chattogram et al., 2024, p. 1). The extension of fossil infrastructure in both countries is brought to attention in a brief speech on stage. Parallels are also drawn with regards to the proximity of an energy hub to the Sundarbans mangrove forests, that, similarly to the Wadden Sea, are protected by UNESCO (Reinhardt 2022, 18, 22, 24). Laying special emphasis on the World Heritage status of both sites, the choir's performance, therefore, ends with a few words of trans-local solidarity.

5 Analysis and Discussion

5.1 The Wadden Sea Energy Seascape

Analyzing current developments at the Wadden Sea, the aim of this thesis is to develop a profound understanding of coastal residents' perspectives on how maritime energy infrastructures transform local seascapes. In this context, I propose the concept of "energy seascapes" – which I define as seascapes that, over time, have significantly been shaped by the flows of energy derived from human energy demands. I argue that referring to energy seascapes – instead of simply abiding to the terrestrial-oriented concept of energy landscapes – is necessary in order to account for the distinctiveness of lived realities in spaces where the terrestrial and the aquatic meet.

As demonstrated above, the Wadden Sea seascape is currently subjected to large transformations induced by the energy sector. Historically, the Wilhelmshaven coast of the Wadden Sea has been shaped by industrial influences for decades, leading, for instance, to the reclamation of Voslapper Groden Nord in the 1970s, that today constitutes an important bird protection site. In the wake of contemporary transformations of the Wadden Sea energy seascape, gas is gaining substantive dominance compared to other sources of energy. Dispute among locals is, amongst other things, particularly caused by temporal qualifications of the contemporary energy seascape, since many residents viewed the LNG terminals as more permanent than initially communicated. Furthermore, the current expansion of energy infrastructure on the Wadden Sea coast reveals how contexts across different scales intertwine in the making of energy seascapes. Global and national contexts, such as the cease of Russian gas imports, on which Germany heavily relied, interlaced with the local history of energy industrial investments – thereby producing conditions under which extension of gas infrastructure within the Wadden Sea energy seascape was facilitated.

Contemporary transformations of the Wadden Sea were imagined in diverse ways by interlocutors. Therefore, local actors evoked different spatial transformation imaginaries – a concept that has its origins in cultural geography and represents shared ideas about the transformation of places through generalized processes (Watkins, 2015, p. 513). I found that especially industrial actors perpetuated a spatial transformation imaginary where the creation of an Energy Hub and subsequent industrialization would lead Wilhelmshaven – that has been grappling with high poverty and unemployment rates for decades (Frieske & Krüger, 2025, p. 8; Stadt Wilhelmshaven, 2025) – towards regional upswing and prosperity. More precisely, a transition imaginary is created, in which hydrogen takes up the role of an energy carrier of the

future, that enables the region to rise to national importance for German energy supplies. In the face of pressing concerns caused by climate change, hydrogen imports, within this imaginary, offer a path to securing industrial prosperity in the decarbonized economy. In line with Swyngedouw, hydrogen imports, hence, resemble a solution to the climate crisis that inherently stays in the realm of the post-political (Swyngedouw, 2011, p. 270). CO2, in this context, becomes the fetishized object around which energy policy revolves, while, at the same time, the economic growth imperative remains untouched.

The spatial transformation imaginary elaborated above was often paired with the notion of LNG as a bridge technology, that would create sufficient stability and tranquility for an energy transition towards renewables to be carried out. The discourse around gas imports was heavily dominated by questions of supply security rather than fundamentally questioning the logics inherent to the larger political economy – thereby indicating a techno-managerial, depoliticized approach to energy politics. LNG imports were largely perceived and presented as without an alternative, due to the gas shortages provoked by the cease of Russian gas imports. Among interlocutors, this perception was fed with fears of running out of gas for residential heating in winter. In line with the modalities of post-political decision-making that Clarke and Flannery (2020) identified, the need of securing gas supplies imposed pressing time limitations, that fostered path-dependencies towards expenditures of gas infrastructure rather than allowing for the consideration of alternative solutions (p. 174).

On the other hand, especially within the environmentalist movement, contemporary transformations of the Wadden Sea seascape exhibited pronounced negative connotations. Many interlocutors interpreted the prospects of heavy industrialization to result in developments that bore resemblance to conditions in the German Ruhr region. The process of industrialization, from that perspective, was associated with ecological harm, adverse effects on tourism, and loss of Heimat. Environmentalists commonly understood contemporary transformations of the energy seascape as a fossil lock-in. As such, current developments constitute a resurge of fossil fuel energy, thereby deepening fossil path-dependencies and impeding climate protection. In that context, the term “bridge technology”, that is frequently applied to LNG, functions as a deception of the solidification of fossil capitalism, while an actual transition to renewable energies is effectively decelerated. In contrast to the imaginary of hydrogen as an energy carrier of the future, this spatial transformation imaginary centered around the cementation of fossil technologies, that, on a temporal scale, were regarded as belonging to the past.

Notably, locals had different ways of contextualizing the materiality of energy infrastructure within their spatial imaginary of the Wadden Sea. While transformations of the local energy seascape were sometimes rather easily combined with the spatial imaginary of the Wadden Sea – referring to the presence of boats on the beach or the dynamic nature of the sea –, for many interlocutors they severely clashed. LNG terminals, in these cases, precipitated profound fears for the local ecosystem and were perceived as a threat to the distinctive, intimate relations interlocutors had with the Frisian seascape. This finding demonstrates that coastal residents' perspectives on maritime energy infrastructure are profoundly shaped by their unique relation to the local seascape, underlining the conceptual need for energy seascapes in anthropology.

5.2 Approaching Energy Imports on the Wadden Sea Coast through a Framework of Justice

In the following, I will further analyze maritime energy infrastructure on the Wadden Sea coast through the lens of blue and energy injustices. As elaborated at a prior point, distributional, recognition-based, and procedural injustice constitute the most applied principles of energy and blue justice in academic scholarship (Jenkins et al., 2016, p. 175; Blythe et al., 2023, p. 3). On the next pages, I will therefore contextualize the case of the two LNG terminals and the planned energy park on the Wadden Sea coast alongside these three dimensions.

Current developments of the Wadden Sea seascape provoke perceptions of *distributional injustices* among local residents, referring to the unequal distribution of costs and benefits (Jenkins et al., 2016, p. 176). As already discussed earlier, many local residents perceived the LNG terminals to relate to a loss of recreational and heritage value, destroying their Heimat and impacting them through light or air pollution. Views on whether high-quality employment opportunities would materialize, if Wilhelmshaven was to become an energy hub, were largely divided among interlocutors. Those more critical of contemporary developments located benefits at international corporations rather than local actors. Overall, this finding resembles commonly made critiques of Blue Growth as not actually delivering benefits to coastal areas and communities (Clarke & Flannery, 2020, p. 176).

A clear shortcoming of this thesis presents the fact that I did not manage to speak to any FSRU crew members directly, which is where future research can tie in with. While I was doing fieldwork, labor migration connected to the FSRUs was only seldomly brought up and even when mentioned, interlocutors did not know much about the lived realities of crew members. This indicates that FSRU workers subsume in the invisible labor force that the maritime industry heavily relies on (Leivestad & Markkula, 2021, p. 2; Bailey & Winchester, 2025, p. 7).

Generally, it is very common for ships to be internationally crewed, and the Filipino mobile labor force takes up a big share in the global maritime economy (Acejo, 2021, pp. 99-100; Markkula, 2021, p. 166). The Philippines have a long history of international labor migration, which was promoted during Spanish and US colonial rule and further institutionalized by the Philippine government since the 1970s (Acejo, 2021, p. 100). International recruitment of seafarers was additionally facilitated by the neoliberal deregulation of the shipping sector as well as the rise of temporary, contract-based migration, that enabled shipping companies to draw on a cheaper and more flexible workforce (Acejo, 2021, p. 101; Markkula, 2021, p. 167). Studies on the lived realities of Filipino seafarers reveal that often the – compared to inland employment opportunities – higher-paid salaries constitute the main incentive for joining the maritime workforce (Lindgren & Nilsson, 2011, p. 18). Most of the time, earnings are not only used to increase own living-standards, but also to send remittances to family members. Difficulties that are often reported by seafarers include home sickness and emotional challenges connected with staying apart from family members for a long time (Lindgren & Nilsson, 2011, pp. 19, 20, 23). This was also brought up by two of my interlocutors, who spent some time with crew members of the FSRUs. Furthermore, ethnographic research indicates stark structural inequalities on international vessels, as Filipino seafarers are often confronted with racist stereotypes (Markkula, 2021, pp. 172-173). In addition to that, contracts as well as working conditions recurrently differ between Filipino and European crew members. Since globalization heavily relies on the maritime workforce (Markkula, 2021, p. 166), the discipline of maritime anthropology has taken a pronounced interest in an array of issues surrounding maritime labor (Roszko, 2021, p. 306). Arguably, lived realities of crew members on a cargo ship are likely to differ from workers' lives on an FSRU, which for the longest time remains close to the shore of the same coast. Further research should therefore more deeply investigate the lived experiences of foreign mobile laborers on maritime energy infrastructure.

Aside from FSRU crew members, future ethnographic work should also employ a deeper focus on other types of labor connected to maritime energy infrastructures. In this thesis, all employees in the energy sector I conducted in-depth interviews with were highly skilled workers, which presents another clear shortcoming of my research. During my time in the field, I noticed, for instance, that energy infrastructure was constantly guarded by private security staff. However, usually, when I tried to approach security personnel, they proclaimed that they were legally not allowed to talk to me. Healy and Berry (2017) designate the issue of labor as a pivotal part of energy justice (p. 455). Therefore, jobs in the energy sector need to hold high

standards regarding working conditions, salary, and resilience towards fluctuations on the energy market. Hence, future research could tie in here and more closely examine the experiences of people working security jobs and low-skilled employment positions at energy infrastructure sites.

Next to distributional justice, *recognition-based justice*, referring to the fair representation, and equal validation of all individuals, presents the second tenet of energy and blue justice (Jenkins et al., 2016, p. 177; Blythe et al., 2023, p. 3). In the context of the posthumanist turn, anthropologists have started to account for "ecological interdependency and interresponsibility" (Boyer, 2014, p. 319), therefore putting increasing attention to interrelations between energy and the more-than-human (Howe, 2019, pp. 4-5). Since traditionally, energy justice scholarship exhibited a rather anthropocentric bias, Sovacool et al. (2017) have called for an expansion towards animal-centric, biocentric, or ecocentric approaches (p. 678). This case very clearly depicts how non-human animal perspectives are systematically denied recognition in energy policy decisions. This invalidation of non-human perspectives is also inscribed into the legal framework that surrounds energy infrastructure. The LNG Acceleration Act (LNGG) allows for the suspension of regulations normally imposed by the Environmental Assessment Act, which is justified with the need to secure energy supplies (Kment & Fimpel, 2022, p. 601).

In the case of the energy park, it is noteworthy how the transition imaginary of Wilhelmshaven as an energy hub is consulted to invoke an overriding public interest, that justifies biotope destruction. Again, this overriding public interest appears to be strongly depoliticized and anthropocentric, as it inherently consists of securing industrial prosperity and economic growth within a decarbonized economy (Hanrieder, 2025, p. 84). Therefore, by positing maritime hydrogen imports as a necessary brick to this vision of a decarbonized future economy – that essentially caters to human industrial needs – the destruction of the Voslapper Groden bird protection site is effectively condoned.

Lastly, *procedural justice* constitutes the third dimension of blue and energy justice and refers to the inclusion of all stakeholders in decision-making processes (Jenkins et al., 2016, p. 177; Blythe et al., 2023, p. 3). Findings discussed above indicate deficits regarding the procedural justice dimension. Participation processes were viewed by many interlocutors as choreographed events to legitimize and advertise already preordained decisions. Besides, some interlocutors explicitly exerted a feminist critique, pointing to the dominance of white and male perspectives in decision-making processes. Since legitimization of transformations of the Wadden Sea

energy seascape is inherently output-centered, the post-political condition manifests very clearly in this case (Clarke & Flannery, 2020, p. 173). In this context, security of energy supplies, for instance, is posited as more important than local participation in decision-making processes. Again, this is also reflected in the legal framework, as the LNGG restricted public participation on both floating LNG terminals (Kment & Fimpel, 2022, p. 601). These findings are overall consistent with anthropological scholarship on post-political maritime governance, where choreographed participation is identified as a key modality of the post-political condition (Clarke & Flannery, 2020, p. 173).

As already touched on beforehand, decision-making processes were heavily criticized for the extensive influences that fossil gas lobbyism has had on policy decisions. Expansion of energy infrastructure was the source of pronounced political dissatisfaction and disappointment. These sentiments were particularly directed at the Greens. Further research could pick up on that strand and more deeply investigate the implications of the post-political condition on party politics. In that context, researchers could inquire why neither of the opposition parties managed feeding on the dissatisfaction with Green politicians.

5.3 Connecting Local Developments to the Global Political Economy

As already indicated earlier, energy injustices occur in a disproportionate way along the whole energy cycle (Healy et al., 2019, p. 221). Accordingly, Healy et al. (2019) propose a reconfiguration of the energy justice framework by introducing the term "embodied energy injustices" (p. 220), thereby accounting for energy injustices alongside transboundary energy chains. In the following, I will therefore discuss how the energy seascape of the Wadden Sea relates to energy injustices that happen upstream the energy supply chain.

In line with frameworks of environmental justice that have been applied to fracking, environmentalists frequently mentioned to me the adverse effects hydraulic fracturing has on nearby, often marginalized communities (Fry et al., 2015, pp. 22-23; Tyree, 2021, p. 1016; Ogneva-Himmelberger & Huang, 2015, p. 165). Thereby, energy injustices that occur at the Wadden Sea coast were regularly linked to the tremendous harm imposed by fracking. In that context, many interlocutors very clearly stated how environmental and social impacts that occur upstream the supply chain by far exceed adverse effects on the local seascape. Nevertheless, outside of environmentalist circles, focusing on supply security often eclipsed energy injustices at gas extraction sites. As a result, the latter are condoned in order to satisfy German gas demands.

Importantly, energy injustices occur not only along the LNG supply chain but also concern green hydrogen production. More recently, research from energy anthropology has begun looking at hydrogen trade through a lens of green colonialism. However, neocolonial tendencies were less easily identified among interlocutors, pointing to the need to address hydrogen colonialism more clearly.

The embeddedness of hydrogen transportation chains in global power dynamics was commonly obscured by industrial actors behind a transition imaginary, in which hydrogen imports constitute a pivotal column of the decarbonized economy. Hydrogen, in this context, is presented as a technology of green progress that enables the local energy hub to resume a pioneering role for German energy transition. Not only does this imaginary contribute to the legitimization of European lifestyles of excessive overconsumption (Hamouchene, 2023, p. 30). It also conceals how socio-environmental costs of renewable energies are placed onto peripheral regions and communities, whose demand for energy, as a result, is disdained to the benefit of German energy consumption (Hamouchene 2023, p. 30). In addition to that, I found that employees in the energy sector frequently devalued local resistance to energy infrastructures as mere NIMBY-tendencies. Again, this devaluation represents a reflection of the post-political condition, where "the actions of those seeking to instigate counter-hegemonic practices" (Clarke & Flannery, 2020, p. 173) are frequently delegitimized. The devaluation of local resistance plays a critical role in the justification of hydrogen imports, since, according to industrial actors, it is NIMBY-tendencies – rather than the imperative of economic growth – that create a need for energy imports. Alarmingly, many industrial actors invoked an idealized spatial imaginary of deserts as vast, uninhabited and empty spaces, thus void of resistance. This idealized spatial imaginary serves precisely to legitimize solar energy expansion on desert grounds. From a historical perspective, such terra nullius narratives are far from new but embedded in the centuries long history of colonialism, where they were drawn on to justify imperial conquest (Zukas, 2005, p. 45). Notably, these findings are particularly important for the discipline of energy anthropology as they reveal how depoliticized energy governance in the Global North enables neocolonial relations of power to persist within the transition to a decarbonized economy.

Identifying embodied energy injustices can provide opportunities for the emergence of transboundary solidarity across movements (Healy et al., 2019, p. 231). In shifting the focus from technocratic arguments to the underlying social relations that are touched by energy, transboundary solidarity can repoliticize local injustices. Such relations of transboundary

solidarity have evidently emerged along LNG supply chains. On the Wadden Sea coast, the local environmental movement has established connections to both LNG export- as well as other LNG receiving sites. While hydrogen imports are still in the fledgling stages, it is critical to underscore neocolonial tendencies early on. Transboundary solidarity could offer a way to politicize struggles along hydrogen transportation chains as well.

6 Conclusion

To conclude this thesis, I want to come back to the day of the Tour du Gas. When we return from our last stop in East Frisia to the shore of the Wadden Sea, the sun has already started to set. Before our ways part, and each of us get back into our own cars, I pause for a moment and gaze towards the horizon. Again, next to us, there is the tidy, well-tended sea memorial place. On my left, I can see the coal power plant, and I know that only within a couple of kilometers distance, the two LNG terminals rest steadily on sea surface. The five of us have spent the whole day visiting the various energy infrastructure sites scattered along the Wadden Sea coast. Partaking in this tour has revealed to me how much my Heimat has been shaped by flows of energy, feeding an ever-growing anthropocentric hunger for power. What I am looking at in this very moment, therefore, truly represents an energy seascape. Over the course of this thesis, I have argued that referring to energy seascapes – instead of simply abiding to Pasqualetti and Stremke's (2018) land-oriented "energy landscapes" (p. 95) – is essential in order to account for the distinct lived realities in spaces where the terrestrial and the aquatic coincide. Conducting ethnographic research, I have inquired into coastal residents' perspectives on how infrastructure for maritime energy imports transforms their local seascapes. Thereby, this thesis provides an answer to the question of "What do coastal residents' perspectives on maritime energy infrastructures reveal about the making of energy seascapes?", hence contributing to the fields of both energy anthropology and maritime anthropology.

Before more deeply elaborating the theoretical implications of my work, I will, in the following, briefly recap my key findings. I have started by concentrating on local perspectives on changes of the Wadden Sea energy seascape. With regards to the LNG terminals, I found that debates on LNG revolved to a large part around the security of energy supplies after the cease of Russian gas imports. This was regularly countered by arguing that the extension of LNG infrastructure would lead to overcapacities, so that more infrastructure was built than necessary. Generally, gas shortages were put forward as a reason to legitimize the speeded-up construction processes of LNG terminals, which was legally enabled by the LNG Acceleration Act. While local residents initially thought the terminals to only stay on the Wadden Sea coast for a short period of time, charter periods ended up being much longer than expected. Among industrial actors, LNG was commonly referred to as bridge technology, that would enable a transition towards renewables. Within the environmentalist movement, on the other hand, LNG imports were predominately interpreted as a cementation of fossil fuels.

After some time in the field, I realized that the extension of LNG infrastructure was closely connected to the planned construction of an energy park. While the park is envisaged to contain an onshore LNG terminal, the import of hydrogen is meant to gain traction as well. Hydrogen was frequently construed as an important constituent to a decarbonized future. However, some people exhibited pronounced skepticism regarding hydrogen imports. The centralization of energy, that would accompany the expansion of energy infrastructure, was frequently criticized from a geopolitical perspective. Accordingly, local residents confined to me their disquiet about terrorist attacks emanating from Russia. In addition to that, almost all people expected further industrialization of the region in the future. Considering the high regional unemployment rate, this was often perceived as a good development. Nonetheless, locals also suspected industrialization to result in conditions that would resemble the German Ruhr region. Additionally, many people entertained strong doubts that current developments would result in the creation of new and well-paid jobs. In that context, labor migration was revealed to constitute a relevant topic as well, as both FSRUs are crewed by migrant workers. What is more, extension of energy, in many cases, conflicted with other economic sectors in the region.

Tying in with the more recent posthumanist currents in the discipline of anthropology, I have delved deeper into the "multispecies muddle" (Haraway, 2016, p. 31) of the Wadden Sea. Accordingly, I found that energy-induced transformations of the local seascape have adverse impacts on the more-than-human world of the Wadden Sea. The LNG terminals have been criticized for chlorine discharges, impingement of fish, as well as light-, air- and noise pollution. In addition to that, the construction of the energy park is expected to cause the demolition of a bird protection site.

Notably, locals had different ways of contextualizing the materiality of energy infrastructure within their spatial imaginary of the Wadden Sea. Often, specific features – such as the salty, clean air, or the flat, wide land – were associated with the Wadden Sea and its coast, invoking an imaginary of a unique, Frisian seascape. Interlocutors frequently emphasized the UNESCO world heritage status of the Wadden Sea and placed special value onto the multispecies world of the Wadden Sea. Therefore, many people feared that energy infrastructure might inflict harm on the local ecosystem. In addition, for many people personal health and the feeling of Heimat played a big role in how they related to the Wadden Sea. Energy infrastructure was frequently perceived as a threat to these intimate personal connections.

On the other hand, some spatial imaginaries of the Wadden Sea allowed for the integration of energy infrastructure into the local seascape. Sometimes, the LNG ships were approached with interest rather than hostility. Holding the only deepwater port in Germany, the Wilhelmshaven coast, in industrial narratives, was often portrayed as almost destined for industrial settlements. In addition to that, industrial actors frequently alluded to the dynamic nature of the Wadden Sea to justify industrial pressures on the local ecosystem. Likewise, the interplay of human, and non-human forces in the creation of the Wadden Sea seascape was sometimes drawn on to legitimize industrial influences.

Focusing on how energy imports reach into the political sphere, I found that political participation in decisions around energy infrastructure was evidently impeded. Often, public information events were perceived as mere advertisement for already pre-ordained decisions, rather than an attempt for real participation in decision-making. Many people conceded asymmetrical positions of power to conflicts around energy infrastructure measures. LNG terminal construction as well as general influences of fossil lobbyism fostered an environment of political dissatisfaction among environmentalists, that was particularly directed at the Greens. Notably, industrial conflicts and compromises are not unknown to coastal residents but subsume in a longer regional history.

Lastly, I have ended by showing how transformations of the local energy seascape are embedded into the larger political economy. Fracking and its disproportionate impacts on marginalized communities were largely condemned among most people. In contrast, neocolonial tendencies of hydrogen production were not identified as easily. Talking to employees in the energy sector, I found that alleged NIMBY-tendencies and terra nullius narratives were often put forward to justify hydrogen imports. In addition to that, by relating struggles at the local energy seascape to ecological and social harm at other places along the LNG supply chain, transboundary connections of solidarity have emerged at the Wadden Sea.

The results presented in this thesis demonstrate how contexts across different scales intertwine in the making of energy seascapes. More precisely, global and national contexts in this case interlaced with the local history of energy industrial investments – thereby producing conditions under which extension of gas infrastructure at the Wadden Sea was facilitated. Local perspectives on maritime energy infrastructures revealed how contesting spatial imaginaries are invoked to make sense of contemporary transformations of the energy seascape. The transition imaginary perpetuated by industrial actors in this context is strongly depoliticized, as it

inherently revolves around managing questions of supply security, while securing industrial prosperity and enabling regional upswing in the decarbonized economy. However, I found that this transition imaginary is locally contested. Among environmentalists, transformations of the energy seascape were commonly understood as a cementation of fossil structures. A spatial transformation imaginary is evoked, in which heavy industrialization will cause ecological harm, adverse effects on tourism, and loss of Heimat. Energy infrastructure in these cases clashed with the spatial imaginary of the local seascape, which precipitated profound fears for the local ecosystem and were perceived as a threat to the intimate relation interlocutors had to the local seascape.

Adopting a framework of justice, I illustrated how power relations can materialize in maritime infrastructures for energy imports. Ethnographic research revealed deficits at distributional, recognition-based, and procedural dimensions of blue and energy justice. In addition to that, I laid open how the depoliticization of contemporary efforts in the energy sector fosters and obscures energy injustices at sites of energy production – thereby perpetuating relations of neocolonial exploitation. Therefore, this thesis ties in with more recent works on hydrogen and green colonialism (Tunn et al., 2025, p. 1; Hamouchene, 2023, p. 30). Importantly, I found that these power dynamics are also heavily contested. Linking injustices along transboundary energy chains, the local resistance movement has established relations of trans-local solidarity to other regions.

Aside from the theoretical implications of my research, the findings of this thesis can offer valuable insights to actors outside of academia. Developing just energy policies requires a profound understanding of local perspectives and underlying power dynamics. The findings of this thesis underline how restricted participation in decision-making fosters political dissatisfaction. Therefore, it is critical to ensure actual participation in decision-making rather than deploying choreographed participation processes.

Lastly, I hope that this study can help local resistance movements to repoliticize struggles around energy, shifting the focus from technocratic arguments to the underlying social relations that are touched by energy. While hydrogen imports are still in the fledgling stages, findings of this thesis suggest a need to underscore neocolonial tendencies early on. Transboundary solidarity could offer a way to politicize struggles along hydrogen transportation chains.

Given that the construction of the energy park has not yet begun, hopefully, the findings of this thesis can inspire real change at the Wilhelmshaven coast. Hence, – to end this thesis on a jitter

of hope – I dream that next autumn, when I revisit the small, rustic stage at the migratory birds festival and watch the Netzwerk Singers perform, this time, the music in my ears will tell the tales of ample interspecies reciprocal care.

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Appendix

Appendix A – Interview Guidelines

A.1 Interview Guidelines for Residents

Einleitung:

Vielen Dank, dass Sie[1] sich die Zeit nehmen, mit mir zu reden. Wie schon erwähnt führe ich im Rahmen meiner Masterarbeit Interviews durch. Der Schwerpunkt der Masterarbeit liegt auf den beiden LNG-Terminals, die in Wilhelmshaven in das Wattenmeer gebaut wurden und an denen Flüssiggas aus anderen Ländern nach Deutschland und Europa importiert wird. Das erste Gas-Terminal wurde 2022 gebaut als Reaktion auf die Energiekrise als Folge des Russland-Ukraine-Kriegs, und das zweite im Jahre 2025. In meiner Masterarbeit untersuche ich die Perspektive von Anwohnenden und möchte erfahren, wie sich Wilhelmshavens neue Rolle als „zentrale Energiedrehscheibe“ auf das Leben der Menschen in der Region auswirkt.

Ich möchte nochmal betonen, dass es keine richtigen oder falschen Antworten gibt. Das Interview wird eher wie ein informelles Gespräch sein. Auch wenn ich es nicht erwarte, möchte ich auch nochmal sagen, dass Sie keine der Fragen beantworten müssen und dass Sie das Interview jederzeit stoppen können.

Haben Sie irgendwelche Fragen an mich?

Ich werde nun mit der Aufnahme beginnen, ist das okay?

Aufnahme starten

Dann möchte ich zu Beginn noch einmal sicherstellen, dass Sie folgenden Bedingungen zustimmen:

- Das Interview wird aufgezeichnet und es wird ein Transkript erstellt.
- Das Transkript des Interviews wird von mir analysiert und der Zugriff auf das Interviewtranskript ist auf mich und akademische Kolleg*innen beschränkt.
- Die eigentliche Aufzeichnung wird vertraulich behandelt.
- Alle Zusammenfassungen des Interviewinhalts oder direkten Zitate aus dem Interview, die in der Masterarbeit veröffentlicht werden, werden (falls Sie damit einverstanden sind) anonymisiert, sodass Sie nicht identifiziert werden können. Es

[1] Depending on the relationship to the interlocutor, either ‘Sie’ or ‘Du’ was used to address the interlocutor

wird darauf geachtet, dass keine anderen Informationen aus dem Interview preisgegeben werden, die Rückschlüsse auf Ihre Identität zulassen.

Socioeconomic Restructuring:

- Erzählen Sie mir vorab gerne ein bisschen was über sich und Ihr Leben in der Region.
    - Probes: Wie verbringen Sie Ihren Alltag?

Energy and Energy Transition:

- Nun möchte ich mit Ihnen ein wenig über die Energiewende in Deutschland und die LNG Terminals an der Küste sprechen. Können Sie mir ein bisschen was über Ihre Erfahrungen und Gedanken dazu erzählen?
- Können Sie mir erzählen, wie Sie die Terminals im Alltag wahrnehmen?
    - Probes: Können Sie beschreiben, ob sich durch den Bau der Terminals etwas in Ihrer unmittelbaren Umgebung verändert hat?
- Was denken Sie über den geplanten Umstieg auf Wasserstoff in der Region?[2]

Politics and Political Participation:

- Wie gut haben Sie sich über den Bau der Terminals informiert gefühlt?
    - Probes: Informationsveranstaltungen?
- Können Sie mir erzählen, wie Sie die mediale Berichterstattung rund um die Terminals denken wahrgenommen haben?[3]

Meaning Making and Spatial Imaginary:

- Zuletzt möchte ich Ihnen ein paar Fragen zur Küste und zum Wattenmeer stellen. Was verbinden Sie mit der Küste und dem Wattenmeer?
- Was glauben Sie kann sich generell durch den Bau der Terminals und die generellen Entwicklungen im Energiesektor in der Region verändern?

- Meine Forschung bezieht sich ja wie gesagt vor allem auf die Erfahrungen von Anwohnenden mit den beiden Flüssiggasterminals. Gibt es dazu noch etwas, dass Sie mir nicht erzählt haben, aber mir gerne erzählt hätten?

[2] This question was only added at a later point
[3] This question was later dropped because it perceived as less important

Demographic Questions:

- Vielen Dank, als letztes würde ich Ihnen nur noch kurz ein paar allgemeine standarddemographische Fragen stellen. Welchem Geschlecht fühlen Sie sich zugehörig?
- In welchem Jahr sind Sie geboren?
- Was für eine Staatsangehörigkeit haben Sie?
- In welchem Land sind Sie geboren?
- Können Sie mir erzählen, in welchem Land Ihre Eltern geboren sind?
- Wie würden Sie Ihren Familienstand beschreiben?
    - Probes: Ledig, verheiratet/eingetragene Lebenspartnerschaft, geschieden, verwitwet
- Wie viele Personen wohnen in Ihrem Haushalt?
- Können Sie mir Ihren Bildungsweg ein bisschen beschreiben?
- Wenn Sie möchten, können Sie mir zum Schluss noch eine freiwillige Einschätzung Ihres monatlichen Haushaltsnettoeinkommens geben. Dafür gibt es Buchstaben, Sie müssen also keine Zahl nennen. Können Sie mir zeigen, welcher Buchstabe von A-F am besten das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts beschreibt?
    - Probes: Denken Sie nicht nur an Arbeitseinkommen, sondern auch an Renten, Pensionen, Stipendien, regelmäßige staatliche, familiäre und andere Unterstützungen.

      Das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts sind die Einkünfte abzüglich Steuern und Sozialversicherung
    - Probes Selbstständige: abzüglich Betriebsausgaben und Steuern

Abschluss:

Vielen Dank, dass Sie sich die Zeit für mich genommen haben. Das war dann das Ende des Interviews.

A.2 Interview Guidelines for Activists

Einleitung:

Vielen Dank, dass Sie sich die Zeit nehmen, mit mir zu reden. Wie schon erwähnt führe ich im Rahmen meiner Masterarbeit Interviews durch. Der Schwerpunkt der Masterarbeit liegt auf den beiden LNG-Terminals, die in Wilhelmshaven in das Wattenmeer gebaut wurden. In meiner Masterarbeit untersuche ich die Perspektive von Personen, die sich gegen die Terminals einsetzen, und möchte erfahren, wie sich Wilhelmshavens neue Rolle als „zentrale Energiedrehscheibe“ auf das Leben der Menschen in der Region auswirkt.

Ich möchte nochmal betonen, dass es keine richtigen oder falschen Antworten gibt. Das Interview wird eher wie ein informelles Gespräch sein. Auch wenn ich es nicht erwarte, möchte ich auch nochmal sagen, dass Sie keine der Fragen beantworten müssen und dass Sie das Interview jederzeit stoppen können.

Haben Sie irgendwelche Fragen an mich?

Ich werde nun mit der Aufnahme beginnen, ist das okay?

Aufnahme starten

Dann möchte ich zu Beginn noch einmal sicherstellen, dass Sie folgenden Bedingungen zustimmen:

- Das Interview wird aufgezeichnet und es wird ein Transkript erstellt.
- Das Transkript des Interviews wird von mir analysiert und der Zugriff auf das Interviewtranskript ist auf mich und akademische Kolleg*innen beschränkt.
- Die eigentliche Aufzeichnung wird vertraulich behandelt.
- Alle Zusammenfassungen des Interviewinhalts oder direkten Zitate aus dem Interview, die in der Masterarbeit veröffentlicht werden (falls Sie damit einverstanden sind), werden anonymisiert, sodass Sie nicht identifiziert werden können. Es wird darauf geachtet, dass keine anderen Informationen aus dem Interview preisgegeben werden, die Rückschlüsse auf Ihre Identität zulassen.

Politics and Political Participation:

- Können Sie mir als Einstieg ein wenig über sich selbst und Ihren Hintergrund erzählen?
    - Probes: Wie sind Sie zur Umwelt-/Klimabewegung gekommen?

- Können Sie mir beschreiben wie das war, als Sie zum ersten Mal von den LNG-Terminals in Wilhelmshaven erfahren haben?
- Wie kam es dazu, dass Sie gegen die Terminals aktiv wurden?
- Können Sie mir von Situationen erzählen, in denen Sie sich politisch gegen die Terminals engagiert haben?
- Wie nehmen Sie die Reaktionen auf Ihr Engagement wahr?
    - Probes: Können Sie mir von Ihren Begegnungen mit Anwohnenden erzählen?

Energy and Energy Transition:

- Nun möchte ich mit Ihnen ein wenig über die Energiewende in Deutschland und die LNG Terminals an der Küste sprechen. Können Sie mir ein bisschen was über Ihre Erfahrungen und Gedanken dazu erzählen?
- Was denken Sie über den geplanten Umstieg auf Wasserstoff in der Region?[4]
- Können Sie mir erzählen, wie Sie die mediale Berichterstattung rund um die Terminals denken wahrgenommen haben?[5]

Meaning Making and Spatial Imaginary:

- Zuletzt möchte ich Ihnen ein paar Fragen zur Küste und zum Wattenmeer stellen. Was verbinden Sie mit der Küste und dem Wattenmeer?
- Was glauben Sie kann sich generell durch den Bau der Terminals und die generellen Entwicklungen im Energiesektor in der Region verändern?

- Meine Forschung bezieht sich ja wie gesagt vor allem auf die Erfahrungen von Anwohnenden mit den beiden Flüssiggasterminals. Gibt es dazu noch etwas, dass Sie mir nicht erzählt haben, aber mir gerne erzählt hätten?

Demographic Questions:

- Vielen Dank, als letztes würde ich Ihnen nur noch kurz ein paar allgemeine standarddemographische Fragen stellen. Welchem Geschlecht fühlen Sie sich zugehörig?
- In welchem Jahr sind Sie geboren?
- Was für eine Staatsangehörigkeit haben Sie?

[4] This question was only added at a later point
[5] This question was later dropped because it perceived as less important

- In welchem Land sind Sie geboren?
- Können Sie mir erzählen, in welchem Land Ihre Eltern geboren sind?
- Wie würden Sie Ihren Familienstand beschreiben?
    - Probes: Ledig, verheiratet/eingetragene Lebenspartnerschaft, geschieden, verwitwet
- Wie viele Personen wohnen in Ihrem Haushalt?
- Können Sie mir Ihren Bildungsweg ein bisschen beschreiben?
- Wenn Sie möchten, können Sie mir zum Schluss noch eine freiwillige Einschätzung Ihres monatlichen Haushaltsnettoeinkommens geben. Dafür gibt es Buchstaben, Sie müssen also keine Zahl nennen. Können Sie mir zeigen, welcher Buchstabe von A-F am besten das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts beschreibt?
    - Probes: Denken Sie nicht nur an Arbeitseinkommen, sondern auch an Renten, Pensionen, Stipendien, regelmäßige staatliche, familiäre und andere Unterstützungen.

      Das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts sind die Einkünfte abzüglich Steuern und Sozialversicherung
    - Probes Selbstständige: abzüglich Betriebsausgaben und Steuern

Abschluss:

Vielen Dank, dass Sie sich die Zeit für mich genommen haben. Das war dann das Ende des Interviews.

A.3 Interview Guidelines for Employees in the Energy Sector

Einleitung:

Vielen Dank, dass Sie sich die Zeit nehmen, mit mir zu reden. Wie schon erwähnt führe ich im Rahmen meiner Masterarbeit Interviews durch. Der Schwerpunkt der Masterarbeit liegt auf den beiden LNG-Terminals, die in Wilhelmshaven in das Wattenmeer gebaut wurden. In meiner Masterarbeit untersuche, wie sich Wilhelmshavens neue Rolle als „zentrale Energiedrehscheibe“ auf das Leben der Menschen in der Region auswirkt.

Ich möchte nochmal betonen, dass es keine richtigen oder falschen Antworten gibt. Das Interview wird eher wie ein informelles Gespräch sein. Auch wenn ich es nicht erwarte, möchte ich auch nochmal sagen, dass Sie keine der Fragen beantworten müssen und dass Sie das Interview jederzeit stoppen können.

Haben Sie irgendwelche Fragen an mich?

Ich werde nun mit der Aufnahme beginnen, ist das okay?

Aufnahme starten

Dann möchte ich zu Beginn noch einmal sicherstellen, dass Sie folgenden Bedingungen zustimmen:

- Das Interview wird aufgezeichnet und es wird ein Transkript erstellt.
- Das Transkript des Interviews wird von mir analysiert und der Zugriff auf das Interviewtranskript ist auf mich und akademische Kolleg*innen beschränkt.
- Die eigentliche Aufzeichnung wird vertraulich behandelt.
- Alle Zusammenfassungen des Interviewinhalts oder direkten Zitate aus dem Interview, die in der Masterarbeit veröffentlicht werden (falls Sie damit einverstanden sind), werden anonymisiert, sodass Sie nicht identifiziert werden können. Es wird darauf geachtet, dass keine anderen Informationen aus dem Interview preisgegeben werden, die Rückschlüsse auf Ihre Identität zulassen.

Labor and Socioeconomic Restructuring

- Können Sie mir als Einstieg ein wenig über sich selbst und Ihren Hintergrund erzählen?
- Können Sie mir ein bisschen über Ihren Alltag bei [...] erzählen?
    - Probes: Was sind Ihre Tätigkeiten dort?

Energy Transition:

- Nun möchte ich mit Ihnen ein wenig über die Energiewende in Deutschland und die LNG Terminals an der Küste sprechen. Können Sie mir ein bisschen was über Ihre Erfahrungen und Gedanken dazu erzählen?
- Was denken Sie über den geplanten Umstieg auf Wasserstoff in der Region?[6]

Politics and Political Participation:

- Können Sie mir von Begegnungen mit Anwohnenden erzählen, falls es welche gab?
- Welche Widerstände und Bedenken begegnen Ihnen bei Ihrer Arbeit in Bezug auf die LNG-Terminals?
    - Probes: Was denken Sie über die Kritik aus Klima- und Naturschutz Perspektive?
- Können Sie mir erzählen, wie Sie die mediale Berichterstattung rund um die Terminals denken wahrgenommen haben?[7]

Meaning Making and Spatial Imaginary:

- Zuletzt möchte ich Ihnen ein paar Fragen zur Küste und zum Wattenmeer stellen. Was verbinden Sie mit der Küste und dem Wattenmeer?
- Was glauben Sie kann sich generell durch den Bau der Terminals und die generellen Entwicklungen im Energiesektor in der Region verändern?

- Meine Forschung bezieht sich ja wie gesagt vor allem auf die Erfahrungen von Anwohnenden mit den beiden Flüssiggasterminals. Gibt es dazu noch etwas, dass Sie mir nicht erzählt haben, aber mir gerne erzählt hätten?

Demographic Questions:

- Vielen Dank, als letztes würde ich Ihnen nur noch kurz ein paar allgemeine standarddemographische Fragen stellen. Welchem Geschlecht fühlen Sie sich zugehörig?
- In welchem Jahr sind Sie geboren?
- Was für eine Staatsangehörigkeit haben Sie?

[6] This question was only added at a later point
[7] This question was later dropped because it perceived as less important

- In welchem Land sind Sie geboren?
- Können Sie mir erzählen, in welchem Land Ihre Eltern geboren sind?
- Wie würden Sie Ihren Familienstand beschreiben?
    - Probes: Ledig, verheiratet/eingetragene Lebenspartnerschaft, geschieden, verwitwet
- Wie viele Personen wohnen in Ihrem Haushalt?
- Können Sie mir Ihren Bildungsweg ein bisschen beschreiben?
- Wenn Sie möchten, können Sie mir zum Schluss noch eine freiwillige Einschätzung Ihres monatlichen Haushaltsnettoeinkommens geben. Dafür gibt es Buchstaben, Sie müssen also keine Zahl nennen. Können Sie mir zeigen, welcher Buchstabe von A-F am besten das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts beschreibt?
    - Probes: Denken Sie nicht nur an Arbeitseinkommen, sondern auch an Renten, Pensionen, Stipendien, regelmäßige staatliche, familiäre und andere Unterstützungen.

      Das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts sind die Einkünfte abzüglich Steuern und Sozialversicherung
    - Probes Selbstständige: abzüglich Betriebsausgaben und Steuern

A.4 Interview Guidelines for Local Politicians

Einleitung:

Vielen Dank, dass Sie sich die Zeit nehmen, mit mir zu reden. Wie schon erwähnt führe ich im Rahmen meiner Masterarbeit Interviews durch. Der Schwerpunkt der Masterarbeit liegt auf den beiden LNG-Terminals, die in Wilhelmshaven in das Wattenmeer gebaut wurden. In meiner Masterarbeit untersuche ich den politischen Konflikt rund um die beiden LNG-Terminals und möchte erfahren, wie sich Wilhelmshavens neue Rolle als „zentrale Energiedrehscheibe“ auf das Leben der Menschen in der Region auswirkt.

Ich möchte nochmal betonen, dass es keine richtigen oder falschen Antworten gibt. Das Interview wird eher wie ein informelles Gespräch sein. Auch wenn ich es nicht erwarte, möchte ich auch nochmal sagen, dass Sie keine der Fragen beantworten müssen und dass Sie das Interview jederzeit stoppen können.

Haben Sie irgendwelche Fragen an mich?

Ich werde nun mit der Aufnahme beginnen, ist das okay?

Aufnahme starten

Dann möchte ich zu Beginn noch einmal sicherstellen, dass Sie folgenden Bedingungen zustimmen:

- Das Interview wird aufgezeichnet und es wird ein Transkript erstellt.
- Das Transkript des Interviews wird von mir analysiert und der Zugriff auf das Interviewtranskript ist auf mich und akademische Kolleg*innen beschränkt.
- Die eigentliche Aufzeichnung wird vertraulich behandelt.
- Alle Zusammenfassungen des Interviewinhalts oder direkten Zitate aus dem Interview, die in der Masterarbeit veröffentlicht werden (falls Sie damit einverstanden sind), werden anonymisiert, sodass Sie nicht identifiziert werden können. Es wird darauf geachtet, dass keine anderen Informationen aus dem Interview preisgegeben werden, die Rückschlüsse auf Ihre Identität zulassen.

Politics:

- Können Sie mir zu Beginn ein wenig über sich selbst und Ihren politischen Hintergrund erzählen?

- Können Sie mir etwas über Ihre Rolle im Bezug auf die LNG-Terminals in Wilhelmshaven erzählen?

Energy and Energy Transition:

- Nun möchte ich mit Ihnen ein wenig über die Energiewende in Deutschland und die LNG Terminals an der Küste sprechen. Können Sie mir ein bisschen was über Ihre Position dazu erzählen?
- Was denken Sie über den geplanten Umstieg auf Wasserstoff in der Region?[8]

Political Participation:

- Was für Konflikte nehmen Sie generell um den Bau der Terminals wahr?
    - Probes: Gab es Konflikte oder Reibungen innerhalb Ihrer Partei oder zwischen politischen Ebenen?
    - Probes: Was denken Sie über die Kritik aus Klima- und Naturschutz Perspektive?
- Können Sie mir von Begegnungen mit Anwohnenden erzählen, falls es welche gab?
- Können Sie mir erzählen, wie Sie die mediale Berichterstattung rund um die Terminals denken wahrgenommen haben?[9]

Labor and Socioeconomic Restructuring:

- Welche Probleme nehmen Sie generell in der Region wahr?

Meaning Making and Spatial Imaginary:

- Zuletzt möchte ich Ihnen ein paar Fragen zur Küste und zum Wattenmeer stellen. Was verbinden Sie mit der Küste und dem Wattenmeer?
- Was glauben Sie kann sich generell durch den Bau der Terminals und die generellen Entwicklungen im Energiesektor in der Region verändern?

- Meine Forschung bezieht sich ja wie gesagt vor allem auf die Erfahrungen von Anwohnenden mit den beiden Flüssiggasterminals. Gibt es dazu noch etwas, dass Sie mir nicht erzählt haben, aber mir gerne erzählt hätten?

[8] This question was only added at a later point
[9] This question was later dropped because it perceived as less important

Demographic Questions:

- Vielen Dank, als letztes würde ich Ihnen nur noch kurz ein paar allgemeine standarddemographische Fragen stellen. Welchem Geschlecht fühlen Sie sich zugehörig?
- In welchem Jahr sind Sie geboren?
- Was für eine Staatsangehörigkeit haben Sie?
- In welchem Land sind Sie geboren?
- Können Sie mir erzählen, in welchem Land Ihre Eltern geboren sind?
- Wie würden Sie Ihren Familienstand beschreiben?
    - Probes: Ledig, verheiratet/eingetragene Lebenspartnerschaft, geschieden, verwitwet
- Wie viele Personen wohnen in Ihrem Haushalt?
- Können Sie mir Ihren Bildungsweg ein bisschen beschreiben?
- Wenn Sie möchten, können Sie mir zum Schluss noch eine freiwillige Einschätzung Ihres monatlichen Haushaltsnettoeinkommens geben. Dafür gibt es Buchstaben, Sie müssen also keine Zahl nennen. Können Sie mir zeigen, welcher Buchstabe von A-F am besten das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts beschreibt?
    - Probes: Denken Sie nicht nur an Arbeitseinkommen, sondern auch an Renten, Pensionen, Stipendien, regelmäßige staatliche, familiäre und andere Unterstützungen.

      Das durchschnittliche monatliche Nettoeinkommen Ihres Haushalts sind die Einkünfte abzüglich Steuern und Sozialversicherung
    - Probes Selbstständige: abzüglich Betriebsausgaben und Steuern

A.5 Income card

Durchschnittliches monatliches Nettoeinkommen des Haushalts

A	Unter 500€
B	500 bis unter 1.000€
C	1.000 bis unter 2.000€
D	2.000 bis unter 4.000€
E	4.000 bis unter 7.000€
F	7.000€ und mehr

Appendix B – Quotes in Original Language

B.1 Local Perspectives on Changes of the Energy Seascape of the Wadden Sea

B.1.1 Supply Security and Imagining LNG on a Temporal Scale

„[...] wenn die Leute dann angefangen haben, irgendwie rumzumeckern, dann habe ich ja auch, habe ich immer gesagt, dass sie das ja auch gerne im Winter warm haben möchten und dann müssen wir das halt jetzt so machen.“ (Silas, interview, October 2025)

“[...] wir wollen keine kalten Füße haben. Und auch die Industrie muss laufen. Die braucht viel Gas und das zu möglichst vernünftigen, wettbewerbsfähigen Preisen. Sonst geht nichts. Und ja, das ist dann notwendig irgendwo.“ (Manuel, interview, October 2025).

“[...] da ist glaube ich so ein bisschen mit unserer Angst gespielt worden. Da kann ich mich schon so ein bisschen dran erinnern, dass so diese so, ne, das muss jetzt, weil sonst [...] haben wir hier irgendwann nicht mehr genug Gas, um sämtliche... Es ist ja auch nicht nur... Heizung ist das, was dich betrifft, aber es sind ja tatsächlich auch Krankenhäuser. Oder Sachen, die betrieben werden müssen. Dass du dafür nicht mehr genug Energie hast, ne?“ (Andrea, interview, October 2025)

„Und es war halt extrem schockierend, dass das so schnell durchgeboxt wurde, so mit dem Ding, ‚Eure Wohnzimmer werden kalt sein, wenn wir das nicht machen und wir müssen Deutschland retten und in Rekordgeschwindigkeit die Dinge aus dem Boden stampfen‘.“ (Johanna, interview, October 2025)

„[...] aber da habe ich dann auch gesagt: ‚Okay, das ist für zwei Jahre dann‘, ich meine, wir wurden ja nicht gefragt, wir haben ja nicht gewählt darüber. Da habe ich gesagt: ‚Das müssen wir vielleicht in Kauf nehmen, als Überbrückungslösung und da haben wir zwei Jahre dieses olle Schiff hier vor der Haustür stehen und dann kommt was Besseres, oder so‘, ne? Aber dieses Bessere ist ja nur noch schlimmer geworden, und das Schiff wurde ja nicht für 20 Jahre [sic] gechartert, sondern für 20 Jahre gechartert.“ (Ursula, interview, October 2025)

„[...] wir bilden heute und jetzt Versorgungssicherheit ab. Dafür sind die schwimmenden Terminals relativ kurzfristig und im Übergang eingesetzt. Dies bildet die Basis, auf der die Transformation stattfinden kann.“[10] (Oliver, interview, September 2025)

[10] Wording was slightly revised at request of the interlocutor.

„Für mich ist das noch mal so das letzte Aufbäumen oder noch ein weiteres Aufbäumen der fossilen Industrie.“ (Ursula, interview, October 2025)

„Sauberes Gas ist eine dreckige Lüge. Darauf kann ich es schon mal runterbrechen. Es wird viel Augenwischerei betrieben. Es ist nicht umweltfreundlicher als. Es ist auch keine Übergangstechnologie. Es zementiert im Moment fossile Strukturen.“ (Deike, interview, November 2025)

B.1.2 Regional Transition Towards an Energy Hub

[...] an unseren Standorten in Wilhelmshaven, in Brunsbüttel und zukünftig auch in Stade gibt es jeweils auch Projekte für landseitige Terminals. Alle mit etwas unterschiedlichen Strategien, aber immer mit dem Pfad zu klimaneutralen Gasen. Ob das jetzt Wasserstoff ist, ob das Derivate sind, wie beispielsweise Ammoniak oder ob das synthetisches oder Bio-LNG ist. Alle beginnen mit klassischem LNG-Import und rüsten ihre Terminals dann schrittweise um. Die landseitigen Terminals werden für den Import von erneuerbaren Gasen die wichtigsten Transformationsrollen einnehmen.”[11] (Oliver, interview, September 2025)

„Wasserstoff kann Teil der Lösung sein und muss dementsprechend mitgedacht werden, gerade wenn es um die Wärmewende geht und darum, wie wir die Industrie von Gas wegbekommen, also von Erdgas.“ (Luna, interview, September 2025)

“Und im Moment ist, finde ich, diese Wasserstoffgeschichte noch so ein bisschen zu viel Zukunftsmusik.“ (Silas, October 2025, interview)

„Ich höre ja immer das Wort Brückentechnologie und so, ne? Und dann soll ja der Wasserstoff importiert werden, der grüne, den es noch gar nicht gibt. Und ich glaube auch gar nicht, dass der kommen wird [...]“ (Volker, October 2025, interview)

“Das heißt ja die Pipelines, die man heute baut, seien Wasserstoff-ready und das ist eine Lüge. Denn Muffen und Dichtungen müssen auf Wasserstoff umgesetzt werden und man möchte erst eine ganze Weile den Wasserstoff anteilig ins Methannetz einspeisen, sodass wir viel mehr bezahlen für eine Wärmeversorgung im Winter.” (Alexandra, September 2025, interview)

„Es ist ein Thema für innere Sicherheit und Sicherheitspolitik, wenn hier tatsächlich ein Energy Hub, eine Energiedrehscheibe erstellt wird. Weil wir sind dann nicht dezentral. Sprich, es ist ein Punkt, der angegriffen werden muss und schon geht wie in anderen Orten unter Umständen

[11] Wording was slightly revised at request of the interlocutor.

das Licht wirklich aus. Wir machen uns dann von einem großen Punkt abhängig, was sich ja gezeigt hat, auch in der Ukraine, was überhaupt gar keine gute Idee ist. Also jedes Atomkraftwerk [...] ist ein einfaches Ziel und ein vulnerables Ziel.“ (Deike, interview, October 2025)

„Ich möchte das gar nicht so sagen, irgendwie so nach dem Motto Putin oder so, aber ich könnte mir das durchaus vorstellen, so wie die Lage im Moment ist, dass irgendwie einer ja nun mal eskalieren muss, ne? Die sind alle gerade relativ überreizt, die finden Ideen, und ich glaube, da muss jetzt einfach irgendwie so ein Funke irgendwie passieren und dann haben wir hier eine riesen Katastrophe. Ja und dann bist du halt als Deutschland ja irgendwie auch ein bisschen mittendrin, bist auch gefragt, du bist NATO-Partner. Ja, also sehe ich schon so ein bisschen mit Sorge, ne?“ (Andrea, interview, October 2025)

„Und wir hoffen jedenfalls, dass wir dann nicht mehr an der, sagen wir mal, wirtschaftlich bezogen jedenfalls, am Ende der Industrialisierung von Deutschland sind, nicht? Sie wissen vielleicht, dass wir 401 Landkreise und kreisfreie Städte haben und in vielen Belangen ist Wilhelmshaven die 401. Stelle, ne?“ (Karl-Heinz, interview, October 2025)

„Also es ist ja eine Transformation der kompletten Umgebung, meines Lebenswohlfühlraumes, [die] da ansteht, weil es endet ja nicht mit den LNG-Terminals, sondern es sind irgendwie 14, 15 Projekte in der kompletten Region, die dann einen Streifen ergeben werden, der sich für mich ähnlich gestaltet, wie die Bilder, die ich aus Nordrhein-Westfalen kenne.“(Deike, interview, October 2025)

“Und wir haben in Anführungsstrichen ja hier selber gar nichts davon. Und wenn ich mit anderen Leuten vielleicht irgendwann mal das Thema anspreche, heißt das ja Arbeitsplätze. Da hat niemand einen Arbeitsplatz davon. Das Schiff ist von irgendwelchen armen Philippinos bemannt, die dann alle sechs [Monate] mal zwei Wochen nach Hause gehen dürfen. Die Rohre wurden überwiegend von De Römer aus den Niederlanden gelegt. Da waren mal irgendwelche lokalen Fuhrunternehmen, die dann entweder Schlick an- oder abgefahren haben und ein paar Versorgungsfahrzeuge. Aber das ist ja nun nicht gerade das große Versprechen, dass wir in einer strukturschwachen Gegend dadurch gut bezahlte Arbeitsplätze bekommen jetzt, ne?” (Ursula, interview, October 2025)

B.1.3 Conflicts with Other Sectors

“[...] man kann praktisch [...] sehen, wenn wenig Gäste da sind, dann sind auch allgemein im Wangerland wenig Gäste da. [...] Und wenn das dann im direkten Zusammenhang mit

irgendeinem Bauwerk ist, das da hingesetzt wurde, [...] dann würde ich ja sagen, es liegt an dem Schiff. Aber grundsätzlich kann ich sagen, es hat sich nicht geändert. Also das Schiff hat keine negativen Auswirkungen [...] auf den Fremdenverkehr. Das ist so mein Eindruck." (Silas, interview, October 2025)

„Und als das Schiff dann kam, war das so, dass ich, also ich für mich dachte, weil ich glaube, da spreche ich auch so ein bisschen für die Urlauber, eigentlich eher positiv ist, wenn man am Strand ist und Schiffe sieht, weil das ja auch irgendwie so zu mehr dazugehört, das man jetzt einfach nur als Schiff an sich betrachtet." (Silas, interview, October 2025)

"[...] ich sage mal so, ich habe einige Flächen, wenn ich die auch nur 30 oder 50 Zentimeter tiefer lege, dann brauche ich die nicht mehr bewirtschaften. Dann sind die abgesoffen. Weil wir hier wassernah leben. Wir haben halt nicht so viel Gefälle, um Wasser aus dem Land rauszuleiten. Da zählt jeder Zentimeter. Und wenn ich dann das hier alles einspüle und da letztendlich eine Schüssel draus mache, dann läuft das Wasser hier nicht mehr raus, dann darf ich anfangen zu pumpen. Und dann habe ich eine Ewigkeitslast, meines Erachtens." (Renke, interview, November 2025)

"[...] dem Ostfriesen, denen gehört ihr Grundstück bis zum Erdmittelpunkt, so ganz krass gesagt, und mir oben, mir gehört nur der Meter oben drauf und ich darf vielleicht noch Sachen wie Kies und Sand abbauen mit einer Genehmigung, aber alles andere gehört dem Land Niedersachsen." (Renke, interview, November 2025)

B.2 How Energy Imports Influence Local Relations to the More-Than-Human

B.2.1 Liquid Gas Imports and the Wadden Sea Ecosystem

„[...] Ich als Fachmann bin natürlich da sofort eingestiegen. Als ich mich mit den Unterlagen aus Australien da beschäftigt habe, [habe ich] gesagt: ‚Das kann doch nicht wahr sein'. Die lehnen da unten ein Schiff ab und hier soll das Ding in Betrieb gehen mit einem hundertfachen mehr an Grenzwerten als in Australien. Das konnte ich mir nicht gefallen lassen." (Volker, interview, October 2025)

„Und das Mus wird abgekratzt und dann heißt es vom NLWKN, die Biomasse wird an Land entsorgt. Man sagt uns nicht, welche Fischarten, welche Mengen, welche Größen, wie viele, kleine, nichts sagt man uns. Und wenn nur eine FFH-Art darin ist, eine Flora-Fauna-Habitat-Art, wie zum Beispiel das Neunauge... Das ist ein Salz-Süßwasser-Wechselfisch. Da müsste eigentlich diese Anlage stehen, weil die sind hochgefährdet. Aber man untersucht die Fische

nicht, weil man hat ja keine Umweltverträglichkeitsprüfung machen müssen wegen des LNG-Beschleunigungsgesetzes, nicht wahr?“ (Alexandra, interview, September 2025)

“[...] dann natürlich die Lichtverschmutzung auch, weil die sind ja hellstens erleuchtet. Ich weiß nicht, ob du da warst am Anfang, als die ankam, diese Dreckschleuder, die große, ne, die erste? Die war so hell erleuchtet, also du dachtest, da ist irgendwie eine Großstadt da am Kai gelandet. Es ist unfassbar wie hell und es war wie so ein großer Dom, der da in der Ferne geleuchtet hat. Das hast du von überall gesehen. Und ich weiß, wenn ich im Boot rausfahre nachts, darf ich auf gar keinen Fall Licht anhaben, weil das halt für den Tierschutz sehr wichtig ist. Und da sitzt dann diese Fabrik und leuchtet da hin und die ist jetzt ein bisschen weniger hell, aber das ist halt, aus Sicherheitsgründen muss die hell erleuchtet sein. Und dass das nicht gerade gut ist für die Tiere im Meer kann man sich vorstellen, und auch die Vögel und auch die Tiere an Land. Ganz abgesehen davon von den Menschen und ihrem Schlaf.” (Johanna, interview, October 2025)

„Das zweite Terminal hat ein anderes Reinigungsverfahren, das Ultraschallverfahren, das potenziell Meeresäuger, Schweinswale, schädigen kann, weil die natürlich sehr empfindlich auf Schallwellen reagieren. Aber auch da gibt es Verfahren, die eingesetzt werden, dass die Tiere quasi gewarnt werden, Vorab-Signal, dass sie die Flucht ergreifen und dann in sicherer Entfernung sind, wenn dann per Ultraschall die Rohrleitung gereinigt werden. Also beides sind potenzielle Umweltauswirkungen, die aber eng gemonitort werden und bisher gab es keine Beanstandung durch die Aufsichtsbehörden.“ (Elias, interview, October 2025)

B.2.2 The Energy Park in Voslapper Groden Nord

“[...] und dann, was mich dann halt so berührt oder auch enttäuscht, traurig und wütend macht ist, dass wir jetzt dafür, dass die den Voslapper Groden dafür kriegen. Für eine Industrie, die es noch gar nicht in der Form gibt. Ne, wenn das wenigstens was ausgereiftes ist, wo man genau sagen kann, das wird irgendwas sein, wo wir unsere Erde weniger belasten. Dann wäre ich auch die letzte Person, die da ‚Nein‘ sagen würde. Aber dafür gibt es ja noch gar keine Beweise, ne? Und warum muss man ein Naturschutzgebiet hergeben? Der Voslapper Groden ist riesig. Da sind andere Areale, industriell schon erschlossen worden mit Industrien, die so soweit ich jetzt das verstehe, auch erstmal stillgelegt worden sind. Warum nimmt man nicht diese Teile? Warum nimmt man den Teil, wo unsere Mitwesen sind, deren Zuhause das ist und die auch auf der roten Liste stehen? Ich meine, [...] wie bekloppt kann man sein, das Tafelsilber zu vernichten, was wir haben für die Zukunft. Und das sind halt so Sachen, [...] ist halt unüberlegt jetzt, ne? Egal, was für eine Technologie das ist.” (Ursula, interview, October 2025)

„Ich finde generell das System der Ausgleichsflächen is sehr schwierig. Klar, als Landwirt [...] bin ich vielleicht ein bisschen voreingenommen, aber ich finde das ganze System der Ausgleichsflächen ziemlich bescheuert, weil das ist einfach nur eine Augenwischerei, weil die Fläche, die ich platt gemacht habe, die ist ja trotzdem weg. Nur, weil ich eine andere Fläche ökologisch aufwerte, beziehungsweise das ist ja das was ich sagte: Die Landwirtschaft hält die Flächen frei. [...] [O]b man dann hier Natur drauf packt oder schreibt, das ist letztendlich Papierkram viel. Ist das dann ausgeglichen? Ist das dann wirklich ausgeglichen oder ist dann halt einfach nur eine Fläche ein bisschen aufgewertet, während eine andere aber trotzdem kaputt gemacht wurde? Und dementsprechend sehe ich das hier kritisch. Und vor allem mit dem Voslapper Groden Nord. [...] [D]as (die Weidenflächen) sind halt nicht solche Standorte für irgendwelche spezielleren Pflanzen, [...] die halt nährstoffärmere Standorte brauchen und wo auch mal ein offenes Stückchen Erde ist oder sowas, wo dann (unv.) irgendwie Vögel oder sowas alles zusammenleben können.“ (Renke, interview, November 2025)

B.2.3 How Current Energy Imports Relate to Local Imaginaries of the Wadden Sea Seascape

“[...] stellen Sie sich mal bei Windstärke 12 oben auf den Deich. Das ist sowas von toll.“ (Volker, interview, October 2025)

„[...] also eigentlich verbinde ich Haare mit dem Meer, die so ein bisschen strähnig sind, so ein bisschen, du merkst die Luft, wenn du am Strand bist in deinen Haaren.“ (Andrea, interview, October 2025)

“[Warum] macht der Urlauber Urlaub an der See? So, er möchte Meer, er möchte frische Luft, er möchte Land und Leute, er möchte sich erholen oder war vielleicht auch krank, Atemwegserkrankung oder sonst irgendwie. Und da finde ich, dass da Industrien natürlich immer so ein bisschen kontraproduktiv sind, weil die ja dann auch immer mit Emissionen behaftet sind.” (Silas, interview, October 2025)

“Es ist zum Beispiel so, dass man nachts eigentlich Zeitung lesen kann, ohne Licht anzuhaben. Die beiden Terminal-Schiffe haben also einen Beleuchtungseffekt, der ist schlimm. Also die Insel Spiekeroog zum Beispiel ist eine Insel, wo man früher sagte, man kann den Sternenhimmel so gut betrachten, wie sonst kaum irgendwo anders in Deutschland. Und das ist auch vorbei. Die sehen selbst in 40 Kilometer noch den Lichtkegel da von beiden Schiffen. Und bei uns ist es halt extrem.“ (Volker, interview, October 2025)

“[...] wie so ein Feuerball, so ein bisschen rötlich siehst du es auf jeden Fall, dass das Schiff immer leuchtet.“ (Andrea, interview, October 2025)

„Das muss man mal gesehen haben oder Fotos gesehen haben, dass, man denkt, draußen am Hafen brennt es. Aber es sind halt nur die Beleuchtungskörper.” (Volker, interview, October 2025)

“[...] anfangs dachte ich: ‚Ah, ist das ein braunes Meer und so‘, ne? Aber das Wattenmeer ist ja sowas von einzigartig. Die Gezeiten und ja, was das so alles Leben davon abhängt eigentlich, dass dieses Meer da ist, ne? Und das berührt mich halt sehr, ne? Ja, es ist ja so friesisch herbe Landschaft hier, ne, auch menschlich gesehen. [...] Aber ich mag auch, ja, weiß gar nicht, ist ja nicht kalt, es ist nicht kühl, aber es ist so irgendwie so kantig. [...] Das Wattenmeer ist ein Meer, so fast ein bisschen wie ein Arbeitsmeer. Also ist nicht dieses türkisblaue Meer, wo man hinsetzt und dann seinen Cocktail schlürft und sagt: ‚Wie wunderbar‘, aber wenn ich da die Kinder oder den Hunde oder so springen sehe und Muscheln sammeln und wenn ich die Vögel beobachte, denke ich: ‚Wow‘.“ (Johanna, interview, October 2025)

“Aber letztendlich ist das ein kleines Chemiewerk [...] im Wasser. Ja und deshalb bin ich eigentlich manchmal so ein bisschen zwiegespalten, weil ich immer hoffe, dass alle Wartungsarbeiten vernünftig gemacht werden, damit da nie irgendetwas passiert, dass da kein Unfall oder sowas ist. Weil letztendlich ist das ja so unsere Küste hier, unser Fund, ne? Und das würde ich, glaube ich, ganz dramatisch finden, wenn hier irgendwie was passiert, ne?“ (Andrea, interview, October 2025)

“Was ich damit verbinde? Heimat. Das ist meine Heimat. [...] Es ist das Stück Land, wo ich wieder hingekommen bin und wo ich gerne indigen sein möchte. Weil indigen heißt nichts anderes, als mit dem Land verbunden zu sein und eine Güterin dieses Landes zu sein. Und ich mag den Geruch vom Watt. Ich mag die Nordsee lieber als die Ostsee. Ja, das ist für mich Zuhause. Zuhause mit all den Wesen, die meisten, die ich gar nicht kenne, ne? Da müsste ich mal Wattwanderin eine Ausbildung dann so machen. Aber diese Faszination von dem Meer und der Platz, wo zwei Elemente, [...] wo Wasser und Erde aufeinandertreffen einen, das ist ja auch so ein Liminal Space, sagt man auf Englisch dazu, so ein ganz besonderer Verwandlungsort auch jetzt, ne? Und ich könnte ja, wenn ich wollte, könnte ich ja hier wegziehen, aber das würde ich sehr ungern tun. Und ich bin ja auch wieder hierher gezogen, auch wenn es eher unverhofft war, aber [...] das ist mein Zuhause. Und das ist mir wichtig, dass mein Zuhause, ein schöner Ort ist. [...] ich habe ja schon viel gesehen, es ist bei weitem nicht die schönste Küste, die ich

kenne, weil ja diese ganze Küste schon immer stark benutzt wurde von uns Menschen, ne? Weil einfach die See und das Wasser für uns ein ungeheurer Reichtum sind. Und ja, dass ich meinen Anteil dazu tue, dass die Wesen, die hier sind auch eine Heimat haben, die mehr als menschlichen Verwandten, die ich habe und dass die Leute, die nach mir kommen, vielleicht auch noch [...] sagen können ‚Das kann meine Heimat sein'. Und ich finde, dass diese Industrie ein Zerstörungsmechanismus ist." (Ursula, interview, October 2025)

„Ja, so im Alltag, also vor allem so abends finde ich das eigentlich auch schön, wenn wir am Deich entlangfahren mit dem Auto, [...] weil das einfach beeindruckend ist, wenn man es im Dunkeln so alles Leuchten sieht und wie dieses riesengroße Schiff, wenn das so abends beleuchtet ist, sieht das ja aus wie so ein Kreuzfahrtschiff irgendwie, für mich jedenfalls. Und dann ist das einfach nur faszinierend, das irgendwie zu sehen und man stellt sich dann vor, wie das alles so funktioniert und wie die Schiffstechnik funktioniert." (Anja, interview, November 2025)

"Und dann sage ich eins auch immer zu den Gästen, wenn die sagen: ‚Oh, dieses Schiff und was macht das da?' Ich sage: ‚Zur Küste oder zum Hafen gehören auch Schiffe'. Und die Leute möchten auch was zu gucken haben. Und wenn da ein Schiff an und ab legt und die Schlepper kommen, dann ist das eher Abwechslung als stöhrend." (Silas, interview, October 2025)

"Das heißt wir haben enorme Baggermengen zu bewältigen und dieser Tiefwasserhafen Jade-Weser-Port ist eine Lüge. Wir müssen ihn ausbaggern. Es ist die tiefste Stelle, die wir haben in Deutschland, um mit großen Schiffen herzukommen. Aber der ist nicht automatisch tief, sondern es muss gebaggert werden, das nur so scheppert." (Alexandra, interview, September 2025)

"Mit Küste und Wattenmeer? Ja, natürlich im wahrsten Sinne Natur, die sich aber auch regelmäßig verändert und ständig verändert durch natürliche Vorgänge. [...] Und so ist das zum Beispiel auch mit dem Voslapper Groden, wenn Sie überlegen, dass eben in den Mitte der 70er Jahre diese ganzen Grodenflächen [...] aufgespült worden sind und dass die sich innerhalb relativ kurzer Zeit, also gut, hat auch Jahre gedauert, aber in der Sukzession, hat sich natürlich vieles im Grunde wieder ergeben, an Natur hat sich da wieder gesammelt, hat sich wieder, als aus meiner Sicht Zufluchtsort oder so ergeben und hat sich regeneriert und in einer Form regeneriert, wie man es vorher nicht gehabt hat. Ja und das meine ich immer, kommt so ein bisschen zu kurz, wenn man sagt: ‚Ja, wir müssen aber das unbedingt erhalten'. Wenn Sie in den Jadebusen mal reingucken, also so weit ich zurückdenken kann, hat sich der Jadebusen jetzt

wirklich um ein Drittel so etwa verringert, beziehungsweise ist grün geworden inzwischen, ja das ist ja nichts Schlechtes, sondern das ist eigentlich einfach nur eine natürliche Entwicklung.“ (Karl-Heinz, interview, October 2025)

“So und dann fällt mir eben häufig auf, wie jetzt zum Beispiel, ich weiß nicht, ob sie das verfolgt haben, die Wildschweine im Voslapper Groden Süd, ne? Da, gut, ist auch in gewisser Hinsicht Natur und gut, dass die da nicht unbedingt, sagen wir mal gewollt sind, weil sie eben in dieses Biotop nicht reinpassen, kann ich mir sehr gut vorstellen. Aber was ich damit sagen will ist die Frage, wie man mit Natur umgeht, gerade auch in unseren Gefilden hier, die ja eigentlich, es gibt keine wirklichen natürlichen Gefilde mehr hier, die sind alle irgendwie mal umgekrempelt worden schon, ja? So und jetzt erwarten auf der einen Seite die eingefleischten ideologischen Naturschützer, dass alles so bleibt wie vor 150 Jahren oder wieder so wird wie vor 150 Jahren. Das wird es doch nicht geben, ne?” (Karl-Heinz, interview, October 2025)

B.3 How Energy Imports Reach into the Political Sphere

B.3.1 Impeding Political Participation

“[...] ich hatte wirklich gehofft, dass wir da auch gute Antworten bekommen, aber das war eigentlich eine reine politische Veranstaltung, um uns das Ganze schmackhaft zu machen, weil jedes zweite Wort, oder in jedem zweiten Satz kam das Wort ‚Krieg‘ vor, ‚Krise‘, ‚Wir haben nicht genug‘.“ (Ursula, interview, October 2025)

„Die Leute hatten nur ein Thema, das macht die ganze Sache viel, viel einfacher, als wenn man breitwandig aufgestellt ist. Die Leute hatten ja ein gewisses Ziel, man hat gemerkt, die hatten Rhetorik-Training. Da sind Leute aufgestellt worden, die für Zielgruppen möglichst charmant rüberkommen, also für alte, weiße Männer alte, weiße Männer dahingestellt. Von denen lässt man sich das ja viel lieber erzählen, weil hätte man eine kleine, süße Frau dahingestellt, ich gehe davon aus, da hätte es dann Nachfragen zur Kompetenz gegeben. Da, also mit den Geschlechterstereotypen wurde wunderbar gespielt. Es sind halt Vollzeit bezahlte Leute, um dieses Produkt zu bewerben gegen Ehrenamtliche, die versuchen, irgendwie noch was in Einklang zu bringen [...], also die ganze Klimabewegung besteht ja aus NGOs.“ (Deike, interview, October 2025)

„[...] ich hab das immer meinen Kollegen gesagt, wenn ich meinetwegen einen Vortrag halte vor 50 oder vor 100 Leuten, dann bin ich jemand, der das gewohnt ist, ja, der das schon öfters in seinem Leben gemacht hat. Das ist jetzt nicht mehr so, wo ich sagen muss: ‚Oh, da fange ich jetzt an zu zittern‘. Wenn Sie dann aber beobachten, wenn Oma Erna dann aufsteht, in so einer

Runde und mit zitternder Stimme eine Frage stellt, dann weiß man, was das für eine Überwindung ist, vor den Nachbarn, vor den Mitbewohnern in dem Ort aufzustehen und so eine Frage zu stellen. Und vielleicht ist die auch noch ganz doof, die Frage und die anderen wissen schon die Antwort. Und dann hab ich gesagt: ‚Leute habt als allererstes Respekt vor den Leuten, die sich trauen, so eine Frage zu stellen'." (Konstantin, interview, November 2025)

Und der zweite Punkt war dann eben, dass wir gesagt haben: ‚Naja, wir können ja vielleicht die Hemmschwelle etwas reduzieren, damit man besser Fragen stellen kann'. Und das war dieses Open-Table-Konzept, wo wir dann gesagt haben: ‚Naja, wenn jemand, da ist so ein Tisch, da stehen dann drei, zwei, drei nette Leute und da steht der Nachbar auch schon daneben und so weiter. Und die haben auch einen Laptop in der Hand und ein paar Broschüren und dann kann man aber eine Frage stellen, dann ist das jetzt nicht vor großem Publikum'. Und meine persönliche Wahrnehmung war wirklich gelungen, weil diese Hemmschwelle, die war viel, viel niedriger." (Konstantin, interview, November 2025)

B.3.2 Fostering an Environment of Political Distrust

„Also es stinkt fossil, es stinkt lobbyistisch, großlobbyistisch zum Himmel" (Alexandra, September 2025, interview)

"Macht ist ja suchterzeugend, ne? Genau wie Geld und solche Sachen. Und die meisten Politiker handeln nicht unbedingt aus ihrem Herzen oder aus ihrem Gewissen, sondern aus dem, was sie wieder zur nächsten Wahl die Stimmen sichert, ne? Und das ist glaube ich einfach unser System, ne?" (Ursula, October 2025, interview)

"[...] es ist halt so, wir haben eine Person im Wirtschaftsministerium, die das gerade leitet, die aus der Gaslobby kommt, die als Gaslobbyistin in dieser Position ist. Und da wird auch gar kein Hehl draus gemacht, sondern so die Gaslobby sitzt am Kopf des Wirtschaftsministeriums gerade in Person. Und so sieht es halt gerade auch aus in Deutschland und deswegen wird diese Energiewende so krass umgedreht und zurückgewandt." (Luna, September 2025, interview)

„[...] wir sagen immer, das ist Habeck sein Hafen." (Silas, October 2025, interview)

„Und eben halt auch, sagen wir mal, so gepusht von einem grünen Politiker, den ich eigentlich vorher ziemlich gut fand und der eigentlich auch die Schweinswale total toll findet und sogar sehr bewegend. Und den dann zu hören, dass er sagt: ‚Na gut, die Schweinswale müssen da jetzt [...] ein bisschen in den Hintergrund treten im Sinne von nationaler Sicherheit'. Und da ist

es mir erst bewusst geworden, was da gerade passiert, dass das eben die fossile Wirtschaft sozusagen jetzt alle gekapert hat.“ (Johanna, October 2025, interview)

“[...] wer wäre ich denn jetzt, wenn ich sagen würde: ‚Chemie ist total blöd‘? Das kann ich doch auch irgendwie nicht machen. Die haben ja auch letztendlich 30 Jahre dafür gesorgt oder Geld bezahlt oder [meinen Mann] bezahlt. Und da hat er ja auch gerne gearbeitet. Also ich bin jetzt, wie gesagt, ich bin hier nicht der absolute super Gegner oder überhaupt und sage: ‚Nee, das geht überhaupt gar nicht, das macht mich krank. Wenn das Schiff da zu sehen, ich kann nachts nicht schlafen, weil das hell erleuchtet ist‘, oder so, überhaupt nicht. [...] Ja, das wäre auch sehr verlogen. Wenn ich jetzt plötzlich mal hier auf gar keinen Fall Chemie oder so. Das ist ja Quatsch.” (Andrea, October 2025, interview)

„Und ich weiß auch, dass es [...] schon ein Thema war, dass eigentlich als Ausgleich für die Industrie Hooksiel eine Mole zugesprochen wurde, um diesen Sandabbau zu verhindern oder um den ein bisschen vorzubeugen oder zu verlangsamen. Und diese Mole ist ja auch nie gebaut worden. Da haben sich die Hooksieler, glaube ich, immer [...] eigentlich so ein bisschen aufs Glatteis geführt, gefühlt, [...] so nach dem Motto, das wurde ihnen versprochen, aber es wurde nie durchgeführt.“ (Andrea, October 2025, interview)

„[...] in den 70er Jahren, als ich jung war, wurde ja die Entscheidung gefällt, machen wir Wilhelmshaven zu einer weißen Stadt, sprich, bauen wir sie weiter touristisch aus, oder gehen wir für die Industrie? Und damals wurde dann ja der Voslapper Groden in den 70er Jahren erschlossen. Da wurde ja ein ganzes Dorf für platt gemacht. Die Menschen wurden umgesiedelt. Und ich weiß noch, als ich da jung war – da war die Aluminiumarbeit in der Industrie da gewesen – dass Leute ganz viel Asthma, Lungenerkrankungen hatten, wenn da einfach so eine Chlorwelle da mal über den Deich geschwommen, gekommen ist. Und [...] was ist daraus geworden? Nachdem die Gewerbesteuerabstriche, die die Industrien bekommen haben, für zehn Jahre gehabt haben, sind die wieder weggegangen. Ne? Und was macht man jetzt mit uns? Das wird doch genauso wieder sein.“ (Ursula, October 2025, interview)

B.4 How Local Developments Relate to the International Political Economy

B.4.1. The Environmental Racism of Fracking

„[...] was mich am meisten entsetzt, ist eben diese ganze Fracking-Geschichte in den Staaten und was das für menschliche Tragödien verursacht, in größtem Maßstab. Fast immer Menschen mit einem, ja, Hintergrund, der jetzt nicht unbedingt weiß, männlich, reich ist, sondern eher so, ne, indigenen. Die Kulturen, die jetzt nicht unbedingt sich ein großes Haus irgendwo an einem

schönen Platz leisten können. Und dass denen in ihrem Schulhof plötzlich eine Fracking-Industrie entsteht und diese giftigen, krebserregenden Gase freisetzt und ihre Kinder eigentlich keine Chance haben, woanders zu sein. Die können nicht wegziehen. Die werden sozusagen vergiftet, da, wo sie wohnen, ne? Und keinen Menschen interessiert es, weil das ist ja eh die arme Bevölkerung und b), man kann ja so viel Geld machen mit diesem Fracking-Gas.“ (Johanna, October 2025, interview)

B.4.2 Hydrogen Colonialism

“[...] wenn Sie nach draußen gehen und sagen, ja, wir wollen jetzt noch mal achtmal, zehnmal so viel Erneuerbare aufbauen in den nächsten Jahren, muss man damit rechnen, dass man erheblichen Gegenwind erhält. Also allein aus der Frage der Akzeptanz würde ich das für schwierig halten, die erneuerbaren Energien komplett hier in Deutschland zu errichten, mal abgesehen von der Speicherthematik, so dass unsere These ist: Deutschland wird auch weiterhin ein Importland für Energie bleiben.“ (Konstantin, November 2025, interview)

„Und wenn man nur solche Geschichten und solche Momente aneinander reiht, dann weiß man, was für ein beschissenes Business das ist. Hier ist es beschissen und da, wo das Gas aus der Erde geraubt wird sozusagen, ist es noch viel beschissener, weil man da in einer Umgebung lebt, wo die Luft zum Atmen eigentlich tödlich ist.“ (Alexandra, September 2025, interview)

Appendix C – Codebook

Code	Code Description
1 Politics and Political Participation	This code includes all political activities participants engaged in; ways of informing oneself/being informed about the terminals and energy developments; reactions to the terminals and energy developments, including emotional reactions; and expressions that directly point to satisfaction or dissatisfaction with politics as well as general opinions on current state of politics. Technical Arguments are not included.
1.1 Participation	This code includes all political activities participants engaged in; ways of informing oneself/being informed about the terminals and energy developments; perceptions of own influence on politics and level of information; perceptions of transparency.
1.1.1 Monitoring	
1.1.1.1 Trust in Monitoring	
1.1.1.2 No Trust in Monitoring	
1.1.1.3 No Obvious Tendency	
1.1.2 Own Political Engagement	
1.1.3 Information & Participation	
1.1.3.1 Access & (In)transparency	
1.1.3.2 Little knowledge	
1.1.3.3 Information Events	This code includes all passages where interlocutors narrate their experiences at information events.
1.1.3.4 Ways of informing	
1.1.4 Perceived Influence & Participation	
1.2 Reaction to Politics	This code includes reactions to the terminals and energy developments, including emotional reactions; and expressions that directly point to satisfaction or dissatisfaction with politics as well as general opinions on current state of politics. Technical Arguments are not included.
1.2.1 Opinions & Emotions	
1.2.1.1 Positive	
1.2.1.1.1 Agreement	
1.2.1.1.2 Interest	

1.2.1.1.3 Pride	
1.2.1.1.4 Happiness	
1.2.1.2 Neutral	
1.2.1.2.1 Mixed Feelings	
1.2.1.2.2 Comprehension	
1.2.1.2.3 Acceptance & Resignation	
1.2.1.3 Negative	
1.2.1.3.1 Disagreement	
1.2.1.3.2 Fear Terrorism	
1.2.1.3.3 Fear Environment	
1.2.1.3.4 Disappointment & Loss of Trust	
1.2.1.3.5 Frightened & Shocked	
1.2.1.3.6 Felt like Fear was Exploited	
1.2.1.3.7 Felt Treated Unfairly	
1.2.1.3.8 Nonsense	
1.2.1.3.9 Anger	
1.2.1.3.10 Sadness	
1.2.1.3.11 Disbelief & Skepticism	
1.2.1.3.12 Like a Punch in the Face	
1.2.1.4 Other	
1.2.2 Opinion Generally Regarding Politics	
1.2.2.1 Democracy	
1.2.2.2 Lobbyism	
1.2.2.3 Lies & Propaganda	
1.3 Interactions with Others	This code includes all interactions participants have had with other people as well as other people's opinions. Also, statements about how interactions only remain within their own bubble are included.
1.3.1 Majority Agrees or Will Agree	
1.3.2 No Resistance & Others are Indifferent	
1.3.3 Others Criticism is Local and Not Global	
1.3.4 Others Strongly Disagree	
1.3.5 NIMBY	
1.3.6 Other	
1.4 Concrete Party or Politician Mentioned	This code applies to every segment, where concrete political actors are mentioned.
1.4.1 Greens	

1.4.1.1 Green Party	
1.4.1.2 BMWE Greens	
1.4.1.3 Robert Habeck	
1.4.1.4 Green Party Ratsmitglied	
1.4.2 SPD	
1.4.2.1 SPD Party	
1.4.2.2 Olaf Scholz	
1.4.2.3 Olaf Lies	
1.4.2.4 Siemtje Möller	
1.4.3 CDU	
1.4.3.1 CDU Party	
1.4.3.2 BMWE CDU	
1.4.3.3 Katherina Reiche	
1.4.3.4 Friedrich Merz	
1.4.3.5 Angela Merkel	
1.4.4 FDP	
1.4.4.1 FDP Party	
1.4.4.2 Christian Lindner	
1.4.5 AfD	
1.4.6 Without Party	
1.4.6.1 Oberbürgermeister	
1.4.6.2 Bürgermeister	
1.4.6.3 Wählergemeinschaft Wangerland	
1.4.7 Other	
1.4.7.1 Ampelkoalition	
1.4.7.2 die Linke	
1.4.7.3 Vladimir Putin	
1.4.7.4 Markus Söder	
1.4.7.5 Other	
1.5 Political Compromise	This code includes everything that points to a political compromise, e.g. the mole or compromises between different sectors or interests.
1.5.1 Compromise Community & Industry	
1.5.2 Compromise Temporal Use	
1.5.3 Conflict Economy & Environment/Climate	
1.5.4 Conflict Climate- & Environment	

1.6 Asymmetrical Power Positions	This code includes all passages where respondents spoke of asymmetrical positions in the local conflict.
1.6.1 David vs. Goliath	
1.6.2 Felt Truths	
1.6.3 Agriculture	
1.6.4 Other	
1.7 Other	
2 Legal Framework	This code includes all mentioning of legal conditions related to the terminals and energy developments.
2.1 LNG Acceleration Act	
2.2 Nature and Climate Protection	
2.2.1 Environmental Assessment Study	
2.2.2 UNESCO World Heritage	
2.2.3 Climate Protection	
2.2.4 EU-Directives	
2.2.4.1 EU Natura 2000	
2.2.4.2 EU Marine Strategy	
2.2.4.3 EU Flora Fauna Habitat	
2.2.4.4 EU Hydrogen	
2.2.5 Environmental Protection, National	
2.2.5.1 Environmental Protection, General	
2.2.5.2 National Park	
2.2.5.3 Federal Immission Control Act	
2.2.5.4 Fine Dust Levels	
2.2.5.5 Spatial Planning	
2.3 Agriculture: Mining Law	
2.4 FSRU Under Foreign Flag	
2.5 Planning Process	
2.6 Labor Security	
2.7 Denuncitions	
2.8 Workers Not Allowed to Talk to Me	
2.9 Other	
2.9.1 EU Farming Subsidies	
2.9.2 Energiecharta	
2.9.3 Bundeswehrbeschaffungsbeschleunigungsgesetz	
2.9.4 Deichschutzgesetz	

2.9.5 Lieferkettengesetz	
2.9.6 Other	
3 Energy Transition and Socioeconomic Restructuring	This code includes broadly everything related to the economy, specifically the energy sector: opinions and arguments on energy projects and energy transition; socio-economic developments in the region, regional history, opinions on sustainable transformation of economy, including own sustainable activities.
3.1 Temporal Imagining	This code includes everything that refers to a temporal dimension, such as conceptualizations of the future and past, speed of construction etc.
3.1.1 Permanence	
3.1.1.1 Temporary	
3.1.1.2 More Long-Term	
3.1.1.3 Not Clear	
3.1.2 Speed of Construction	
3.1.2.1 Remarkable Speed of Construction	
3.1.2.2 Neutral Mentioning of Speed of Construction	
3.1.2.3 Suspicious of Speed of Construction	
3.1.3 Future	
3.1.3.1 Future Plans & Visions for Wilhelmshaven	
3.1.3.2 Exit Gas, Enter Future	
3.1.3.3 Hydrogen	
3.1.3.4 Other	
3.1.4 Past	
3.1.5 Regional History & Developments	
3.1.5.1 Regional History	
3.1.5.2 Current & Recent Developments	
3.1.5.3 LNG Plans "in der Schublade"	
3.1.5.4 Other	
3.1.6 Other	
3.2 Socioeconomic Conditions	This code includes everything that relates to socio-economic developments in the region not connected to energy.
3.2.1 Employment	
3.2.1.1 Job Creation	
3.2.1.2 No Job Creation	
3.2.1.3 Other	

3.2.2 Tranquility & Rural Decline	
3.2.3 Other	
3.3 Technical Arguments	This code includes all technical arguments on energy infrastructure and energy transition.
3.3.1 LNG	
3.3.1.1 Storage	
3.3.1.2 LNG-Ships, Not Environmental	
3.3.1.3 Other	
3.3.1.4 Functionality & Efficiency	
3.3.1.5 Economic Costs	
3.3.1.6 Security of Energy Supplies	
3.3.1.6.1 Neutral or Not Clear	
3.3.1.6.2 Terminals Not Needed	
3.3.1.6.3 Terminals Needed	
3.3.2 Hydrogen	
3.3.2.1 Storage	
3.3.2.2 Security of Energy Supplies	
3.3.2.3 Safety	
3.3.2.4 Economic Costs	
3.3.2.4.1 Neutral or Not Clear	
3.3.2.4.2 Not in Favour of Hydrogen	
3.3.2.4.3 In Favour of Hydrogen	
3.3.2.5 Efficiency/Functionality	
3.3.2.5.1 Neutral or Not Clear	
3.3.2.5.2 Not in Favour of Hydrogen	
3.3.2.5.3 In Favour of Hydrogen	
3.3.2.6 Other	
3.3.2.7 Needed for Decarbonization	
3.3.2.8 General Environmental Impact	
3.3.2.8.1 Demand of Water	
3.3.2.9 Areas of Use	
3.3.2.9.1 Private	
3.3.2.9.2 Mobility	
3.3.2.9.3 No Real Use	
3.3.2.9.4 Industrial	
3.3.2.10 Switch (Not) Easily Possible	
3.3.2.10.1 Not Clear	

3.3.2.10.2 Switch Not Easily Possible	
3.3.2.10.3 Switch Easily Possible	
3.3.3 Centralization	
3.3.4 Other Energy Infrastructure	
3.3.4.1 CCS	
3.3.5 LNG Relation to Energy Transition	
3.3.5.1 Not Helping Energy Transition	
3.3.5.2 Bridge Technology	
3.3.5.3 Not Clear	
3.3.5.4 Blocking Energy Transition	
3.3.6 Diversification	
3.4 Industrialization	This code includes all mentions of industrialization of the region.
3.4.1 Negative	
3.4.2 Positive	
3.4.3 Comparison Ruhr Region	
3.5 Profit Orientation	This code includes all mentions of corporate profit orientation.
3.6 Conflicts with Other Sectors	This code includes conflicts between the energy industrial and other sectors.
3.6.1 Agriculture	
3.6.2 Tourism	
3.6.2.1 Not clear	
3.6.2.2 Harmony	
3.6.2.3 Conflict	
3.7 Other	
3.7.1 Sustainable Transition of Economy	
3.7.2 Individual Sustainable Action	
4 Relations to the Region and its More-than-Human World	This code includes influences of energy projects on humans, non-humans, and the more-than-human; conceptualizations of nature; ways of imagining the Wadden Sea seascape; as well as interactions with non-human animals.
4.1 Other	
4.2 Conceptualization of Nature & Seascape	This code captures how nature, especially the Wadden Sea and the coast, is constructed in participants' minds, meaning how they think about nature, and what characteristics they attribute to nature.

4.2.1 Human-Nature Relationship	
4.2.1.1 Human-Nature Binary	
4.2.1.2 Landscape Altered by Humans	
4.2.1.3 Human Dominance over Nature	
4.2.1.4 Humans as Part of Nature	
4.2.2 Dynamics	
4.2.2.1 Must not change	
4.2.2.2 Change is Natural	
4.2.2.3 Nature Fighting Back	
4.2.3 More Philosophical & Indigenously Influenced Views	
4.2.3.1 Preserving Nature for Next Generation	
4.2.3.2 Gratefulness	
4.2.3.3 Stewards of Nature	
4.2.3.4 Mother Earth	
4.2.3.5 Indigenous Influences	
4.2.3.6 Ocean as the Predecessor for All Life	
4.2.3.7 Other	
4.2.4 Industrial Narratives	
4.2.4.1 Deepwater Port	
4.2.4.2 Blue Economy	
4.2.5 Associations with Wadden Sea Seascape	
4.2.5.1 Biodiversity	
4.2.5.2 "Arbeitsmeer"	
4.2.5.3 "friesisch herb"	
4.2.5.4 Small Coast	
4.2.5.5 Clean & Salty air	
4.2.5.6 Sensory Associations	
4.2.5.6.1 Other Sensory Association	
4.2.5.6.2 Smell	
4.2.5.7 Beach	
4.2.5.8 Dunes	
4.2.5.9 Harmony	
4.2.5.10 Water	
4.2.5.11 Livable	
4.2.5.12 Wide Landscape	
4.2.5.13 Tides	
4.2.5.14 Unique	

4.2.5.15 Part of Global Migrations	
4.2.5.16 Wind	
4.2.5.17 Not the Most Beautiful Place on Earth	
4.2.5.18 Boats	
4.2.5.19 Tourism	
4.2.5.20 Beautiful	
4.2.6 Nature Threatened by Industry	
4.2.7 Other	
4.2.8 Hierarchical Conceptualizations of Nature	
4.2.8.1 "Störende" Natur	
4.2.9 UNESCO World Heritage & National Park	
4.3 Relation to the Region & Activities	This code includes any activities or other relations to the region. It also includes the feeling of “Heimat”.
4.3.1 Working	
4.3.2 Sailing	
4.3.3 Stargazing	
4.3.4 Cure of Health Issues	
4.3.5 Being inside the Water	
4.3.6 Living	
4.3.7 Importance of Vicinity of Water	
4.3.8 Vacation & Retreat	
4.3.9 Childhood	
4.3.10 Agriculture	
4.3.11 Harbor	
4.3.12 "Heimat"	
4.3.13 Frisian Tea Ceremony	
4.3.14 Walking	
4.3.15 Biking	
4.3.16 Sea Memorial Place	
4.3.17 Regional Knowledge	
4.3.18 Mudflat Tour	
4.3.19 Other	
4.3.20 Singing	
4.4 Interactions with Non-Human Animals	This code includes any interactions respondents have had with non-human animals.
4.5 Energy Influences on Residents	This code includes any way in which respondents describe that the terminals

	(or other energy projects) influences them (or other humans). Impacts on farmers are not included, as they are mentioned elsewhere.
4.5.1 Air Pollution	
4.5.2 Ships Nice are to Look at	
4.5.3 General influences on humans	
4.5.3.1 No Influence	
4.5.3.2 Negative Influence	
4.5.3.3 Relativation of Influence	
4.5.4 Noise Emissions	
4.5.5 Light Emissions	
4.5.6 Street closure	
4.5.7 Influence of Water Quality	
4.5.7.1 Not Swimming Anymore	
4.5.7.2 People Can Swim	
4.5.8 Other	
4.6 Energy Influences on the More-than-Human	This code includes any way in which respondents mention how the terminals (or other energy projects) influence the more-than-human world in the region.
4.6.1 Noise Emissions	
4.6.2 Excelsior Crossing the Dike	
4.6.3 Sea Water Temperature	
4.6.4 Ground Layering Pipeline Construction	
4.6.5 Generally Mentioning Environmental Impacts	
4.6.5.1 Not Clear	
4.6.5.2 Negative Environmental Impacts	
4.6.5.3 Relativation of Environmental Impacts	
4.6.6 Light Pollution	
4.6.7 Air pollution	
4.6.8 Chlorine Discharge Höegh Esperanza	
4.6.8.1 Not Clear	
4.6.8.2 Negative Impacts	
4.6.8.3 Relativation or Neutral	
4.6.9 Ultrasound Cleaning Excelsior	
4.6.10 Impingement	
4.6.11 Formation of Subsidence Basins	
4.6.12 Voslapper Groden Nord	

4.6.13 Dredging	
4.6.14 Impacts for Porpoises	
4.6.15 Other	
4.6.15.1 Forest Cleared for Parking	
4.6.15.2 Sand For Pipeline Construction	
4.6.15.3 Desalination	
4.6.15.4 Cockle shells	
5 Connection to the Global	This code includes everything related to the global scale, such as trading relations to other countries, migration, as well as colonial continuities, or the Russia-Ukraine war.
5.1 International Solidarity	This code includes all expressions of transboundary solidarity.
5.2 Terrorism	This code includes all passages where respondents speak of terrorism.
5.3 Other LNG Terminals	This code includes all mentions of other LNG terminals that do not lie on the coast of the Wadden Sea.
5.4 Export	This code includes everywhere where exports are mentioned.
5.5 Other	
5.6 Fracking & Extractivism	This code includes all mentions of fracking and extractivism.
5.7 Russia-Ukraine War	This code includes all mentions of the Russian invasion in Ukraine.
5.8 Import	This code includes everywhere where imports are mentioned, except from Russian imports before the war.
5.9 Captain and Crew	This code includes all passages where respondents speak about the FSRU crews.
5.10 Neocolonialism	This code includes all explicit mentions of neocolonialism by interlocutors.
5.11 Foreign Investment in Wilhelmshaven	This code includes all mentions of foreign investment in Wilhelmshaven.
6 Quotable Passages	
7 Other	
7.1 Media	This code includes all mentioning of media.