Master's thesis

NTNU
Norwegian University of Science and Technology
Faculty of Humanities
Department of Philosophy and Religious Studies

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Saving the Climate by Disrupting Nature?

Untangling Ethical and Practical Conflicts around Land-Based Wind Power Development in Norway

Master's thesis in Philosophy
Supervisor: Sophia Efstathiou
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Summary in English

With its seemingly ever-lasting coastlines and gigantic mountain peaks, Norway's landscape should provide the perfect conditions for wind power production. This wind energy, along with other renewable sources like thermal and solar power, is crucial if we are to meet global demands for affordable energy while at the same time decarbonize the world. Even though the importance of wind power in relation to combating climate change is well documented, the development of land-based wind production in Norway is faced with considerable amounts of local resistance. Why is this?

Although the finite nature of land mass is a source of conflict, I would argue there is a lot more going on in the debate around land-based wind power development in Norway than area and resource management. My project illustrates that there is more under the hood of this discourse than meets the eye: There are deep seated ethical conflicts stemming from sociotechnical controversies at play here. These conflicts need to be resolved if wind power is to be a viable alternative energy source in Norway. Could it in fact it be that ethical themes also largely characterize the debate? Ethical considerations in relation to land-based wind power development in Norway are the central topic of this master's thesis. The main research question is this: *What are the ethical and practical barriers of land-based wind power development in Norway?*

Through a thematical analysis of answers given to a public hearing conducted in 2019 about a proposed national framework for land-based wind power development in Norway, I've collected a data set which is well suited to answer this question. By synthesizing the findings yielded from this data set with relevant theory such as Sovacool & Dworkin's conception of energy justice, Haraway's cyborg myth and theory of situated knowledges, and deep ecological and ecofeminist understandings of the self from among others Næss, Plumwood and Curtin, I identify three key dimensions of ethical conflict which structure the discussion around land-based wind power and development in Norway: *the value of nature*, *energy justice*, and *identity*. These ethical conflicts need to be resolved if we are to successfully implement wind power production in Norway.

First, there are conflicts around *the value of nature* stemming from the anthropocentric essence of the core ethical systems fundamental to most social structures, practices and political discourses found in the western world. This anthropocentrism is also built into climate change mitigating technology such as land-based wind power production. Secondly, there are ethical barriers related to the concept of *energy justice,* specifically when it comes to the *procedural justice* dimension. Thirdly, ethical conflict spring from how land-based wind power development in Norway is simultaneously perceived as both a threat to and a possible way to preserve individual and collective *identity*. Understanding the three ethical barriers I have identified here is crucial if we are to untangle the complexities of this discourse and acknowledge what is really at stake in the debate of land-based wind power development in Norway.

Sammendrag på norsk
Med sine tilsynelatende uendelige kystlinjer og gigantiske fjelltopper bør Norges landskap gi de perfekte forutsetninger for vindkraftproduksjon. Denne vindenergien, sammen med andre fornybare kilder som termisk energi og solenergi, er avgjørende om vi skal møte globale krav til rimelig energi og samtidig avkarbonisere verden. Selv om betydningen av vindkraft i bekjempelsen av klimaendringer er godt dokumentert, har utviklingen av landbasert vindproduksjon i Norge møtt betydelig lokal motstand. Hvorfor er det slik?

Selv om det er velkjent at det er press på landområder, vil jeg påstå at debatten rundt landbasert vindkraftutbygging i Norge handler om mye mer enn areal- og ressursforvaltning. Denne oppgaven illustrerer at det er mer under panseret i denne diskursen enn det man først ser: Det er dyptliggende etiske konflikter som stammer fra sosiotekniske kontroverser. Disse konfliktene må løses dersom vindkraft skal være en levedyktig alternativ energikilde i Norge. Kan det være at det er etiske temaer som også i stor grad påvirker debatten? Det sentrale temaet for denne masteroppgaven er etiske hensyn opp mot landbasert vindkraftutbygging i Norge. Hovedproblemstillingen er dette: *Hva er de etiske og praktiske barrierene for landbasert vindkraftutbygging i Norge?*

Gjennom en tematisk analyse av offentlige høringssvar som ble gitt i forbindelse med et forslag til nasjonalt rammeverk for landbasert vindkraftutbygging i Norge i 2019, har jeg samlet et datasett som er godt egnet til å besvare dette spørsmålet. Ved å syntetisere funnene fra dette datasettet med relevant teori som Sovacool & Dworkins oppfatning av energirettferdighet, Haraways cyborgmyte og teori om situerte kunnskaper, og dypøkologiske og økofeministiske forståelser av selvet fra blant andre Næss, Plumwood og Curtin, har jeg identifisert tre sentrale dimensjoner ved etisk konflikt som strukturerer diskusjonen rundt landbasert vindkraft og utvikling i Norge: *verdien av natur*, *energirettferdighet* og *identitet*. Disse etiske konfliktene må løses hvis vi skal lykkes med vindkraftproduksjon i Norge.

For det første er det konflikter rundt *verdien av naturen* som stammer fra den antroposentriske essensen av de etiske kjernesystemene som er grunnleggende for de fleste sosiale strukturer, praksiser og politiske diskurser som finnes i den vestlige verden. Denne antroposentrismen er også innebygd i teknologi som reduserer klimaendringer, for eksempel landbasert vindkraftproduksjon. For det andre er det etiske barrierer knyttet til begrepet *energirettferdighet*, spesielt når det gjelder den prosessuelle rettferdighetsdimensjonen. For det tredje springer etiske konflikter ut av hvordan landbasert vindkraftutbygging i Norge oppfattes som både en trussel mot og en mulig måte å bevare individuell og kollektiv *identitet*. Å forstå de tre etiske barrierene som jeg har identifisert her er nødvending dersom vi skal nøste opp i kompleksiteten rundt denne diskursen og anerkjenne hva som faktisk står på spill i debatten rundt utviklingen av landbasert vindkraft i Norge.

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1. Introduction

In a recent NRK article, the mayor of the municipality of Skien swore that he would chain himself to something in protest if plans of erecting 260 wind turbines under his jurisdiction go through (Rivrud & Moland, 2024). This is just one example of the type of reactions land-based wind power development is being met with in Norway. With its seemingly ever-lasting coastlines and gigantic mountain peaks, Norway's landscape should provide the perfect conditions for wind power production. This wind energy, along with other renewable sources like thermal and solar power, is crucial if we are to meet global demands for affordable energy while at the same time decarbonize the world (United Nations, 2023). Even though the importance of wind power in relation to combating climate change is quite clearly stated, the development of land-based wind production in Norway is faced with considerable amounts of local resistance. Why is this?

I believe the answer to this question must lie somewhere in the realm of ethics. The one thing the vast number of actors engaged in the discussion around land-based wind power development in Norway all have in common is that they all come up with reasons for why implementation of the technology is *right* or *wrong*. This suggests differences in the values, ethics and epistemologies of those involved. The finite nature of land mass makes it a crucial resource in combating the climate crisis, but I would argue there is a lot more going on in this debate than area and resource management. My claim is that there is more under the hood of the discourse around land-based wind power development in Norway than meets the eye: There are deep seated ethical conflicts stemming from sociotechnical controversies at play here. These conflicts need to be resolved if wind power is going to be a viable alternative energy source in Norway. Could it be that themes such as justice, identity or integrity of nature are what permeates the debate? Ethical considerations such as these in relation to land-based wind power development in Norway are the central topic of this master thesis. The main research question is this: What are the ethical and practical barriers of land-based wind power development in Norway?

Through a thematical analysis of answers given to a public hearing conducted in 2019 about a proposed national framework for land-based wind power development in Norway,

I've collected a data set which is well suited to answer this question. A selection of 468 of answers have produced a framework containing a wide variety of actors spanning three main categories: *Advocacy Groups and Organizations*, *Private Business and Economic Sectors*, and *Public Bodies and Political Parties*. All these actors lay forth arguments which have been organized into 16 different interest categories: *Aesthetics, Agriculture and Forestry, Cabin Culture, Culture and History, Energy, Health, Land Ownership, Local Population, Local Value Creation, Natural Environment, Property Value, Recreation, Reindeer Herding, Regional Autonomy, Tourism,* and *Wildlife*. By synthesizing the findings yielded from this data set with relevant theory, I identify three key dimensions of ethical conflict which structure the discussion around land-based wind power and development in Norway: *the value of nature*, *energy justice*, and *identity*. These concepts will be deciphered and analyzed philosophically, as well as through key theoretical concepts from the science and technology studies (STS) tradition, such as black boxes, controversies and technological style.

This thesis is structured as follows: in the second chapter (this introduction is the first chapter), I will go through the background of wind power production in Norway and theory relevant to my project. This theory includes sociotechnical realities as understood by Ask & Søraa and Hughes, Sovacool & Dworkin's conception of energy justice, Routley's now classic attack on the anthropocentric essence of western ethics, Haraway's cyborg myth and theory of situated knowledges, and deep ecological and ecofeminstic understandings of the self from among others Næss, Plumwood and Curtin. The third chapter will run through the empirical data I have selected as a basis for my study and the methodology I have applied to it. Furthermore, this chapter also deals with my positionality, and the measures I have taken to ensure sound practice and good research quality. In the fourth chapter I present my findings, with a particular focus on the actors involved in the discourse around land-based wind power development in Norway, the arguments they present for or against implementation of wind power production, and the interest categories they are speaking on behalf of. Applying relevant theory to the findings happens in the fifth chapter, where I will discuss the case of land-based wind power development in Norway along the three ethical dimensions of *value of nature*, *energy justice* and *identity*. Lastly, the sixth chapter is the conclusion, where I will summarize the most important findings in my study, as well as present some limitations of the study and suggest some areas for future research.

2. Background and Theory

"We don't need to destroy nature in order to save the climate – on the contrary, we need to look for different solutions. They exist." This was the main sentiment put forth by former head-of-research at SINTEF Stein Erik Sørstrøm in a recent chronicle in the newspaper Adresseavisen about wind power development in Norway (2023). Here Sørstrøm presents a small, vertically axled wind power system as an alternative to the more traditional horizontally axled turbines that have been at the heart of much controversy in Norway for quite some time. Wind power, along with other clean energy sources like thermal and solar, are paramount if we are to succeed in decarbonizing the world and providing sustainable, affordable energy to an ever-growing global population (United Nations, 2023). Energy as it is consumed today is responsible for roughly 60% of global greenhouse emissions, and this number is likely to increase as more countries gain access to electricity. This access is crucial for the development of agriculture, transportation, business, healthcare and many other important sectors (United Nations, 2023). It is easy enough to see that renewable energy sources are powerful weapons in the fight against climate crisis, and that wind power should be part of the arsenal. At a first glance, Norway, where huge mountain ranges and far-reaching coastlines provide ample wind resources, looks like an ideal place to harness wind energy. Yet, there has been a considerable amount of resistance towards the implementation of this technology in Norway.

In the Fosen case, the Norwegian government overturned a concession to develop land-based wind power in the region of Fosen on the grounds of it violating the Sámi people's right to cultural practice. As such, this conflict crystalizes the resistance to wind-power development most poignantly (Børstad et al., 2021). Now, almost two and a half years after the fact, the wind turbines at Fosen are still standing, which has been cause for massive public protests by Sámi activists (Rydland Ørnhaug et al., 2023). But the Sámi people are far from the only actors involved in the debate around land-based wind power development in Norway: the discussion features cabin owners, developers, employee and workers' rights unions, landowners, municipalities, political parties and tourism businesses, just to name a few. What makes this discourse so interesting is that we see a myriad of actors with seemingly similar interests when it comes to nature and the climate pitted against each other over land use and technology. The issue has moved a lot of people to action, all laying forth a plethora of reasons why wind power development on land is *right* or *wrong*. Furthermore, many of these reasons deal with

what should be viewed as morally permissible on an individual, which leads me to believe that the debate is firmly rooted in the realm of ethics. While land mass is a finite resource and most definitely imperative in combating climate crisis, could it be that there is more at stake here than how to best use physical space? I would argue that the underlying discussion is in fact one of justice, identity and even the integrity of nature itself. Therefore, ethical considerations such as these in relation to technology-based climate mitigation efforts are the central topic of this master thesis.

I argue that there are underlying ethical conflicts stemming from sociotechnical controversies embedded in the discourse around land-based wind power development in Norway, and that these conflicts must be resolved if wind power is going to be part of Norway's future energy production. I will identify three of these ethical conflicts found in the data material later in the thesis, but before analyzing and discussing this data, I will present a background to land-based wind power development in Norway, as well as lay out theory relevant to the case.

2.1 History of Wind Power in Norway

Land-based wind power development in Norway is nothing new. In fact, it harkens all the way back to 1916, when a wind power plant was built on Andøya, providing energy to a grand total of 16 subscribers (Bye & Solli, 2007, p. 105). After that there was a considerable lull in the development and implementation of the technology until the late 1970s, when the Norwegian government launched their first research program on wind power. Robert Bye and Jøran Solli have an excellent chapter on the history of wind power in the book *Mellom klima og komfort – utfordringer for en bærekraftig energiutvikling [Between Climate and Comfort – Challenges of a Sustainable Energy Development]*, which I will use as a basis for a quick rundown of the subject here (2007).

In 1986, the first new wind turbine in many years was erected at Titran in Sør-Trøndelag, primarily for research purposes, but it also supplied a small local community with power (Bye & Solli, 2007, p. 106). The project demonstrated that wind turbines could at the very least supply power for special purposes, for example on locations where other electricity was unavailable. In the coming years more of these single wind turbines where built, but the program did not progress beyond this very modest investment. Although the general consensus at the time was that the technology provided clean energy with little environmental consequence, the debate in Norway was centered around the profitability of wind power (Bye & Solli, 2007, p. 107). Nobody save the environmental organization Bellona foresaw the potential conflict wind power production could have with nature conservation interests (Bye & Solli, 2007, p. 108). Everyone else simply viewed the technology as too expensive to significantly contribute to the Norwegian power production without substantial government subsidies, and therefore deemed it marginal or fringe. Nevertheless, research and experimental wind power installations carried on throughout the 1980s and parts of the 1990s. Hydroelectric power production provided Norway with more than enough energy during this time period, so there was really no urgent need to look for alternative power sources. This all changed when a draught in 1996 caused a relative low production of hydroelectricity, exposing the vulnerability of overreliance on a single energy source (Bye & Solli, 2007, p. 111). Wind power was now once again a part of the public debate around expanding capacity, this time among other

alternatives such as natural gas production in the North Sea. But now the argumentation around wind power production had shifted, focusing on negative environmental costs such as noise pollution and land mass requirements in addition to the economic costs involved in these projects. In the end, this kind of argumentation helped gas power production win through.

The debate around how environmentally friendly wind power production actually is carried on through the 1990s and 2000s, deepening the divide between modern climate activism and classical conservationist ideals (Bye & Solli, 2007, p. 116). A relatively huge project launced in 1998 by Statkraft at Smøla in Nordmøre involving 100 wind turbines was central to this development. In addition to the aforementioned challenges related to profitability, the project was met with an increasing amount of environmentally charged resistance in the form of conservationist argumentation (Bye & Solli, 2007, p. 115). At the heart of this resistance was the notion that wind parks do more damage than good by laying claim to untouched wilderness, conflicting with biodiversity, cultural values and recreational possibilities, among other things. As we will see later, this kind of thinking is still central to the public discourse around wind power development in Norway. Wind power has been increasingly perceived as a conservationist issue, where development represents relatively massive disruptions of nature (Bye & Solli, 2007, p. 122). An important point raised by Bye & Solli is that it might be beneficial to interpret this is as two distinct understandings of sustainability, where one narrative is concerned with renewable energy production and the other with nature and the experience of it (2007, p. 122). To help solidify this point, Bye & Solli refer to Macnaghten & Urry who argue that if a single, unified *'Nature'* does not exist, it therefore follows that a single, unified understanding of nature does not either (Bye & Solli, 2007, p. 122; Macnaghten & Urry, 1999, p. 1).

What has been presented here shows us that it is the interactions between nature and wind power that give rise to environmental controversies (Bye & Solli, 2007, p. 122). I will get back to examining understandings of nature(s) a bit later in this thesis, but first I want to spend some time exploring understandings of technology.

2.2 Technological Myths

A common misconception is that new technology enters the world out-of-nowhere and completely shapes the course of society and culture in the process, an idea known as *technological determinism* (Chandler, 2012, p. 256). This idea is further amplified by a notion of technology as *autonomous* and rampant, as a closed and continuous monologue that we have no way of stopping or contributing to. If this holds true, then we are at the mercy of processes that are beyond our control. *"Electric scooters will dramatically improve human mobility"* and *"wind power production will ruin nature"* are two examples of technologically deterministic statements. Furthermore, there is another misconception about technology called *technological reductionism*, which is a direct consequence of technological determinism. Here, one attributes the success (or failure) of a given technology solely to the brilliance (or weakness) of its design. This sort of thinking completely bypasses the complexities of implementing technology in the real world by ignoring factors like economy, availability, identity and environment (Ask & Søraa, 2021, p. 54)

The idea of clinging on for dear life to the Frankensteinian mechanical bull that determinists make technology out to be, seems like a dystopian fever dream to *social constructivists*, who in turn respond with the polar-opposite position (Chandler, 2012, p. 256). Technology does not shape society; it is society that shapes technology. The problem with this line of thinking is that it risks tipping the scales too far in the other direction, resulting in *social determinism*. This misconception leads us to think that it is only social systems and culture that set the tone for societal progress, leaving technology itself not only meaningless, but also powerless in this context (Ask & Søraa, 2021, p. 57). A concept that is linked to social constructivism is that of *interpretative flexibility*: the use of technology is determined not only by its design, but also by how it is interpreted by the user (Bijker & Pinch, 1984, p. 422). In its strictest form, where only the social decides the shape of technology, it is not hard to see how interpretative flexibility can lead to misconceptions about how technology is created and used. But, bearing in mind the role of technology in shaping society, it can also be a powerful analytical tool. The consequence of social determinism is that technology gets wrapped in a black box that obscures all its internal processes and inner workings. We can see what happens before and after the black boxing, but not what happens along the way (Ask & Søraa, 2021, p. 18).

If we are to understand the impact of a given technology, then we must open these black boxes and uncover the mechanics hidden inside. At the same time, it is paramount that we, in the excitement of the unwrapping, do not forget the users of the given technology and the culture it is shaped and informed by. Technology never enters unexpectedly from the sidelines, nor is it conjured through the magic of social systems. Therefore, a hard dichotomy between technological and social determinism makes little sense. Instead, we should look at it as dialogue or *co-creation*, a *sociotechnical* process where technology and society mutually influence and shape each other (Chandler, 2012, p. 256). Awareness of this dialectical relationship is an invaluable critical tool and creates a fruitful jumping off point for my analysis of technology implementation and impact, both locally and globally.

2.3 Technological Adaptation

"Technological systems contain messy, complex, problem-solving components. They are both socially constructed and society shaping."

(Hughes, 1989, p. 51)

According to American historian Thomas P. Hughes, most modern technology can best be understood as *artefacts* in *large technological systems* (1989, p. 51). Electricity, food production and the media are but a few examples of large technological systems. The artefacts that make up these systems can be any number of physical components, even natural resources and investment banks, but more importantly, Hughes also considers *non-physical* components such as laws, legislations and knowledge as artefacts integral to the systems. Because they are brought into existence by entrepreneurs, or what Hughes calls *system builders*, he argues that all the artefacts in technological systems as socially constructed (1989, p. 52).

There are a few concepts lifted from Hughes' theory of large technological systems that will be useful when applied to the case of wind power development in Norway. The first of these, and most important in the context of this thesis, is what Hughes calls *technological style* (1989, p. 68). This concept has to do with *how* technology is *adapted* to fit different needs, cultures and environments. An example of technological style is how China uses their own social media platform WeChat instead of Western platforms like Facebook, Instagram and Twitter, all of which have been blocked by the government (Barry, 2022). This is because of Chinese restrictions on apps that share non-government materials and does not share user data with the state. WeChat, the government approved and subsidized alternative, gives the state full access to its monopolized user data. Here we see that a difference in systemic artefacts, in this case legislation, has forced a variation in the technological style of socal media, in China. According to Hughes, the style of a given technology is an outlet for the system builders' creativity and leans into the socially constructed aspects of technology. It helps us see technology as more than just economics and applied science, counteracting both technological determinism and reductionism in the process (Hughes, 1989, p. 69). A further interesting facet of the concept of technological style, is that it factors in geographical and historical aspects not only on a national level, but regionally as well (Hughes, 1989, p. 70). In relation to land-based wind power development in Norway, the concept of technological style can be a useful tool since the landscape varies vastly from region-to-region, which might prompt the need for local adaptations depending on the topography of a given area.

A second interesting concept that is linked to Hughes' theory of large technological systems, is that of *reverse salients*. Hughes explains that when a system grows, some of its artefacts may become obsolete or out of phase, making them reverse salients (1989, p. 73). Any artefact can be a reverse salient, not only the technical components, but also artefacts such as organization, knowledge or law. Reverse salients can usually be fixed by conservative inventions, which effectively eliminate the lag in the system. For example, the physical design of wind turbines might be something causing lag for land-based wind power development in Norway, and this lag might be fixed by introducing an alternate design. Other examples might be limitations in the amount of concessions granted by the government, lack of labor availability in a given area, or concerns around local environmental impact.

The third and final concept in Hughes' account that is of interest in the context of this thesis, is that of *momentum*. As a system grows and gets ingrained in society, it does not become autonomous, but instead gains what Hughes refers to as momentum (1989, p. 76). All its artefacts are starting to move in the same direction, making it increasingly harder to alter the course of the system. Electricity might be a good example to illustrate this concept, a technological system we have grown so reliant on that it seems almost impossible to live without. This is a result of a system that has over time amassed so many different artefacts (both physical and non-physical) which are all working for the same cause, that it has become enormous and as good as unstoppable. The electrical grid, all the people employed to operate and maintain this grid, private and professional consumers, power plants, energy as a resource, and legislation concerning power production are but a few examples of such artefacts.

These three concepts of technological style, reverse salients and momentum will let me illuminate some fundamental reasons for the ethical conflicts around land-based wind power development in Norway when synthesized with my findings in the discussion chapter.

2.4 Energy Justice

It is almost out of the question to carry on modern society without energy to power our technology. The momentum of the electricity system is expeditious and it shows little signs of slowing down. Satiating the ever-growing global hunger for more energy in a fair manner without exceeding the Earth's planetary boundaries even further has given rise to a whole new set of ethical deliberations (Sovacool & Dworkin, 2015, p. 435). The complexity and sheer scale of this problem is unlike anything we have encountered before in human history, making it hard to solve by applying traditional ethical solutions. Climate change is not a morally clear-cut wrongdoing in the same way that stealing or murder is; It lacks the intentionality of these actions (Sovacool & Dworkin, 2015, p. 436). Furthermore, humans have a *guilty bias*, i.e. we will go to great lengths to conceal our complicity in creating negative outcomes like for instance climate change. The fact that the consequences of climate change differ from one place to the next, and that the most severe ramifications will take place in the future, only further complicates the matter.

Sovacool & Dworkin propose the concept of *energy justice* as a novel approach to reframe and address the ethical issues that emerge in relation to energy production and distribution. Energy justice can be defined as *"a global energy system that fairly disseminates both the benefits and costs of energy services, and one that has representative and impartial energy decision-making"* (Sovacool & Dworkin, 2015, p. 436). What justice *is* can be characterized in numerous ways: As living virtuously, as a freedom to make individual choices, as procuring welfare and equality, as abiding to natural or divine law, or as distributing goods and services fairly. What is important to the concept of energy justice is not necessarily what justice *is*, but what it *does* (Sovacool & Dworkin, 2015, p. 436). It is a powerful tool for analyzing and influencing decision-making. One possible way of applying energy justice on decision-making processes could be trough *restorative justice*, which is not only preoccupied with punishing offenders, but also aims to repair the damage done to society and nature through the legal system (Heffron & McCauley, 2017, p. 10). This could also be useful for preventing harm by aiding in determining the full costs of future actions. According to Sovacool & Dworkin, there are three primary elements that make up the energy justice concept: firstly, it deals with the uneven distribution of *costs* related to the energy system, which often lead to the poor and marginalized having to deal with the worst negative environmental and social outcomes (2015, p. 437). Secondly, it deals with unequal access to the energy system, where the better off, both local and globally, usual reap the biggest *benefits*. Thirdly, it deals with unjust *procedures,* meaning the underrepresentation and unfair legal practices found in many energy projects.

Heffron & McCauley argue that the energy justice concept has the potential to do what climate justice and environmental justice have so far failed to do, which is to finally put a

stop to the rising carbon emissions (2017, p. 18). *Environmental justice* pertains to how the contributions of individual action, distribution of environmental risks and promotion of alternatives to greenhouse emissions can help thwart climate change, while *climate justice* is more singularly centered around mitigating and reducing CO2 emissions through sharing the burdens of climate change (Heffron & McCauley, 2017, p. 19). Considering the sustained increase in carbon emissions, it is clear that environmental and climate change justice have had a limited impact in terms of decreasing emissions of CO2. Contrary to these other two conceptions of justice, energy justice is not blind to the economics at the root of the energy sector. By acknowledging that energy production is, much like any type of business, primarily an economic endeavor, energy justice holds the power to influence decision-making processes towards more long-term, sustainable policies and practices (Heffron & McCauley, 2017, p. 29).

On the basis of energy justice's three core elements of costs, benefits and procedures, Sovacool & Dworkin have produced a framework designed to function as an energy justice decision-making tool (2015, p. 438). This framework consists of eight principles, all of which are meant to secure a just global energy system:

1. *Availability*: The basic right that everyone has to cover their energy needs by accessing high quality energy products (Sovacool & Dworkin, 2015, p. 439).

2. *Affordability*: People of all socioeconomic standings have a right to energy services that are priced well within their income level.

3. *Due Processes*: Ensuring fair participation in decision-making around the production and use of energy on a local level through respect for legal proceedings and human rights.

4. *Good governance*: Securing transparency, fairness and accountability in the decision-making processes through high quality information about the environment and energy production.

5. *Sustainability*: The duty all nations have not to deplete resources too rapidly.

6. *Intergenerational equity*: The right that all currently living people in the world today have to fairly access energy services, allowing them a base level of wellbeing (Sovacool & Dworkin, 2015, p. 440).

7. *Intragenerational equity*: The duty to extend the right of energy equity to future generations as well, so that they also can enjoy the good life afforded us by energy services.

8. *Responsibility*: The duty all nations have towards safekeeping the environment by minimizing threats the energy system poses to the natural world.

A major limitation with this framework pointed out by Heffron & McCauley is that it says very little about how these principles are supposed to be transferred and enforced in practice (2017, p. 8). Nevertheless, I would argue that the principles laid forth within the energy justice framework will be of great assistance in shedding light on ethical dilemmas found in the debate around land-based wind power development in Norway. But how do we go about identifying these ethical dilemmas, when they are so often

hidden deep within the subtext of discourses like this? As we will see, a good place to start the search is at the nucleus of controversies.

2.5 The Strength of Controversy

> *"When we approach the places where facts and machines are made, we get into the midst of controversies. The closer we are, the more controversial they become. When we go from 'daily life' to scientific activity, from the man in the street to the men in the laboratory, from politics to expert opinion, we do not go from noise to quiet, from passion to reason, from heat to cold. We go from controversies to fiercer controversies."*
>
> (Latour, 1987, p. 30)

There are some central tenants to science and technology studies discussed by Tomas Moe Skjølsvold that I would argue fits my project like a glove: The study should search for *controversies*, open *black boxes*, and aim to dissolve *dichotomies* and *technological myths* (2015, p. 172). Even though my primary field of interest is ethics, these interdisciplinary concepts will be of great assistance in getting to the heart of what is at stake in the moral discourse around wind power development in Norway. We have already unpacked the concept of black boxes (no pun intended) and some myths surrounding technology, so before we move on to dichotomies as understood by Donna Haraway, I want to spend some time exploring and explaining controversies.

A *controversy* can typically be understood as "a lot of disagreement or argument about something, usually because it affects or is important to many people" *(Cambridge University Press & Assessment, 2023).* In the context of science and technology, controversies can be defined as "struggles over meaning and morality, over the distribution of resources, and over the locus of power and control" (Nelkin, 1995, p. 445). What controversies can offer us here are specific gateways into complex public discourses about technology and how they impact society. The American sociologist Dorothy Nelkins has identified four different types of situations that normally open up for controversy when it comes to science and technology concerns: the first is when there are matters of morality or religion at stake (1995, p. 447). The teaching of evolution theory in school, abortion and animal welfare are but three examples of situations that might give rise to this type of controversy. The second type of controversy laid forth by Nelkin occurs when there is a choice between environmental values and economic or other political priorities (1995, p. 448). The ongoing debate about whether or not to drill for more oil deposits along the Norwegian coastline exemplifies such controversy quite well. The third type of controversial situation can arise when technology and science uncover or even pose a threat to human health. An example of this type of controversy can be the debate about whether the use of antibiotics in the rearing of poultry makes it unsafe to eat chicken (Skjølsvold, 2015, p. 48). The fourth and final type of controversy identified by Nelkin can be found in the relationship between collective goals and individual expectations (1995, p. 449). The nucleus of this type of controversy is usually questions of rights and regulations, like for example in cases where public vaccinations are mandatory.

Another highly influential theory that views controversies as instrumental in understanding the sociotechnical co-creation of our technological reality, is *Actor-Network Theory* (ANT) (Skjølsvold, 2015, p. 79). Although thoroughly interesting, the theory as a whole is not something I want to spend much time exploring in this thesis. However, I will give it a very brief, surface-level rundown for the purpose of further discussing controversies. Its original conception started appearing in the early 1980s, where it aimed to account for how science and technology is produced in the network of relationships between different actors (hence the name) (Latour, 1996, p. 369). The theory has later been expanded to give a similar account for how *society is produced* (Latour, 2005, p. 94; Skjølsvold, 2015, p. 87). A crucial aspect here is that the actors are not simply individual humans, but also include *non-individual* and *non-human* actors. Non-human entities are commonly referred to as *actants* (Latour, 1987, p. 84). Furthermore, when studying these actor-actant relationships, it must be done from a symmetrical vantage point, meaning that the actions of humans must never be given greater importance than the causality of the natural world (Latour, 2005, p. 76). Instead, these divisions should be ignored so that every actor and actant can be of equal significance, *a priori*. In other words, acknowledging that objects also have *agency* (Johnson, 2020, p. 121). Understanding society through actor-network theory is not only understanding who/what the actors/actants are, but more importantly, *what they do* and *how they relate to each other*. It is through these actions and relationships, which can be conceptualized as the *nodes* of the networks, that society and technology is co-created (Latour, 1996, p. 370). To find your way to these nodes, you simply have to abide by one of the main principles of ANT, which is *"follow the actors"* (Latour, 2005, p. 12). By tracing the paths of the actors (and actants), we can also uncover controversies where their paths intersect. In the ANT tradition, these controversies commonly indicate a lack of a stable knowledge foundation (Callon, 1998, p. 260; Latour, 1987, p. 42).

It is precisely this kind of viewpoint on controversies that is valuable to my project, where controversy around wind-energy technology is seen as a marker for conflicts of interest, providing us with "an essential resource to render the social connections traceable*"* (Latour, 2005, p. 30). I would argue that we cannot only uncover different/unstable knowledges through these social connections, but also different/unstable ethics; We can explore *who*, *what* and *where* matters morally to a wide range of actors and actants. By settling disputes and thereby *closing* controversies, we can arrive at scientific and technological stability, however impermanent and fleeting it may be (Skjølsvold, 2015, p. 79). This impermanence is because the production of fact and technology are ever-changing processes, with no clear beginning nor end, where new controversies are continuously being opened and closed.

A thinker who intersects with and expands on ANT in significant ways is the feminist studies scholar Donna Haraway. Seeing as her ideas on the situated, relational essence of sociotechnical reality are central to my project, they warrant a thorough description. In line with Ericka Johnson, I have chosen to focus on concepts from the 1980s and 1990s because it is here that Haraway's concepts intertwine with ANT most clearly and pointedly (2020, p. 121).

2.6 Through the Eyes of the Cyborg

An interesting and possibly fruitful way of understanding large sociotechnical systems like wind parks are through the eyes of a third party. The *Cyborg*, being part technological construct and part social reality, can provide us with the exact perspective required for such a task (Haraway, 1991a, p. 149). The word Cyborg itself is a portmanteau of the words *cybernetic* and *organism*: it is where the machine meets the biological, a melting pot of science fiction and real-world experience. With Reagan-era America and the cold war as a grim backdrop, Haraway constructed her cyborg as political myth aimed at dismantling essentialist ideas about gender propagated by the patriarchy. In the process of challenging these archaic, socially prescribed gender roles thrust upon us under the guise of a leaky man/woman dichotomy, the cyborg also dissolves other dichotomies: human/animal, animal/machine, the self/the other and perhaps most important to the context of this thesis, nature/culture (Haraway, 1991a, p. 163). Haraway speculates that "a cyborg world might be about lived social and bodily realities in which people are not afraid of their joint kinship with animals and machines, not afraid of permanently partial identities and contradictory standpoints" (1991a, p. 154). This notion is further cemented in Haraway's later writings, where she purposes the *Chthulucene* as a necessary alternate story to the *Anthropocene*, i.e. the geological age of humans: Human beings are far from the only important actors on earth, but we are a valid part of ongoing multispecies practices and stories that make up our collective reality and web of relations (2016, p. 55). Since my project explores *egalitarianism* through climate mitigation technology, where the nature/culture divide and our relationship with technology are up for debate, I will argue that Haraway's cyborg myth (as well as the idea of the Chthulucene) can be repurposed to fit this survey quite well. My understanding of egalitarianism is here based on the premise that everyone with moral worth should be treated as equals and therefore have equal rights (Arneson, 2013).

According to Haraway, the birth of the cyborg myth was facilitated by the breakdown of three major boundaries in the 20th century (1991a, p. 151). The first boundary is that between human and animal. Developments within fields such as biology, evolutionary theory and animal rights have shown us that we are not separate from other animal species, but just as much part of biodiversity as all other living creatures, making the distinction between humans and other animals practically obsolete. This is an important point, because it also starts stabbing holes in the nature/culture dichotomy. If we are no different than other animals, why should our culture be considered the opposite of nature? It also makes a second boundary breakdown feasible, the one between biological organisms and machines.

The evermore complicated essence of machines is now blurring the lines between body and mind, idealism and materialism, and what is perceived as natural and artificial. It makes it harder to see where animal starts and machine ends, which is further stabs at the already leaky nature/culture divide. This is evident in recent developments in for example the field of gene editing. An important point Haraway makes here, is that this hybridization of the technological and organic should not lead us to technological determinism (1991a, p. 152). It is not a one-way street to Doomsville™, where machines inevitably outsmart and destroy their creators. In fact, she argues, this hybridization helps solidify the idea of sociotechnological co-creation of society and technology, and their reciprocal effect on each other. The melding of animal and machine sets the scene

for the third boundary breakdown, which is between the physical and the non-physical (Haraway, 1991a, p. 153).

Because of the way technology is seamlessly being integrated into our daily lives, it is at the same time becoming increasingly concealed. Haraway attributes some of this to miniaturization through the emergence of microchips and portable technology, but I would argue that the *concealedness* of technology runs all the way back to the discovery of electrical power (or maybe even further back). Although there are clearly overt parts of power production, such as power stations, turbines and power lines, the energy transferred within the grid is cannot be seen with the naked eye. But regardless of the origin of technology's concealedness, it is precisely through this invisibility that the cyborg gets its true power.

The cyborg is not only part of our material reality, where the distinction between organic and mechanic is, as we have seen, rapidly blurring, but it also inhabits our social reality. It lives in our collective imagination as science fiction, but, as Haraway points out, "the boundary between social reality and science fiction is an optical illusion" (1991a, p. 150). The reality within which we play out our lives is a construct of politics and social relations, an ever-evolving fiction in itself that has spawned all of our western origin myths. It is precisely this fiction that has laid down the groundwork for modernity and hold the conditions for western society. The cyborg affords us an alternative to such myths, one that is untethered by the shackles of history. It has simply been thrown into time and space, without a clear beginning nor end. The events, laws and traditions of the past hold no bearings on who the cyborg is or where it is going. Furthermore, it is not indebted to nature in the same sense that we are by being born, so it knows not the hierarchical structures inherited through parents and family. In fact, unlike us, it needs not rely on nature to exist at all. The cyborg can manage just fine without a physical presence, and if need be, forever reside in a *disembodied* state in our social fabric. This leaves it free to shape its narrative, politics and identity without being encumbered by the ballast of a past nor the limitations of physical surroundings. It allows it to move seamlessly through both social structures *and* material reality, transgressing all sharp distinctions we have ever managed to draw between the two. If we piggyback on these transgressions, we might be able to see our political institutions, social relations and societal structures in a brand-new light.

In essence, Haraway is suggesting that perhaps we discover that dualisms like for example nature/culture, agent/resource, mind/body, self/other and god/man are causing more problems than they are solving, and are systemic reasons for conflicts and inequality (1991a, p. 177). Or perhaps not. Whatever the outcomes may be, the novel perspectives granted us through the eyes of the cyborg can help us question the validity and usefulness of dichotomic boundaries, offering aid in untangling some of the complexities related to sociotechnical challenges, like wind power implementation on land. In keeping with Johnson's comparison of Haraway and ANT, I would argue that the cyborg lets us, much like ANT, reconceptualize suppositions about culture, science and technology (Johnson, 2020, p. 130). Furthermore, it gives us a useful analytical tool for examining the contents of technological black boxes. Through disembodiment, the cyborg presents us with a unique opportunity to hold multiple perspectives at once (Haraway,

1991a, p. 180). However, this does not mean that the cyborg is searching to reveal one truth, it quite contrary lets us see a plethora of partial truths. This will be particularly useful when dealing with the multitude of perspectives found in the debate around wind power development in Norway. The cyborg holds the power of unity through showing us that *we* are the real boundary that stands between *us* and *them*, between *self* and *other*, a fact that could ultimately help us facilitate democratic process around the implementation and use of climate mitigation technologies like wind power production.

2.7 Knowledges are Always Situated

Vision is also the focal point (no pun intended) of Haraway's theory of *situated knowledges*, a concept which I would argue goes hand in hand with the cyborg. The basic premise here is that we can never view the world from a place of *objectivity*, so it follows that what we should never try to present knowledge as truly *objective* either (Haraway, 1991b, p. 188). Through vision, which is at all times embodied by nature, even when technologically enhanced by the likes of video cameras and computers, we can realize that a gaze always comes from somewhere and someone. Haraway wants to avoid the fallacies of the classic *god-trick* which has become so commonplace in science, where the trappings of *totalization* and *relativism* lead us to believe that knowledge is produced either by a view from above or a view from nowhere, respectively (1991b, p. 191). There are two scientific positions that Haraway is critiquing here: on one hand, the cold and rational view of scientific knowledge as permanent and interchangeable with reality. On the other hand, the disinterest constructivism shows towards all but the scientific process, completely ignoring the possible effects the produced knowledge might bring about (Skjølsvold, 2015, p. 103). Knowledge contributes immensely when it comes to our ability to share the world, and without the knowledge objects science produces, there is little to rally around politically and socially in relation to global problems. But it is also dangerous to conflate these knowledge objects with universal truth, because we are then in danger of leaving valid, subjective perspectives by the wayside.

What Haraway suggests to remedy this is a third position, one of *embodied objectivity* that recognizes knowledges as both *situated* and *finite* (1991b, p. 188). Objectivity is situated not only in place, but also in time: It has a location, physically, historically and culturally. It therefore makes no sense when science presents us with an understanding of the *whole picture*, because the perspectives are always partial and specific (Haraway, 1991b, p. 190). We instead want to understand what all the partial perspectives see, and how these perspectives relate to each other and tie together specific cultures, locations, technologies, knowledge statements, etc. (Skjølsvold, 2015, p. 105). As Haraway puts it: "We do not seek partiality for its own sake, but for the sake of the connections and unexpected openings situated knowledges make possible. The only way to find a larger vision is to be somewhere in particular" (1991b, p. 195). Breaking down the boundaries between body/mind, between subject/object, is part and parcel of how to do this (Haraway, 1991b, p. 190). It is somewhere along this divide that we discover that objectivity is not disconnected at all, but in fact very much attached to the contexts and locations of perspectives; A product of mutual and often unequal social structures (Haraway, 1991b, p. 201).

Johnson argues that Haraway here adds something to ANT: she gives it a way to engage with categories like *gender*, *ethnicity*, *class* and *age*, both individually and intersectionally (2020, p. 126) When trying to understand the material world, then, we must be vigilant so as not to wash out the practices, discourses and power structures that inform the subjects who are seeking out knowledge in the first place. Haraway is basically reminding us how politics always permeate knowledge production practices and technoscience (Johnson, 2020, p. 123). Keeping this in mind will afford us a richer, more complex account of the world that factors in every position between oppression and privilege (Haraway, 1991b, p. 187). This is extremely important to my study, because if I accidently omit the sociopolitical backdrop when trying to explain the complexities of land-based wind power development in Norway, I will end up painting a very wrong picture of these processes.

Furthermore, I would argue alongside Hannah, Thompson & Herbst that situatedness not only applies to knowledge, but also to morality and moral identity (Hannah et al., 2020, p. 749). According to this theory, moral identity is not fixed and unitary, but varies across given roles and even within these roles. It is connected to the different *"hats"* people wear when navigating the relational web of life and the identity structures associated with each hat can help determine and predict moral behavior (Hannah et al., 2020, p. 750). For example, a person who works as a health care professional might act according to higher ethical standards when doing their job than when they off-duty on vacation with their family. Or a person running a small tourism enterprise in a small village on the coast of Norway might have different ethical ideals than a person living and working in a major city like Oslo. This idea of situated moralities is integral to the ethical exploration of land-based wind power development in Norway I am conducting in this master's thesis, because it will allow me to analyze and compare a wide variety of partial ethical perspectives ingrained in the discourse.

There is a notable overlap between situated knowledges (and morality) and the cyborg myth: through the cyborg we are able to recognize our partial perspectives as part of our human identities (Johnson, 2020, p. 127). This leaves us free to acknowledge and therefore also explore the middle ground between binary couplings such as nature/culture, man/machine and social/technical. Technology has the power to embody our values: With it we can shape an *ecotechnological* world according to agreed-upon wishes, beliefs and norms (Hughes, 2005, p. 154). However, for such a utopia to blossom, we need to utilize the political instruments at hand to enable public participation (Hughes, 2005, p. 168). We need to increase *technological literacy*, meaning public knowledge about the processes involved in creating and managing our ecotechnological environment, and be morally concerned about our role in it (Hughes, 2005, p. 170). We need to agree on values that secure inclusion and diversity, especially for those that cannot voice their own opinions. I would argue that this last point perhaps represents the biggest hurdle we need to overcome: A shift away from *anthropocentric,* that is human-centered, ethics (Næss, 1974, p. 183).

2.8 Basic (Human) Chauvinism

Seeing as nature is a key component in in the discussion around land-based wind power development in Norway, I would here like to explore some of the ethical foundations for

our views on nature in general. The common role of nature in modern western civilization is predominantly one of subordination: Animals, plants and landscapes are often nothing more than slaves to humanity's whims and needs, mere conduits for our activities. Richard Routley, in his seminal paper "Is There a Need for a New, an Environmental, Ethic?", sees this type of attitude which is so prevalent in western ethics, as stemming from the *freedom principle*, or what he calls the principle of *basic (human) chauvinism* (1973, p. 207). The principle states that a person can do as they wish, as long as they do not harm others or themselves beyond repair. The simplicity, openness and seeming inclusivity of the principle makes it quite alluring as a core ethical rule, but according to Routley, a major problem with it is that it automatically includes humans first. Even when *"others"* are liberally expanded to mean other sentient beings and even other *future* sentient beings, the principle still works on a hierarchical assumption that human ego and culture is what is supremely important. The natural world, or at the very least the parts of it that fall outside of what qualifies as sentience, such as for example trees and rivers, are - morally speaking - deemed unimportant.

Within ethical systems that operate around basic (human) chauvinism, like most western ethics do, these parts of nature are therefore not allowed much more than *extrinsic value*, meaning that they are viewed as a means to an end rather than as valuable in themselves (Zimmerman & Bradley, 2019). It follows that, since trees are not moral objects, it would for instance be morally permissible under the principle of basic (human) chauvinism to deforest the Amazon, as long as the deforestation causes no harm to the deforesters themselves or to other morally significant actors. Even when morally significant actors are expanded to include other sentient animals, Routley argues that it is unclear what exactly would constitute *harm* (1973, p. 207). Is it merely displacing a few individuals or would it require full-blown speciecide? Furthermore, Routley says that the principle is constructed in such a way that the burden of proof usually falls on the other, meaning that it would be up to the harmed party to prove that they have been harmed.

What Routley is getting at here is that there is something intuitively off with how basic (human) chauvinism tilts western ethics in humanity's favor and allows us to justify actions that in other cases would be morally impermissible. As a moral philosophy, it is therefore both anthropocentric and elitist (Brennan & Norva, 2022). To illustrate this point and posit a need for a different ethical foundation that includes the environment, Routley has designed four counter-examples to basic (human) chauvinism (1973, p. 207). The first is called *the last man* example: The world as we know it has collapsed and every human being save one is gone. This last person makes it their sole mission to eradicate every animal, plant and landscape they encounter. From the perspective of basic (human) chauvinism, there is nothing morally dubious about this person's actions, but from an environmental standpoint this behavior clearly feels wrong. According to Routley, this also holds true if there is more than one person alive after the collapse, as he illustrates in the *last people* example. Reproduction is impossible because of radiation, so the group of people know they are the last of their kind and their actions will not affect any future humans. Similarly to the last man, the last people make a wasteland out of their surroundings by exterminating all wildlife and destroying all of the landscape and oceans. They do not do this out of malice or spite, they are simply numerous and need to survive. Again, this is totally permissible on a human chauvinism level, but it

leaves a foul taste on an environmental ethical level, even when the intentions of the last people are good.

The third scenario put forth by Routley is called the *great entrepreneur* example: Here, the last person is overseeing and constantly expanding a megacomplex of factories and farms, selling what they produces to dummy buyers and getting richer by the minute in the process (1973, p. 208). By doing so they are increasing gross world product, while at the same time increasing their own welfare. The only drawback is that they are also depleting all resources, creating a barren and empty world in the process. While this clearly conflicts with environmental ethics, a prevailing western ethics not only allows for this type of ambition and behavior, but it can also sometimes encourage it, promoting it as progress. Routley also suggests that the great entrepreneur example can be applied to a last group of people, which would create an example with an industrial society not very far from the one we live in ourselves.

The fourth and final example Routley posits, is called the *vanishing species* example: Let us imagine we are hunting a species to extinction for the goods they provide us (meat, fur, oils etc.), that is, for economic reasons (1973, p. 208). Routley uses blue whales as the example here, but it could be any species, real or imagined. It can also apply to species that are threatened because of loss of habitat. The important thing is that the species is being exterminated because they are either valuable to us as a product or happen to live in an area that holds resources that are valuable to us. They are given little value themselves outside their usefulness to us in this context, and since no morally significant actors are harmed here, these actions are seen as permissible within the framework of basic (human) chauvinism. In the perspective of environmental ethics, however, these are without a doubt morally wrong actions.

At the core of what has been laid forth by Routley, sits the idea that the Western super-ethic is fundamentally flawed and therefore needs to be replaced (1973, p. 205). He calls for a move away from anthropocentrism towards an ethic that recognizes the natural world for its *intrinsic value*, i.e. value for its own sake (Zimmerman & Bradley, 2019). Human interest has according to Routley proved a terrible guide for ecological well-being and should therefore be left out when we shape our moral community (1973, p. 210). The question is how to account for the environment as something more than a backdrop for humankind's dealings.

2.9 Shallow and Deep Ecology

> *"Politics cannot be derived from ecology. But the goal to contribute to the implementation of ecologically conscious politics, meaning politics based on ecophilosophical value prioritization, prompts drafting general policy that can act as stances in special cases. It demands a unified ecopolitical front across party lines."*
>
> (Næss, 1974, p. 169)

First coined by German naturalist Ernst Haeckel in 1866, the term *ecology* is meant to give account for the economics of biology (Sarkar & Elliott-Graves, 2016). The

etymological basis for the word *eco* is the Greek word *"oikos"*, which means *"the family household and it's daily maintenance"* (Fox, 1995, p. 31). The suffix *-logy* stems from the word Greek word *"logos"*, which means *"study"* (Odum & Barrett, 2005, p. 2). So, ecology literally means *"The study of home"*. Although "oikos" speaks to the day-to-day running of a household, the subject of ecology has more to do with the relationships that all living things have with each other and their habitats than it has to do with any kind of economic stewardship over nature. A fitting definition of what ecology is today is *"the interdisciplinary scientific study of the living conditions of organisms in interaction with each other and with the surroundings, organic as well as inorganic"* (Næss, 1974, p. 17). Philosophically, ecology has been given limited professional attention, with topics such as *community*, *ecosystems* and *population* being the ones that have received the most focus so far (Sarkar & Elliott-Graves, 2016). In the scope of this thesis however, the lack of literature around the subject is of little consequence, since the philosophy of ecology is not a primary concern. I only mention it here as a means to introduce the more relevant subject matter of *deep ecology* and *ecofeminism*. The concept of ecology understood as the study of home, however, is of some significance, so let's put that aside for later.

At the core of *deep ecological* thinking runs the idea that humans have garnered an inflated sense of importance when it comes to our role in nature and ecology, which has led to us becoming increasingly alienated from the natural world (Klemmer & McNamara, 2020, p. 504). It was the Norwegian philosopher Arne Næss who coined the term *deep ecology* as an alternative to what he called *shallow ecology,* which he argued was the narrow view on the ecological movement as nothing more than a technoscientific fight against pollution and resource depletion (1974, p. 121). While deep ecology acknowledges the importance of the goals set by the shallow ecological movement, it also aims to widen the scope of what needs to be accomplished if humans are to live harmoniously *within* nature: as a part of it, instead of as its de facto master. Næss therefore outlines 7 additional points, adding on to the two points about combating pollution and resource depletion, that will help steer the public ecological discourse away from a shallow, technical debate around climate mitigation efforts towards a radical shift in the core ecological value system commonly held in the global north (1974, p. 126).

The first of these additional points is *reducing population growth*, not only in the global south, but more importantly in the industrialized countries that do the most harm on a global scale (Næss, 1974, p. 122). Ecological consequences should guide us in questions about overpopulation, not just sheer numbers. The second additional point pertains to *combating class structures*, meaning the power-oriented differences upheld by society at large that hinder the self-realization of a majority of the populous and reduce sociocultural diversity. When the upper classes are allowed to set the material conditions for *"the good life"*, it causes lower classes to aspire to the same living standard, leading to overconsumption well beyond Earth's biocapacity. Næss argues that we need to get rid of these hierarchical structures that promote material worth so that we instead can focus self-realization based on intrinsic values (1974, p. 122). *Local autonomy and self-sufficiency* are at the heart of Næss' third additional point. Society's adherence to the *labor division principle* through long-term planning and sectorized task management, all in the interest of reaching global goals, threatens to trivialize the local importance of single organisms, ultimately causing fragmentation or atomization of individual actions. A possible consequence of this is that tasks-at-hand lose meaning since the reasons for

doing them become unclear or even daunting when placed in such grand contexts. Næss instead proposes a *labor unity principle*, where he in line with ecological thinking uses the *local community* instead of global society as a starting point, creating room for self-realization on a local level by lessening the constant interruptions from the outside that often inhibit equilibrium (1974, p. 122).

The fourth additional point laid forth by Næss is about the value of eco-systemic complexity, or what he refers to as *qualitative diversity* (1974, p. 123). He argues that we need to look to the complexity of mature ecosystems, with their multifaceted interactions and economical utilization of resources, as ideals when constructing our communities. Societies should aspire to ecological equilibrium and self-realization instead of providing citizens with ever-increasing leisure time, which is the common utopia of the welfare state and a crux for overconsumption (Næss, 1974, p. 123). Where industrial states traditionally have sought standardization, uniformity and volume, which are quantitative pursuits, they should according to Næss instead provide a foundation for citizens to act according to their own diverse motives and purposes, at least to some extent. He argues that this qualitative diversity will lead towards blurring the lines between work and leisure, leaving individuals free to seek out work on account of its inherent meaning and value. There will of course still be some strenuous and less rewarding duties that need to be performed in the local communities, but the mandatory nature of work as we know it will be significantly reduced. Qualitative diversity ties neatly into Næss' fifth additional point, which is *the maintenance and continuation of diversity and symbiosis* (1974, p. 124). *The principle of diversity* tells us that in order to maximize the capacity for survival and self-realization, it is imperative to focus on diversity and cooperation. A great diversity in organisms, sustenance and reaction possibilities fortifies an ecosystem against change. Furthermore, it promotes indirect cooperation between organisms over direct competition. Næss argues that this principle holds true not just for nature, but for culture as well (1974, p. 124). In society, the principle of diversity helps protect minority cultures against the value judgments of dominant cultures. Adopting a cooperative mindset of you *and* me as opposed to a competitive one of you *or* me, furthers this cause.

The sixth additional point laid out by Næss is that of *biospherical egalitarianism* (1974, p. 124). Here, Næss advocates the view that all living beings have an equal right to self-realization. We are all entangled in the same ecosystems, and although they are hierarchically structured through food chains and the like, our basic right to life and realizing this life is the same for all. The seventh and final point Næss adds is that of *systemic and relational thinking* (1974, p. 125). Ecology as a field is marked by impermanence and constant fluctuation. What holds true in one location or time, might be different in another. It therefore makes little sense to think about ecology in terms of isolated models or universal laws, since nothing is really demarcated in a clear-cut way. In Næss' view, it is therefore more beneficial to think of the environment as a web of relations, where all actors (and actants) are nothing more than quasi-permanent regularities. He further argues that this sort of thinking, when transferred to society, might help undermine the technocratic idea that society can be isolated to its individual processes (Næss, 1974, p. 125).

I would argue that what Næss is trying to achieve in his project bears a striking resemblance to something central in Haraway's work, which is the dissolvement of the

nature/culture divide. It seems to me that both thinkers view this dichotomy as especially problematic if we are to bring about equality amongst not only humankind, but all levels of the natural world we co-inhabit. They are saying that the idea that there is some in-principle difference between humans and other animals is in the way of inclusivity and diversity. By letting the property of life be the common denominator that welcomes you into the moral community, Næss has neatly found a way to do this (Næss, 1974, p. 124). This relates to the case of land-based wind power development in Norway in interesting ways since much of the conflicts found in this discussion originate from different views on the value of nature and questions of justice. The general idea of egalitarianism is also at the nucleus of Næss' conception of identity, which is called *the ecological self*. Since identity is another one of the key ethical conflicts found in the debate around land-based wind power development in Norway, I will now spend some time exploring this subject.

2.10 The Ecological Self

Ever since Descartes split our reality into two distinct substances, that of mind and that of body, our understanding of the self has been marred by dualism (Descartes & Moriarty, 2008, p. 56). This has had some dire consequences for how we relate to the environment. Because if the self is in fact immaterial, it cannot truly be harmed by damage inflicted upon the material world, leaving humans basically free to do as we please with our surroundings without repercussions to our*selves* (Anderson, 2020, p. 33). Furthermore, Descartes conceptualizes the self as autonomous, atomistic: It has no need for relationships with others to exist, it is self-contained (Descartes & Moriarty, 2008, p. 55). Solipsism has taught us to only value what we are sure exists, which is the ego. This cartesian idea of the atomistic self is exactly what Næss wanted to undo through the conception of ecological self. He argued that "we need to identify with others on such a fundamental level that the self no longer stops at one's own ego nor organism, but shares in all life that is understood as both a means to an end and an end in itself equal to one's own ego" (Næss, 1974, p. 177).

Spinoza's holistic approach to ethics greatly inspired Næss' deep ecology, where the understanding of everything as part of a whole, interconnected and inherently valuable amended some of the wrongdoings of dualism (Næss, 1977). For if there is no significant difference between body/mind, between nature/culture, the self is no longer forced to be alone in brooding darkness, but instead free to roam a world connected to other selves, all equally real and valuable. In contrast to the atomistic self then, the ecological self has a stake in the world: If the world gets destroyed, so will the self. Here it would do good to remember the Greek roots of the word eco, *oikos* – home (Fox, 1995, p. 31). Our surroundings constitute our home and without them, we would have nowhere to live. This corresponds with an interesting point raised by Næss about personal identity (1995, p. 230). In addition to identifying with all life, the ecological self also identifies with features of its homeplace, making these features parts of its very fabric. If a person is displaced from their surroundings, in effect severed from their familiar natural, social, and economic setting, they will experience a loss of identity. I would argue that the same holds true if the homeplace itself gets significantly altered or destroyed. Næss exemplifies this trough the tragic fate of the Inuit and their struggles to find a new identity and hence a more comprehensive ecological self (1995, p. 231). The practical importance of an ecological understanding of the self is that when we defend nature, we

are not only defending what it gives us in terms of beauty, recreation or other non-vital experiences, but we are at the same time defending *ourselves*. Nature has suddenly become vital to our very existence, an end in itself (Næss, 1995, p. 232).

The holistic foundation of Næss' conception of the ecological self is not without its problems, however. One such problem is that if only the whole, that is God or nature to Spinoza, qualifies as substance, then it has nothing else it can relate to (Curtin, 1994, p. 205). From such an understanding, the self becomes *nonrelational*. Another problem is that the position seems to use caring for nature as a stepping stone for realizing the human self, undermining its claim to be anti-anthropocentric (Plumwood, 1993, p. 175). In fact, having levels of self-realization, working from parts to supreme wholeness through the process of identification, makes the concept of ecological self-realization paradoxically enough hierarchical (Curtin, 1994, p. 203). Even worse, this actualization of the human self through merging with the cosmos presupposes that there is a difference between humans and the rest of nature, reinforcing the nature/culture divide deep ecology aims to dissolve (Warren, 2015). These shortcomings of Næss' theory of the ecological self have been addressed to a substantial degree by *ecofeminism*, another branch of ecological philosophy adjacent to deep ecology.

2.11 Ecofeminism

The roots of ecofeminism were planted by French feminist thinker Françoise d'Eaubonne, when she in 1974 discussed the possibility of a women-led ecological revolution (Warren, 2015). Early on, the term ecofeminism was used over multiple disciplines as a catch-all for connections between women and nature and didn't become a philosophical position until the late 1980s. Note that, for the purpose of this thesis, I will lay out what is referred to as *ecofeminist philosophical ethics* under the term of ecofeminism. I acknowledge that there are many other perspectives within ecofeminism, such as linguistic, historical and epistemological, but for the sake of brevity and relevance, I will not discuss those here.

To understand ecofeminism, one must also understand what an *oppressive conceptual framework* is (Warren, 2015). In essence, an oppressive conceptual framework serves to maintain and explain practices, institutions and relationships of unjustified subordination and domination through a collection of basic assumptions, attitude, values and beliefs. Sexism, speciesism and racism are examples of how an oppressive conceptual framework might manifest itself in western society. Such a framework basically operates by attributing greater worth to one side of a *value dualism* than the other, for example by making culture out to be more valuable than nature, or men to be more valuable than women. It then uses *privilege* and *power* systematically to uphold this advantage over time. The rich can for example muster and mobilize resources in ways the poor cannot, giving them leverage to serve their own needs first. These patterns are justified by what is called the *"logic of domination",* a moral principle that tells us that superiority gives grounds for subordination. These reasons are usually based on some characteristic, for example how we might justify fish farming on the mistaken grounds of fish not having any feelings.

Dissolving the value dualisms upheld by oppressive conceptual frameworks is a central objective to ecofeminism, especially the nature/culture divide (Plumwood, 1993, p. 39). If this dichotomy could be rejected, it would help us in realizing that humans are both part of nature as ecological selves, and at the same time individual selves separate from nature (Plumwood, 1993, p. 184). Furthermore, the self is essentially viewed as relational and interdependent, meaning that self-interest is expanded to include caring for the ecological well-being of others (Warren, 2015). This moral value also extends to nature itself and even to relationships themselves. In other words, *how* we relate to others matters morally for ecofeminists. Another major theme of ecofeminism is that it is pluralistic and contextual: Ethical discourse is based on a plethora of values and principles and aims to include voices from all kinds of cultural and historical backgrounds. An extension of this is that it does not assume a neutral point of view since this would be self-defeating to the purpose of inclusion.

For ecofeminist Val Plumwood, the issues found in deep ecology stem from it having not one, but at least three different (and false) accounts of the self in play at the same time (1993, p. 176). The first of these accounts is what she calls *the indistinguishable self*, which tells us that humans and nature are one and the same, a totally boundaryless unit. The problem here is that this frames the self as no different than the other, in effect turning the world into one unidentifiable blob, which makes respecting and understanding others impossible (Plumwood, 1993, p. 178). The second account *is the expanded self*, where self-realization through identification with others simply leads to an inflated ego that confuses self-interest with empathy (Plumwood, 1993, p. 179). On its ever-ongoing path to continual expansion, exaggerated self-focus blinds the self to the importance of individuals and the relationships they are engaged in (Warren, 2015). The third account of self recognized by Plumwood in deep ecology is what she calls *the transcendent self* (1993, p. 181). Here, the personal ego is finally vanquished, and the self is at one with the cosmos. The problem with this view is that it falsely presents universals as the goal, while particulars like personal relationships, emotions and desires are something to be overcome. Although I have already laid forth Plumwood's solution to these issues surrounding the ecological self above, it bears repeating once more: the self is both *separate* and *part* of nature at the same time, essentially two complimentary pieces that form ecological selfhood (Plumwood, 1993, p. 184).

A similar understanding of the self is presented through the Japanese Buddhist priest Dōgen's *relational self* (Curtin, 1994, p. 209). Much like the ecological self of Plumwood, the relational self is both distinctly individual while at the same time defined through its relational network. What I find so fascinating with Dōgen's account, is that it is void of hierarchical structure. Ecological consciousness is not something gained through incremental mastery of the self, it is the experience of concrete existence (Curtin, 1994, p. 207). It is always there, and enlightenment can be found in the mindfulness of daily practices. Throughout the ages, women have unfairly been relegated to the ordinary by the patriarchy and naturist society: weighed down by their primary task of translating nature into culture through agriculture, cooking and childbirth, they have had little choice but to center their lives around the ordinary and the everyday (Curtin, 1994, p. 211). Although there is no way to redeem the millennia of oppression caused by this relegation, Dōgen's understanding of the ordinary as the gateway to the ecological self at the very least acknowledges women's expert knowledge on the subject. What the

relational self is able to show us, especially if viewed through the lens of ecofeminism, is that we are always connected and engaged with the environment through our ordinary lives, and it is this ordinariness that turns a bioregion into a home (Curtin, 1994, p. 212).

3. Qualitative Methods and Empirical Data

The case of land-based wind power development in Norway is very much an ongoing discourse with real-world implications and impact. It therefore made a lot of sense to perform a qualitative study on the subject to uncover ethical and practical considerations around the implementation of this climate change mitigating technology. In this chapter I will explain and justify the choice of method and data material used in the qualitative study. A positionality statement about my interests, academic background and relevant biases is provided in the first section. The next section contains the reasoning for why I chose to study documents through thematical analysis, and a rundown of the methodology. In the third section I explain the public hearings and hearing answers that make up my data material, as well as justify my focus on particular data materials considering the scope of this master's thesis. A description of how the method was applied to the data material is presented in the fourth section, before the chapter closes with a summary of the criteria used to ensure the consistency and quality of my research practice.

3.1 Positionality and Reflexivity

In qualitative methods, the researcher *is* the instrument and is therefore inseparable from both the research process and the results produced (Patton, 2010, p. 64). To safeguard high quality and ethically sound research practices, it is therefore of utmost importance to say something about the *positionality* of the researcher: who they are and where they come from in terms of individual worldview, as well as the researcher's position towards research tasks and their political and social contexts (Darwin Holmes, 2020, p. 1). The researcher's positionality is informed by the cultural, social, ideological, political and linguistic basis of their beliefs and values, which can be disclosed through rigorous self-reflection and self-assessment, a process called *reflexivity* (Patton, 2010, p. 65). Simply put, reflexivity helps determine positionality.

Some aspects that make up one's positionality is considered fixed, like for example ethnicity or historical location, while others, like political allegiance or religious faith, are deemed more fluid (Darwin Holmes, 2020, p. 2). Although some factors might lead to a predisposition towards a certain perspective, it is not necessarily given that the predisposed person will adopt these viewpoints. What this entails is that a researcher's

positionality is never static, but on the contrary changes over time and is context dependent. It is therefore crucial that the researcher puts together a positionality statement in accordance with their current study's subject matter. By acknowledging all aspects of their own perspective relevant to the study-at-hand, the researcher should be able to represent other perspectives encountered in the study in a more authentic and accurate way (Patton, 2010, p. 65). Recognizing this also helps counteract *researcher bias*, that is the way in which theory, beliefs or preconceptions might warp the researcher's data or analysis of them (Maxwell, 2009, p. 243). Reflexively summing up project-relevant preconceptions, beliefs, values, motivations, qualifications, perspectives, and theoretical foundations into a coherent positionality statement, lets the researcher show how and where they believe they have or might have influenced their work (Darwin Holmes, 2020, p. 3).

Growing up in northern Norway in the 80s and 90s, I was first and foremost a sci-fi nerd with David Attenborough as a spiritual guide. This was the start of a deep fascination for both technology and nature, two subjects that still enthrall me to this day. For my master's thesis, I wanted to choose a topic that combined these two subjects with applied ethics, which is my field of study. Furthermore, I wanted to study something that piqued my interest, but that I was not passionately invested in. The case of land-based wind power development in Norway turned out to fit these prerequisites like a glove. Here, I could explore ethical considerations through an ongoing public debate about the relationship of technology and nature. In addition to my background in applied ethics, I've also had some formal training in science and technology studies (STS), which has strengthened my ability to decipher and analyze our shared sociotechnical reality. I therefore bring together key theoretical concepts from STS (e.g. black boxes, controversies, technological style) with thinking in environmental ethics (e.g. ecological self, energy justice, ecofeminism) in order to unearth key ethical considerations structuring the social controversy around this technological innovation, throughout the data set.

Furthermore, I am, almost to a fault, biased towards taking the side of the underdog. This might be a common human trait, but nevertheless, it was something I factored into the rationale of selecting a case with a lot of actors, interests and arguments. Having to map out and spend time with so many different perspectives would help counteract this bias. I am also at heart a pragmatist, which might explain why I am drawn to the practical philosophy of applied ethics through current, real-world cases like that of wind power development. With such pragmatism comes a wariness towards lofty theorization for the sake of theory, which I would argue is a direct advantage when it comes to studying climate mitigation efforts, where tangible results are of the essence.

3.2 Choice of Method

Land-based wind power development is a divisive topic in the Norwegian public discourse, comprising different voices from all over the country and walks of life. Choosing to do interviews or observations on such a large population would be very difficult within the time constraints of this master's thesis, especially since representing diversity is a key factor of the study (Morgan, 2022, p. 67). Another concern was that the divisiveness of the subject matter might cause participants to answer untruthfully,

especially within minority groups like the Sámi people, who might fear that the findings will be useless or even harmful (Morgan, 2022, p. 66). The divisiveness might also lead to misrepresentation in the study, where certain actors might refrain from participating at all. Considerations like these made me look for pre-existing data sources that could potentially provide an account of the actors and interests involved in the discourse. A comprehensive national hearing about land-based wind power development in Norway from 2019, comprising a myriad of participants and types of answers, proved ideal as the primary data set for my study. Given that the data material is a report on a public hearing with corresponding hearing answers, it was only natural to choose *document analysis* as the research method (Morgan, 2022, p. 64). Although the method has its limitations when it comes checking for bias, its relative unobtrusiveness and cost-effectiveness makes it an excellent fit for particular purposes (Morgan, 2022, p. 70).

A *thematic analysis* is best suited for the task of sifting through and organize the wealth of information encompassed by the hearings. This method helped me identify, analyze and report on patterns in the data material, leading to a rich and detailed description of it (Braun & Clarke, 2006, p. 78). Although there is some very basic, quasi-quantitative work in the analysis as well, mostly in the way of adding up actors or types of interests, my quest is primarily of a *qualitative* nature: I want to examine the phenomenon of land-based wind power development in a Norwegian context to uncover key concepts, increase understanding of the phenomenon, and hopefully add to existing knowledge (Douglas, 2022, p. 427). Qualitative studies "are naturalistic to the extent that the research takes place in real-world settings and the researcher does not attempt to manipulate the phenomenon of interest (e.g. a group, event, program, community, relationship, or interaction). The phenomenon of interest unfolds naturally in that it has no predetermined course established by and for the researcher such as would occur in laboratory or other controlled setting" (Patton, 2010, p. 39).

The main goal of my study is answering the research question of what the primary ethical barriers of land-based wind power development in Norway are, and working with themes within the data set is a good way to uncover patterns of meaning that will help me achieve this goal (Braun & Clarke, 2006, p. 82). Themes vary in both size and relevance to the research question, and there is not necessarily a correlation between these two variables. Some themes that occur often will be less important than other more infrequent ones when it comes to how key they are to the context of my thesis. Furthermore, themes can be identified either as primarily *inductive*, i.e. strongly linked to the empirical data itself, or as primarily *theoretical*, that is driven by the theoretical interests of the analyst (Braun & Clarke, 2006, p. 83). Since the ethical themes I am interested in exploring aren't explicitly talked about in the hearing answers, my analysis falls under the theoretical approach. Another choice I have had to make, is whether to look for *semantic* or *latent* themes. Semantic themes are found in the surface meanings of the data, while latent themes can be identified in the underlying ideas, assumptions and conceptualizations that inform the data (Braun & Clarke, 2006, p. 84). Again, since what I am looking for is not explicitly stated, I am looking for latent themes. Epistemologically, my thematic analysis is essentially *constructionist*, meaning that I am looking for structural or systemic reasons for the accounts provided in the data material (Braun & Clarke, 2006, p. 85). The contrast to this is called a *realist/essentialist* approach and is more geared towards looking at individual meaning, experience and

motivation. In keeping with sound research ethics, I have conducted my thematical analysis in a careful, rigorous manner (Douglas, 2022, p. 428).

Braun and Clarke have laid out a good step-by-step guide to doing thematic analysis in their paper on *Using thematic analysis in psychology*, which I have chosen to follow when working with my data material (2006, p. 86). The steps are not clear-cut, where one follows the other, but rather represent guidelines for how to conduct an analysis, where moving back and forth between the different phases is an integral part of the process. The first step is *familiarizing yourself with the data* through repeated reading and immersing yourself in the material in an active way (Braun & Clarke, 2006, p. 87). *Generating initial codes* is the second step (Braun & Clarke, 2006, p. 88). Here, features of interest are coded across the data material into meaningful groups by working systematically through the material, usually with specific questions in mind that the codes are generated around. The third step is *searching for themes*, which starts after the initial coding of the data is completed. At the end of this step you should have a set of candidate themes comprising all the data that has been coded in connection to them (Braun & Clarke, 2006, p. 90). Now comes the fourth step, which pertains to *reviewing the themes* (Braun & Clarke, 2006, p. 91). Here, the candidate themes are revised to see what has enough data support, which themes might collapse into each other on account of similarity, and which themes are too big and need to be broken down into separate themes. The fifth step is *defining and naming themes* (Braun & Clarke, 2006, p. 92). Here, the essence of each theme is identified, as well as of the complete set of themes. Once this work is done, you can move on to the sixth and final step, which is *producing the report* (Braun & Clarke, 2006, p. 93). This is where you present the set of themes and the final analysis in way that shows the validity of the analysis and your data.

As we have seen here (and as I have most certainly experienced first-hand), thematic analysis is a meticulous and often time-consuming process. it does however have many advantages, which is part of what made the method appealing to me in the first place. First of all, it is both flexible, easy to learn and easy to use (Braun & Clarke, 2006, p. 97). Secondly, thematical analysis is also good at encapsulating key characteristics of large data sets, as well as providing a *thick description*, that is a broader record of the subjective contexts the meanings/themes are abstracted from (Geertz, 1973, p. 2). Thirdly, thematical analysis is useful for finding and juxtaposing similarities and differences, and interpreting data both socially and psychologically (Braun & Clarke, 2006, p. 97). Lastly, it is flexible enough to allow for unexpended results. I would argue that all these method attributes make thematic analysis both relevant and appropriate for analyzing my data material.

There are however some methodical pitfalls identified by Braun and Clarke that is important to be aware of when doing thematical analysis (2006, p. 94). The first of these is neglecting to in any respect analyzing the data, forgoing the rich analytical narrative needed to make sense of the data for the readers. The second is confusing data collection questions with actual themes, resulting in a failure to identify themes or patterns in the data set. A third pitfall is allowing too much overlap between themes and/or inconsistency or incoherence within themes, which will produce a poor analysis. This can happen if the analysis fails to describe the data or central aspects of it

accurately, or fails to present sufficient examples from the data. A fourth mistake can occur when there is little support for analytical claims made by the researcher found in the data material (Braun & Clarke, 2006, p. 95). Discrepancies between analytical claims and theory gives way to a fifth pitfall. Interpretations of the data need to match the chosen theoretical framework to provide a solid thematical analysis. The sixth and last pitfall comes about when a researcher does not divulge crucial information about the method used or theoretical assumptions.

3.3 About the Empirical Data

In April 2019, the Norwegian government opened a public hearing on The Norwegian Water Resource and Energy Directorate's (NVE) proposed national framework for land-based wind power development in Norway. Public hearings are the democratic process of letting citizens, organizations and businesses voice their opinions about proposed laws and regulations, in effect contributing to the shaping of policy (Regjeringen, 2023). The proposition NVE put out on hearing is directed towards the future development of land-based wind power in Norway and is based upon a comprehensive knowledge database about the impact of wind power production gathered through Norwegian and international literature reviews, direct experience with concession processing in wind power cases, and from already active wind power plants. Based on this knowledge, 13 areas have been deemed suitable for wind power development throughout Norway. When choosing these areas, NVE emphasized avoiding conflict with important natural areas, and took considerable care regarding relevant interests like for example recreation, noise, wildlife cultural heritage and reindeer herding.

The hearings and hearing answers can be found here:
https://www.regjeringen.no/no/dokumenter/horing--nves-forslag-til-en-nasjonal-ramme-for-vindkraft-pa-land/id2639213/

The hearings ended in October of 2019, and although it is not directly related to what I am exploring in my project, it is worth noting that the hearings resulted in the government dropping the proposed national framework for land-based wind power development in Norway on account of the massive backlash it received (Solberg et al., 2019). When the deadline for the hearings came, a myriad of actors had given their thoughts on whether such a framework should be implemented or not. In fact, the hearings produced 5341 different answers in total, which is by all accounts a massive response. In the scope of a master's thesis, though, this is simply too massive. Even more pressing were the relevance concerns I had in relation to the research question, which prompted a selection to be made within the data set. I therefore decided to cut all answers from private individuals, not because they are invalid or uninteresting, but based on the premise that these arguments are included in assessments made by local government, organizations and associations. All answers missing argumentation were also left out on the basis of irrelevance, since the arguments themselves are a key part of the ethical study I am conducting here. I was now left with 468 answers, which is still a lot, but definitely more manageable.

While the hearing answers certainly are compelling in their own right, what makes them so interesting in the context of my thesis is that, along with their thoughts on the actual framework itself, many of the actors also explicitly argue for or against land-based wind power. They are in essence giving reasons for why this technology is to be considered an important climate change mitigation strategy that should be given priority, or on the other hand, why it should not and what other interests should be prioritized instead. What this data gives us is not only real-world, but also current insight into an ongoing national debate around a quite polarizing climate change mitigation effort, complete with an array of conflicting interests situated in a huge network of actors.

By unpacking these conflicts, I will shed some light on the necessary ethical and practical considerations that need to be addressed if land-based wind power is to be successfully implemented in Norway. Here, I am not saying that wind power on land is either the right or wrong way forward if we are to save the climate; I simply want to explore if it is possible to implement mitigating technology in such a way that it is perceived to be *just* by all involved parties, meaning that no one feels left behind or voiceless in the process. Given the subject relevance and scope of NVE's hearings on their proposed national framework for land-based wind power development in Norway, I would argue that they provide fruitful grounds on which to conduct such an exploration. Granted, this material will not allow me to say much of anything on general terms about climate change mitigation strategies as a whole, but that is not what I am trying to accomplish here anyway. What I want to do is map out and analyze what could possibly be at stake in conflicts of interest surrounding climate change mitigation efforts such as land-based wind power. While land mass is a finite resource and most definitely imperative in combating climate crisis, could it be that there is more at stake here than how to best use the physical space? Could the underlying discussion in fact be one of justice, identity or even the integrity of nature itself? I believe questions such as these can be answered, at least in part, through investigating the discussion found in NVE's hearings, and that is exactly why I have landed on them as my primary data source.

3.4 The Actors

To identify common themes throughout the nine-hundred-and-some pages of hearing answers I was left with after the selection, I started out by loosely scanning the document for concepts that are repeatedly being discussed and could be of interest in the context of this thesis. Once identified, the most relevant themes and/or concepts were organized into sets of codes that could systematically be applied while deep reading the document.

The search has produced a code set of 16 interest categories that, once properly analyzed, should be able to tell me something meaningful about what could be at stake in this particular debate around land-based wind power in Norway. What they will *not* tell me, however, is *who* these things are at stake *for*. An essential feature of every one of these interests is that they do not appear in a vacuum; they are always voiced by *someone* and there's always real-world implications involved. So, the question then becomes: who are the actors contributing to the discourse? This question gave rise to a second set of codes, simply labeled *actors*. I will briefly introduce this set of actor codes before I get into the interest categories. Coding the actors will not only be advantageous in terms of what kind of depth it can add to the interest categories, but it will also make

it easier to look for *controversies* and therefore also possible ethical conflict in the data set (Latour, 1987, p. 30). I've grouped the actors found in the data material into three main categories: *Advocacy Groups and Organizations*, *Private Business and Economic Sectors*, and *Public Bodies and Political Parties*.

Advocacy Groups and Organizations: This category collects all the organizations and groups found in the data material that advocate for one specific field of interest. It therefore seemed logical to sub-divide the actors based on what interest they represent. For example, if the actor in question is a climbing association, it gets coded under the sub-category *"climbing"*. There are a few actors that do not fit into any other group, e.g. advocacy groups for health and dog owners' associations, but they are so few that it made most sense to group them into an *"other"* category. The sub-categories are:

- Agriculture and Forestry
- Anti-Wind Power
- Cabin Culture
- Employers' and Workers' Rights
- Environment and Wildlife
- Climbing
- Culture and History
- Hunting and Fishing
- Sámi and Reindeer Herding
- Sports
- Hiking, Trekking and Tourism
- Village
- Other

Private Business and Economic Sectors: Another large category present in the hearing answers are actors that in some way have economic stakes in the matter. This can be in the form of financial gains or losses that are either directly or indirectly linked to the wind power industry. A wind power developer will for example have a direct economic interest in wind turbines being built on a given area, while a tourism company might suffer economic loses if those turbines get built. There was also need for an *"other"* category here to collect stragglers like landscaping businesses and cartographers. The sub-division within the private business and economic sectors category is as follows:

- Consulting
- Food and Drink
- Health and Fitness
- Industry
- Landowner
- Power Company
- Tourism
- Wind Power Developer
- Other

Public Bodies and Political Parties: The remaining actors present in the data material operate in the public domain, either on a governmental or regional level. Some of these actors are involved with policy making, like for example municipalities, while others are in charge of specific tasks, such as national parks. The *"other"* category here only contains one actor that didn't fit in anywhere else, which is a public science museum. Here are the sub-categories:

- County Level
- Government Agency
- Municipal Level
- National and Regional Park
- Political Party
- Reindeer Herding
- Publicly Owned Enterprise
- Other

3.5 What is Given Value by Whom?

A discussion of note I found running throughout the hearing answers is one of *value*: what is valued by the person or group giving the answer, and why are these things given more importance than other things? While some actors for example place great value on the natural environment and recreation, others are a lot more concerned with for example local value creation and energy. Simply put, these are the things that the actors are giving top priority*,* it is their *interests* in the debate. These can either be things that are in line with land-based wind power and are therefore used to substantiate an argument *for* it, or things that are in conflict with wind power development and therefore are used as reasons *against* it. In total, my searches through the hearing answers yielded 16 different categories of interests, presented here in alphabetical order. Note that there is a bit of overlap between some of the interest categories, but I would argue that they are all distinct enough to warrant demarcation, hence this brief rundown.

1. ***Aesthetics:*** The introduction of technological elements to any landscape brings up aesthetical concerns: what kind of impact will the technology have on its surroundings in terms of how it looks, and in the case of wind turbines, how it sounds?

2. ***Agriculture and Forestry:*** Large areas of land, especially in the rural parts of Norway, are dedicated to activities in the primary sector, such as growing crops, animal husbandry and forest production.

3. ***Cabin Culture:*** Norwegians have a very distinct relationship with cabins. We use them much like vacation retreats in the woods and on the mountains: quiet, often isolated places to escape the stress of everyday life. Many families own cabins, but there are also cabins for rent, and even cabins put up by various trekking and tourism associations that are free to use.

4. ***Culture and History:*** This category comprises local cultural and historical values like historical buildings, cultural heritage sites, protected landscapes of cultural historical value, as well as local culture and traditions that have been passed down through generations.

5. ***Energy:*** The need for more clean energy is rapidly increasing, with wind turbines being one possible solution to meet these needs. Interests related to energy needs, how energy is produced, and the economics of its production and distribution are all included in this category.

6. ***Health:*** There is much debate about how infrasound from wind turbines might affect the health of both human and non-human animals. This category comprises interests related to possible adverse health effects from wind power technology, but also the health benefits from having access to undisrupted nature.

7. ***Land Ownership*****:** Some of the area that is deemed suitable for wind power development is already in the possession of other landowners. This can spark conflicts of interests in relation to the rights to this land.

8. ***Local Population:*** Communities need a population, and there are a plethora of often region-specific factors that make a village or city an attractive (or undesirable) place to live.

9. ***Local Value Creation:*** A crucial part of any community in Norway, whether it is our smallest villages or our largest cities, is a healthy local economy.

10. ***Natural Environment:*** Because of the climate crisis, undisturbed nature has become somewhat of a hot commodity and is therefore an interest to many of the actors participating in the discourse around land-based wind power in Norway.

11. ***Property Value:*** What a piece of property is worth, not only in terms of money but also how attractive the property is, is in part determined by its surroundings.

12. ***Recreation:*** Mountain climbing, hiking and hunting are just a few examples of recreational pursuits that are possible to carry out in the Norwegian wilderness.

13. ***Reindeer Herding:*** Similar to some other non-industrialized animal husbandry, reindeer herding requires fairly large areas of undisrupted nature, which puts it at risk of conflicting with potential sites for wind power development.

14. ***Regional Autonomy:*** The ability to impact decisions on a local level is a somewhat more abstract interest. Conserving regional autonomy is in part a process related matter, meaning it has to do with a regions capacity to shape

policy, but it also has to do with feelings of unity through local community and democracy.

15. ***Tourism:*** Many rural places in Norway have a growing tourist economy. People come from far and wide to experience what the country has to offer, particularly in terms of nature and culture.

16. ***Wildlife*****:** Conserving biodiversity is a significant goal we need to achieve to combat climate crisis. Protecting animals and their natural habitats on a local level is in essence what is at stake here.

3.6 Research Practice and Quality

Validity and *reliability* are well known measures for ensuring quality and consistency in quantitative research practice, but have proven difficult to use as criteria for rigor in qualitative methods (Mårtensson et al., 2016, p. 595; Yonge & Stewin, 1988, p. 61). In very broad terms, validity refers to the degree of accuracy of measure in a quantitative study, while reliability refers to the measure's consistency (Heale & Twycross, 2015, p. 66). These criteria work fine within the quantifiable, controlled conditions favored by natural sciences, but quickly become problematic when applied to the often chaotic real-world dynamics studied in social sciences. Mårtenson's, Fors', Walin's, Zander's & Nilson's elegant solution to this issue is to change the criteria completely through developing a *universal concept model for the quality of practice*, which basically is a framework for evaluating research practice quality across disciplines (Mårtensson et al., 2016, p. 595). I will rely on this model to ensure that I am using my chosen methods in a way that complies with high quality research practice. The model has four main dimensions, *credible*, *contributory*, *communicable* and *conforming*, where each of these are further subdivided into related concepts (Mårtensson et al., 2016, p. 599). I will now present each of these dimensions and briefly explain how they help secure the quality of research in this master's thesis.

Credible: The consistency, rigor, transparency and coherency of the research practice is what is dealt with through the credible dimension (Mårtensson et al., 2016, p. 599). By placing considerable effort in describing my method as thoroughly and clearly as possible, the study can quite easily be reproduced through the described procedures, which would yield a similar result for others if used in the same context. Furthermore, the public hearings and hearing answers I have used as empirical data in my project are open access, allowing others direct insight into the source into what is being studied here. When it comes to theoretical framework for this master's thesis, I've taken great care in choosing and referring to theory that corresponds with the subject matter in meaningful and interesting ways. A clear and relevant positionality statement has also been provided to help counteract researcher bias and keep my process as transparent as possible.

Contributory: The contributory dimension is in place to safeguard that the research is relevant and original (Mårtensson et al., 2016, p. 599). Wind power is an important part

of the ongoing public discourse in Norway around the climate crisis and green technology. Given the urgency and scope of this subject matter, it is pertinent to find sustainable solutions to ethical conflicts around wind power development. Therefore, it is only natural that there already exists an abundance of literature on the subject. By expanding on this well of knowledge through my training in applied ethics and STS, this is an area of research I feel confident I can add something of value to. Moreover, choosing hearing answers as the empirical foundation for this study is a quite novel approach to data collection in relation to the subject of land-based wind power development. Furthermore, thematical analysis of ethics is unorthodox, at least in a social sense.

Communicable: The communicable dimension helps secure that the research is accessible, searchable and consumable (Mårtensson et al., 2016, p. 599). This master's thesis is structured to be both easy to follow and understandable, where every section and sub-section is clearly marked and set up in logical succession. The language and academic voice used have been meticulously chosen to steadily guide the reader through the arguments and conflicts that are central to this study.

Conforming: Establishing research that is ethical and sustainable is the goal of the conforming dimension (Mårtensson et al., 2016, p. 600). Seeing that land-based wind power development is a quite divisive subject, it was important from an ethical standpoint to account for all the different voices involved in the debate. Since my approach entails mapping out different actors and interests, I would argue that this goal has been achieved in a satisfactory manner. Also, choosing the relatively non-invasive method of document analysis helps me secure that the study is conducted in an ethically sound way.

4. Findings

If I am to say anything of value about the ethical and practical implications of land-based wind power development in Norway, the data material collected through the hearing answers first needs to be unpacked, described and analyzed. It is through the findings uncovered in this process that I will be able to add something meaningful and unique to the literature. In this chapter I will present these findings, starting with the actors involved in the hearings. Questions like who they are and where they stand on land-based wind power development will be answered here. Next, I will give a thorough rundown of each of the 16 interest categories, presenting arguments *for* and *against* wind power development within each category. These arguments are at the nucleus of my study, since they point directly towards the sociotechnical controversies that give rise to the ethical and practical conflicts that I am exploring here.

4.1 Actors

There is a great deal to unpack in any data set of the size and scope that I am analyzing here. In an effort to keep this process as streamlined and easy to follow as possible, I will start with something rudimentary, which is how many actors there are in each actor category. The *advocacy groups and organizations* are the largest category, with a total of 198 actors. Next up are the *public bodies and political parties*, collecting answers from 150 actors. Lastly, we have the *business and economic sectors*, comprising 120 actors.

Figure 1: Attitude Towards Land-Based Wind Power Development in Norway

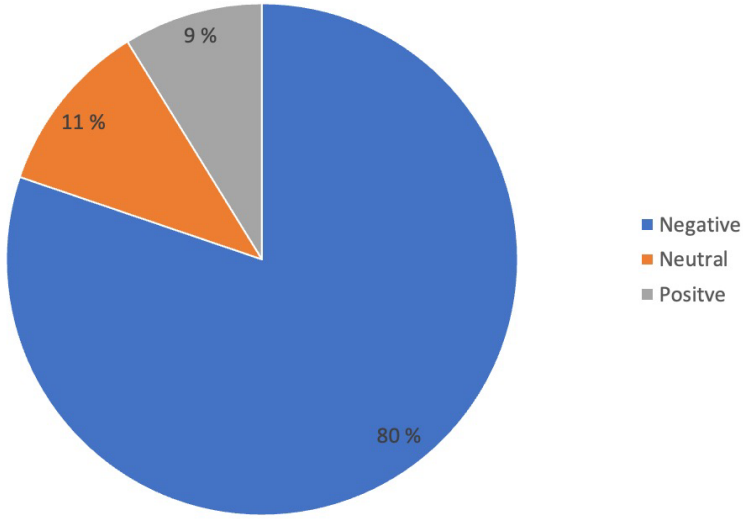


Figure 1: Attitude Towards Land-Based Wind Power Development in Norway

In my preliminary analysis of the data material, the first thing that becomes apparent is that an overwhelming number of the actors involved are negative towards the idea of land-based wind power development in Norway (See figure 1). Out of the 468 hearing answers that make up the data material, only 95 hold a position that is not completely against land-based wind power, with under half of those answers (44 to be exact) adopting a wholly positive stance. The remaining 373 hold a negative stance towards land-based wind power development in Norway.

Figure 2: Attitude Towards Land-Based Wind Power Development in Norway According to Actor Groups

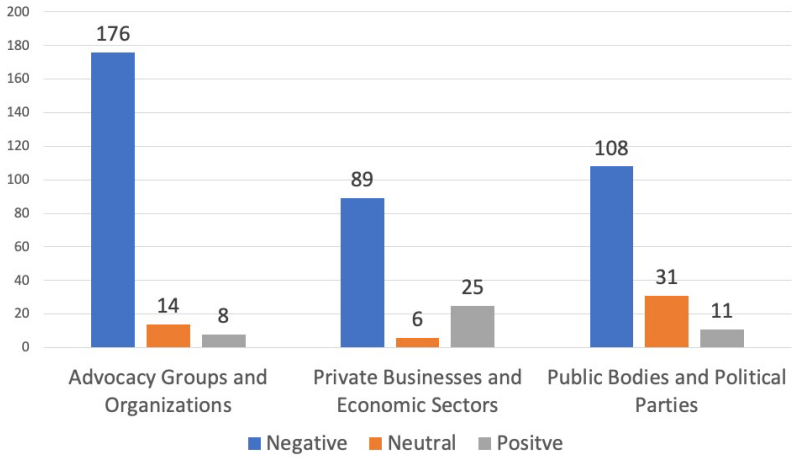


Figure 2: Attitude Towards Land-Based Wind Power Development in Norway According to Actor Groups

Actors that are pro wind power development are primarily found in the private business and economic sectors: the developers themselves, power companies, landowners and a handful of businesses operating in various other fields (see figure 2). Businesses operating within the food and drink, health and fitness, and tourism segments are on the other hand wholly negative to wind power development. Amongst public bodies and political parties there is also some support found, where a small number of municipalities, government agencies and publicly owned enterprises view wind power on land as both a beneficial and necessary solution for the future. Furthermore, 31 of the 51 neutral answers are found within this group of actors, meaning that over half of the neutral stances in the data material come from public bodies and political parties. The least supportive actors are the advocacy groups and organizations, with only a handful or so speaking in positive terms about wind power as a desired environmental mitigation strategy in Norway. The two categories of advocacy groups and organizations where these positive stances from actors are found are *employers' and workers' rights* and *environment and wildlife*.

Although the findings presented so far tell us something about who is involved in the discourse around land-based wind power development in Norway and the general perception of the technology, they say very little as to the grounds on which these opinions are based. To get an overview of this, we need to examine the argumentation *for* and *against* land-based wind power development presented through the actors' different interests more closely.

4.2 Interests

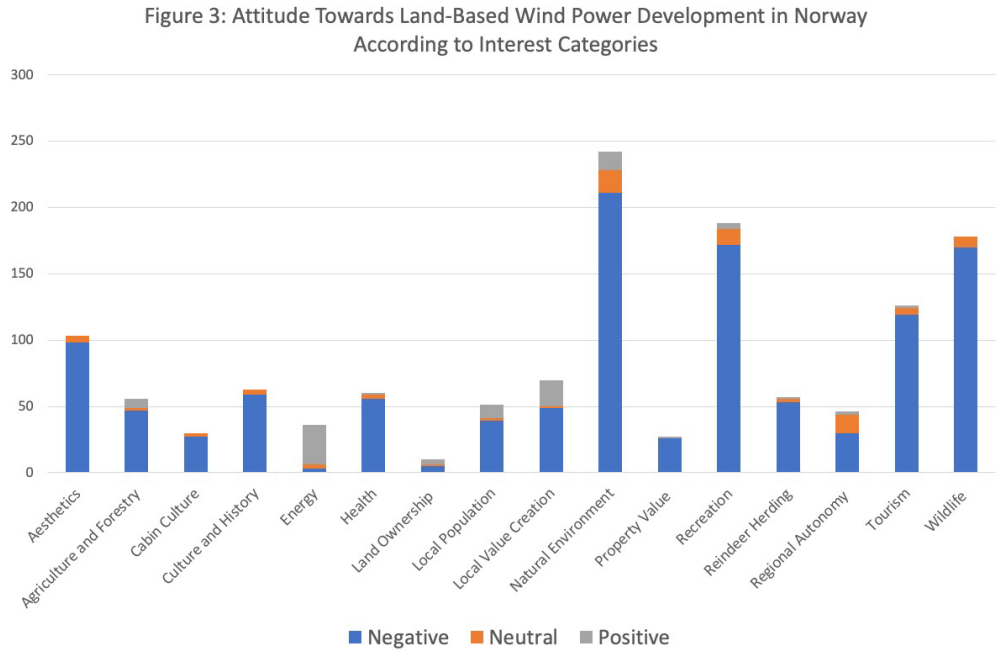


Figure 3: Attitude Towards Land-Based Wind Power Development in Norway According to Interest Categories

As I mentioned in the methods chapter, several of the interest categories weave in and out of each other, often addressing similar or overlapping subject matter, but the demarcations I have made here are not arbitrary. The interests collected in each

category are all relate to land-based wind power development in unique and meaningful ways, which I will make clear as I run through them here in the findings chapter. There is also quite a range in support between the interest categories: the biggest category, *natural environment*, is argued for or against by 242 actors, while the smallest, *land ownership,* is only mentioned by 10 actors (see figure 3). However, it is not necessarily so that the most supported interests or most repeated arguments are the most relevant when it comes to uncovering ethical barriers for land-based wind power development in Norway. On the following pages, I will run through all the major themes of argumentation found within each of the 16 interest categories.

4.2.1 Aesthetics

How the landscape one surrounds oneself with looks and feels is important to most people. According to the actors, the aesthetics of the land we inhabit has a connection to the Norwegian identity and way of life. Here is how one actor passionately expressed this sentiment:

"On October 8, 2019, fire beacons will be lit all along our coastline again. Historically, this type of warning signal runs back 650 years in Hordaland, and this time they will signal DANGER. Because now our coast and our mountains are under such tremendous pressure that we otherwise calm coast and mountain folk have a powerful need to protest! NVE! The steadfast fisherman and calm mountain wanderer has had enough, they don't want any more blown-up nature and high, white, disfiguring wind turbines along the coastline and in the mountains."

This is interesting since identity is one of the three ethical barriers for land-based wind power development in Norway I am exploring in this thesis. I will get back to this a bit later in the discussion chapter.

Although beauty can be quite subjective, there is a general consensus in the hearing answers that wind power development will have a detrimental effect on landscape aesthetics. Here, I've chosen to understand aesthetics in keeping with *strict perceptual formalism,* meaning that visual and auditory, and possible even tactile, gustatory, and olfactory properties are what gives an object its aesthetical value (Shelley, 2019, p. 1). Out of the 103 total actors who I find to hold aesthetics as an important interest, none are positive to land-based wind power development in Norway, while only 5 take a neutral stance. The remaining 98 who are negative to the development come from a wide range of categories: From tourism and anti-wind power associations to political parties and private industry (see figure 3).

The two main concerns voiced by the actors regarding the aesthetics of wind turbines and their adjacent infrastructure are how they look and how they sound. The visual impact of untouched and unbroken nature is held highly by many actors, where words like *pure*, *tranquility* and *freedom* are used to describe this phenomenon. On the other hand, when these same actors are describing wind turbines, the term most frequently used is *visual pollution*. Not only are the turbines deemed unsightly constructions in both

shape and size, but they are also accused of casting bothersome shadows, blocking the sun, and blinking with lights at all hours of day and night. This will not only affect the permanent residents, but also spill over on cabin population, as well as make drawing tourists to the area harder. As one actor sums it up:

"One has to assess the totality of multiple sensory impressions (perception), in this case one should, in addition to the static, visual effect, assess the effect of movement over time, how visual input is changed by light/shadow, auditive effect, and how the totality of this effects how one experiences the landscape."

To add insult to injury, the wind turbines produce noise which many actors hold to be both a nuisance and downright dangerous. It is easy enough to see how this noise can be bothersome for people staying in its vicinity, but a lot of actors in the hearings also state that the low frequencies produced by wind power production can have adverse health effects. They are said to cause an absence of peace and quiet by the actors, introducing an unpleasant or ugly aesthetic into their surroundings. The sum of these aesthetical concerns leads actors represented in this category to be firmly against wind power development on the basis of it being a threat to human and animal well-being, disrupting peace and quiet, as well as negatively impacting the attractiveness of the areas in question.

4.2.2. Agriculture and Forestry

The agriculture and forestry category comprises 56 actors, where most of them are negative to land-based wind power development. Only 7 actors, all of them landowners are positive, while 2 actors are neutral (see figure 3). One of the most common arguments I found against land-based wind power development within this interest category is that wind power production will make agriculture and forestry impossible simply by occupying the same land as these activities require. Wind turbines and their adjacent infrastructure will displace the animals, take up the space needed to grow crops, and prompt deforestation:

"Wind power development will mean pastures that are no longer usable because the soil will be destroyed and the animals, according to experience from among others France and Canada, shun areas of wind power production."

A similar argument put forth by many actors is that traditional agriculture and forestry is a sustainable and environmentally friendly way to use landmass, making it a necessary component in combating climate change, while using the land for wind power production is quite the opposite. The view held here is that the construction and continued operation of wind turbines will permanently alter the surroundings, creating a barren landscape by polluting both soil and drinking water with chemicals and microplastics. They worry what consequences this will have on the quality of produce, milk production and meat.

Furthermore, the noise pollution caused by the turbines will have a detrimental effect on the health and well-being of livestock. Another argument against wind power development that I encountered in the hearing answers from actors that perceive wind turbines as a threat to agriculture and forestry is rooted in tradition. Some of the areas that have been pointed out as suitable for wind power production have been used as pastures for generations and are in many cases the life blood of the villages they belong to. If these areas are overtaken by industrial development, it will make it impossible for actors to make a living of farming the land, thereby effectively putting a stop to long running traditions tied up in these activities. This point can however be used to argue that land-based wind power development constitutes positive change for agriculture and forestry:

"In a time where agriculture only yields marginal income and where it is challenging to run an operation with enough earning to survive on the income, wind power development represents a large and positive value addition for the property in general, and will provide totally new opportunities to withdraw forest resources that otherwise would be impossible to realize the value of."

Making ones living of the land is an increasingly difficult thing to do in Norway (Eika & Vestad, 2022). This causes some actors to view allocating pieces of land to wind power production as a way to alleviate some of the financial pressures. It helps keep the light on and the farm running, not just for today, but for future generations as well. This is important in the context of my thesis, because it is linked to the concept of identity: Tradition, culture and history is part of the make-up of an individual and collective sense of self, which is what the actors are trying to protect here (Warren, 2015). I will get back to this notion more in-depth in the next chapter.

The roads that will be built will according to the actors also help when it comes to looking after livestock and make other rangeland that previously has been difficult to get to more accessible. This is especially relevant when it comes to forestry, where it will be possible to realize the value of previously untapped resources. Some landowners supplement their income with recreational tourism pursuits, and accessibility that the roads might afford will benefit these business interests as well, also making these areas more accessible to i.e. wheelchair users etc. An additional point is that these road networks will add to safety in case of forest fires, facilitating accessibility for vehicles, water and equipment.

4.2.3 Cabin Culture

This is one of the smallest interest categories, with only 30 actors citing cabin culture as a concern (see figure 3). None of these are pro wind power development, while only 3 are neutral. The remaining 27 are primarily actors from the cabin association category. Yet, The cabin culture in Norway is far from a subculture; on the contrary, it is at this point engrained in the very fiber of what it means to be Norwegian (Rees, 2013, p. 125).

One of the greatest concerns for actors that are negative towards land-based wind power within the cabin category pertains to how wind turbines will affect the *value* of the cabins, not only in an economical sense, but also in relation to recreational and

aesthetical value. An important part of cabin life is peace and quiet. It is supposed to be a refuge from the hustle and bustle of modernity, a throwback to simpler times, and many actors feel that the construction of large technological devices in the vicinity of cabins comes in direct conflict with these ideals:

"Those who built cabins in the valley from the mid-60s onward, were people who were very interested in the mountains, mountain fishing and wandering in untouched nature. These people would probably not have chosen these mountains as an excursion and recreation area had they known that the nearby mountains would be developed with monster turbines for wind energy production."

The visual and noise pollution generated by wind power plants will impact the attractiveness of the area, both for existing and future cabins. Therefore, there is a consensus among cabin developers and owners throughout the hearing answers that this will have negative consequences for property value, tourism, local population growth, health and culture. People looking to rent or own cabins want to be close to nature and reap the potential recreational and health rewards gained from being in nature. What is described by some actors in the hearing answers as *"monster turbines"* will stand in the way of achieving this closeness to nature and will therefore significantly reduces the cabin experience and ultimately detract meaning from doing it in the first place.

Further, villages that depend on the income from cabin tourism will suffer when people stop coming to the cabins in their area, drying up an essential revenue stream for local business and at worst cause a negative population growth. Some of these villages also depend on the cabin tourists to keep the villages alive socially: they serve as extra hands in for example sports teams, community centers and associations.

4.2.4 Culture and History

None of the 63 actors represented in the culture and history interest category are positive towards land-based wind power development in Norway. 4 actors are neutral, which means that 59 actors are wholly negative towards wind power production in their area (See figure 3). Many areas that are lucrative for wind power development, contain buildings, artefacts and sites that are deemed historically and culturally valuable. This can be anything from quarries, old churches, landmarks, historical pastures and grasslands, petroglyphs and other remnants of ancient settlements, or pilgrimage routes. Some actors even argue that keeping the landscape intact is itself of cultural and historical importance.

The cultural heritage all these things embody are, according to the actors, key to feelings of community: They help bestow and maintain a sense of belonging and identity to the people who inhabit these locations. Note that again the notion of identity crops up, which is a key concept to my thesis. The main concern voiced by many actors when it comes to introducing wind turbines into these culturally and historically important areas, is that they will significantly lessen the areas' value. Not primarily in an economic sense, although culture certainly helps with the tourist draw, but more in social sense:

"Those of us that were born, raised and eventually chose to stay in nature, watch the development with grief; the choice to stay was rooted in a great respect for the heritage from our forefathers and a powerful love for our homeland."

According to the actors, the unique local heritage these sites, artefacts and buildings represent might be lost if wind power is developed in the same locations, consequently threatening to sever common links to the past which serve as a base layer of social glue to the local populace. I found no actors throughout the hearing answers who had any arguments of how wind power development can be beneficial in a cultural and historical sense.

4.2.5 Energy

With both world population and general living standards on the rise, the need for electrical power is constantly growing. Furthermore, to combat the climate crisis, this energy needs to be produced cleanly, meaning we need alternatives to fossil energy production. The majority of actors who voice energy concerns throughout the hearing answers, are mostly positive towards wind power development (30 out of 36 actors, see figure 3). The main reasons for this are that, according to the actors, wind power is not only one of the most cost effective, but also one of the cleanest ways to meet the growing energy demands:

"Wind power is one of the most competitive forms of energy production that can be implemented without considerable subsidies."

It will contribute to the electrification of Norway, help us achieve our short- and long-term climate goals, and provide affordable clean energy for both private consumers and industry. In some cases, wind turbines can even be located near industrial or urban aeras, thus reducing the need for more power lines while at the same time increasing the utilization of the infrastructure already in place. This kind of affordable, renewable power can be crucial when it comes to prosperity in the industry sector. Another similar argument I found in the hearing answers is that, in contrast to popular belief, wind power development does not require much land at all in comparison to how much clean energy it is able to produce.

Some actors also argue that wind power will have effects outside of our borders, providing a substantial Norwegian contribution to the electrification of Europe, particularly in the transportation industry. Furthermore, wind power and other similar sustainable energy production is viewed by some as a fulfillment of our duty towards the rest of the world and future generations. This clearly has an ethical dimension: The actors are expressing concern for other human beings, both currently living and potential future people, which ties neatly into the concept of energy justice which I will discuss in depth in the next chapter (Sovacool & Dworkin, 2015, p. 440).

An additional point voiced by a few actors is that wind power is one of the most competitive forms of energy without much subsidization, meaning it is viewed as relatively cheap way to produce power that does not necessarily need to involve the taxpayer's dime. Additionally, the technology needed is already there, so there's no need for costly research and development before implementing it into the real world. This fits neatly into the line of argumentation saying that we need to act now before it is too late. The technology is also predicted to keep improving over time, which will lower its climate impact and in essence make it *greener*. Many actors argue that wind power needs to be a supplement to existing renewable energy production like hydroelectric power, seeing the sum of all renewable energy sources as an important contribution to combat the climate crisis.

The three actors who are negative towards land-based wind power development within this category comprise a private power company, an anti-wind power association, and a climbing association. They argue that wind power production will come in conflict with other forms of existing energy production, like for example hydroelectric power, which they claim is both more environmentally friendly and cost-efficient ways of meeting energy demands.

4.2.6 Health

Almost all the answers pertaining to the health effects of wind power development are negative, except for *one*. I will get to that one answer in a minute, but first let's examine the main arguments voiced by actors who are negative towards wind power because of health concerns, which there are a total of 56 of (see figure 3). There are basically two perspectives given by the actors here: The first is that wind turbines have direct adverse health effects on the people who stay in their vicinity. One reported problem is infrasound, i.e. sound that is not audible to the human ear (Flemmer & Flemmer, 2023, p. 1). According to the actors, health issues stem from the infrasound wind turbines produce that continually subject our bodies to pulses of pressure waves:

"We will not accept being subjugated to pressure waves in the air space that might abort fetuses and that has been researched far too little."

The actors claim that over time, exposure to these pulses can supposedly cause sleeplessness, increased stress levels, reduced immune system function and migraines, among other things. Furthermore, it is not only humans who are susceptible to health problems caused by wind power production, but animals as well. Although there's not a lot of research done on the effects of infrasound might have on health, many actors advise us to take a precautionary approach. Another source of perceived health issues concerns the pollution caused by the construction and maintenance of wind power plants, where chemicals and plastics might seep into the drinking water or pollute the soil, thereby getting into people's food.

The other perspective held by many actors (it is important to note that these two perspectives are not mutually exclusive, and it is therefore fully possible for an actor to

hold both beliefs at the same time), is that land-based wind power development bereaves us of access to unspoiled nature, which in turn impacts public health. In relation to this, one of the actors had this to say about the prospect of land-based wind power development in their area:

"This will degrade both the experience of outdoor life and the natural areas where outdoor activities are carried out, and will lead to these areas no longer being usable for outdoor activities and therefore be detrimental to public health benefits."

These actors hold that using nature for recreational purposes is good for people's well-being and health, both physically and mentally. It can help with reducing stress and alleviating pains. Wind power development simply takes up space that could otherwise have remained relatively untouched and hence be perfectly suited for recreational purposes. Another related issue is that wind turbines might throw ice of their rotor blades in the wintertime, making it unsafe for people and animals to move close to the turbines.

Now, to the one hearing answer that takes a positive stance on land-based wind power development in relation to health. This actor, which is a landowner, states that the roads and other infrastructure provided by the wind power development, can actually be beneficial for public health by granting easier access to the terrain. The areas will be better suited for bicycling, skiing and walking, as well as be accessible for people with baby carriages and wheelchairs.

4.2.7 Land Ownership

Space is a finite resource in itself, and therefore conflicts over the rights to the land that can be used for wind power development are bound to happen. Actors voicing concerns within this category are primarily interested in whether wind power development is the right way to use land in terms of financial gains for its owners, but also in terms of social and environmental gains for society at large:

"Anyone who gets a view to turbines from their property, should have the same right of access and right of appeal as landowners who are affected by construction roads and planning areas."

This type of concern is not voiced by very many actors throughout the hearing answers (10 in total), and the actors stand quite evenly divided on the issue of wind power development in Norway (5 actors are for, 1 is neutral and 4 are against).

4.2.8 Local Population

Many, if not most, of the areas that are good prospects for wind power development have a local population. People are either permanent residents, cabin owners or tourists in or around the areas in question. One concern voiced by many of these communities is how wind power development will affect the local population number. Will it attract more people to the community, or will it cause people to move elsewhere? Of the 51 actors in

the hearing answers that hold this concern, most (31 actors) are negative towards land-based wind power development (see figure 3).

The main reason for this is that the communities they speak on behalf of are often sparsely populated in the first place, and in contrast to big cities, there is not much of a cultural or economic draw. What they do have in abundance, is untouched nature, which provides both ample recreational opportunities and a unique, grandiose backdrop to life. This is, according to the actors, what makes these communities attractive places to live or visit in the first place. Some even explicitly state that it is an important part of their own identity, a sentiment that correlates with the ethics of identity which I am exploring as part of my main research question in this thesis: What are the ethical barriers of land-based wind power development in Norway? If wind power is developed in the area, these actors fear that the wind parks will displace what draws people to live there in the first place and might worst-case cause depopulation:

"When I speak to others in the village that has gotten closer to this than they would like, there are several who tell me that they have cried a lot and do not want to live here anymore, but that they feel obliged to do so because of the family farm and strong ties to the village."

Another interlinked point is that a lot of people's livelihoods are based off of these areas of wild nature. Without access to untouched nature, then, the actors feel there is simply not much that will keep people living in these communities. On the other hand, the 10 actors who hold a positive stance towards wind power development in relation to local population see wind power as a welcomed opportunity to save the communities in question:

"We think that access to energy is important to secure viable villages and future population basis in the rural parts of Norway."

Land-based wind power development holds the potential, according to these actors, to generate new revenue streams and new jobs for the local population. Furthermore, the income garnered by the wind turbines might secure farms in the areas, who are fighting a losing battle against foreclosure due to lack of revenue. This will, according to the actors, help keep the farms alive for the current and next generations, preventing depopulation of the communities. Also, these actors argue that the presence of new job opportunities brought on by wind power development and industry might actually be a draw, causing an increase in the attractiveness for the areas in question.

4.2.9 Local Value Creation

A key component to every part of Norway, from our smallest villages to our biggest cities, is local value creation. Therefore, there is already value being created in all the areas that are deemed suitable for wind power development, and introducing wind power production can either be disruptive to the value creation already happening or add to it.

Of the 70 actors voicing this type of concern, most are negative towards land-based wind power development, so I will run through this group first (see figure 3). Here we find 49 actors, many of whom create value on the same natural areas that wind turbines would occupy, primarily through landownership, farming/forestry, tourism or cabin rental/development.

Their biggest concern is that wind turbines will make these activities hard or even impossible, either by taking up the same physical space needed to conduct these activities or by making the area less attractive for tourists and cabin users, in essence forcing them out of business. Since these businesses are keeping a lot of the local population employed, losing them will not bode well for the future of these communities, according to the actors. What is worse is that wind power will not provide employment opportunities for even a fraction of the people that are now without a job. Additionally, there is not much taxation in the wind power industry, so very little of the value created will benefit the municipalities or the local communities. But the other group of actors, the one that argue for land-based wind power development on the basis of local value creation, view things quite differently:

"There will be dozens of jobs directly linked to the wind power plant, but just as important for us are all the indirect jobs and positive repercussions this will have for local and regional suppliers working within everything from road construction, groundwork, fabrication, foundation, and the service industry in general, to name a few. Increased activity is connected to increased employment and population growth. Additionally, if the wind power is used regionally to build new industry, it will create a large number of new jobs within a broad spectrum of the goods and services sector, and thereby further possibilities for local industry."

There are 20 actors who hold this position in the local value creation category, spanning from landowners to public bodies on a municipal level (see figure 3). They argue that wind turbines will not cause unemployment at all, but on the contrary create new jobs that can happily coincide with the existing ones. According to these actors, wind power development will not make the land unusable for the business ventures already in place, and the building, operation and maintenance of the wind parks will create a lot of new additional value. Landowners will be reimbursed for the use of their land by the developers, which in turn can help fund their day-to-day.

The infrastructure provided by the wind parks can also facilitate access to difficult to reach areas that has previously been off limits, granting access to hard-to-reach resources and possibly even creating novel business opportunities. Furthermore, the power created on these sites might attract power-intensive industry ventures to the area, opening up for even more jobs being created in the process. This group of actors also view the wind power industry as a potential future revenue stream for municipalities and the local communities through taxes.

4.2.10 Natural Environment

Concerns for the natural environment is by far the largest of all the categories I have mapped out in the hearing answers, with a total of 242 actors citing this as important (see figure 3). Seeing that most of these actors are against land-based wind power development (only 14 are positive, while 17 are neutral and the remaining 211 are negative), I will start by going through some of the major arguments put forth by this group. Almost every kind of actor is represented here, with political parties, environment and wildlife associations, and anti-wind power advocacy groups being the three biggest. The exceptions are wind power developers, private industry, public bodies on the county level, government agencies, publicly owned enterprise, and other public bodies.

The argument is that if we are to successfully combat the climate crisis, it is paramount to keep a lot of our remaining nature both untouched and unfragmented (United Nations, 2024). According to the actors, this is simply not feasible if we are to use that exact land to produce wind power. The construction and operation of wind turbines and its adjacent infrastructure in any area requires us to disrupt nature, at least with how this technology works at present. This type of disruption is viewed as both permanent and irreversible by the actors, and the extra energy we gain from wind power production is far outweighed by the gravity of what we stand to lose. This point is perhaps most succinctly summed up by one actor, who states:

"Wind power is a rape of Norwegian nature and cannot be reversed."

Biodiversity is a key piece of the puzzle when it comes to fighting climate change, which in essence means we need to conserve as much plant life and terrain intact as possible (United Nations, 2024). A lot of actors mention peatlands in particular, which serve an important role in storing CO2 (Van Der Velde et al., 2021, p. 1). These peatlands are often found in the same mountainous areas that are well suited for wind power production, which means they would have to be drained in order to set up wind parks. Trees also help bind CO2, so a lot of actors point to the importance of keeping forests intact as well. If all this stored CO2 were to be released, it would have severe consequences for the environment.

There's also concerns voiced by quite a few actors regarding the amount of pollution the wind parks might generate in the form of chemicals seeping into nature and plastics littering the areas. Moreover, how the developers will handle the wind turbines after their 20–30-year lifespan is debated, where the fear is that the installations will be left to rot and pollute the area for a long time. Some actors speak of nature as inherently valuable, where doing anything that disrupts nature, including wind power development, undermines this value. This is important in the context of my project because I have identified natures moral value as one of three ethical barriers for land-based wind power development in Norway. I will return to this in chapter 5. A similar argument, albeit of a somewhat more anthropocentric sort, is that we have a duty to preserve and mange nature for our descendants. Another concern commonly raised by actors is that our government is handing over pieces of nature to foreign investors for profit without the consent of the Norwegian people, who they claim Norwegian nature belongs to in the first

place. These actors feel like we are being deceived, tricked out of our own lands by what they sometimes refer to as *"the climate hoax"*, often invoking how this is a breach of treatises like the *UN's Convention on Biodiversity* and *the European Landscape Convention*.

This certainly paints a pretty grim picture of what wind power development will do to the natural environment in Norway, but there are however arguments to be found in the hearing answers that are positive to land-based wind power development in relation to the natural environment. These actors comprise wind power developers, consultants, landowners, private industry, publicly owned enterprises, other private business, and interestingly, environment and wildlife associations. The most common argument put forth by these actors is that we are running out of time if we are to reduce emissions by 2030, and land-based wind power is the most cost and climate efficient way to cut emissions which can be realized right now. The most important thing is setting up alternatives to fossil fuels. Therefore, we simply must invest some of our untouched natural environment in wind power development if we are to have a fighting chance in weening ourselves of fossil fuels. Some actors even argue that wind power production will be a bigger contribution towards saving the environment than keeping untouched nature intact, on account of it replacing dirty energy like coal, oil and gas with green energy.

Furthermore, the actors argue that the technology used will become better and more effective over time, which will lessen the impact wind power production has the natural environment. Since Norway is rich in natural resources, it is our duty towards the rest of the world to help reduce emissions by producing clean energy, and according to the actors a substantial part of this energy is expected to be land-based wind power. A more moderate view held by some actors is that the energy contributions that wind power affords us are imperative, but the wind turbines should be constructed in areas that are already developed and have infrastructure in place, not in untouched natural environment.

4.2.11 Property Value

An important concern for many actors who own property, be it a house, a farm, a cabin or something similar, near a planned wind park, is what the wind park will do to the value of said property. Almost all the 27 hearing answers mapped in this category, except 1, are negative towards land-based wind power development in relation to property value (see figure 3). The one actor that is positive, which is a landowner, argues that wind power production will raise the value of their property in general, letting them access hard-to-reach forest, among other things. The rest of the actors that have concerns towards property value argue that large industrial installations like wind parks will devalue their homes, cabins and farms:

> *"In addition to the direct consequences wind parks will have on the developed areas, adjacent areas will also suffer a negative growth through decline in value and less attractiveness."*

The primary reason for this is that visual and noise pollution, as well as a decrease in access to untouched nature, will make the areas less attractive, ultimately leading to a drop in property prices.

4.2.12 Recreation

A lot of people frequently use their surroundings for recreational pursuits like hiking, biking, hunting, fishing and mountain climbing, to name a few. Recreational activities such as these help people relax, recharge and relieve stress (Brymer et al., 2021, p. 408). Such activities are a major concern for 188 of the actors in the hearing answers, where 172 of them are negative towards wind power development (see figure 3).

The primary reason for this is that these kinds of recreational activities are often conducted in sparsely populated areas where there is untouched nature abound, which as we have seen, is the exact type of areas that are favorable for wind power production. So, again, the conflict revolves around what interests should be prioritized in the given area. Actors that are negative towards land-based wind power development within the recreation category are concerned that wind turbines and their adjacent infrastructure will make it difficult or even impossible to use the terrain for recreational activities, and on that basis see them as a threat to Norwegians well-being and way of life:

> *"Buliding monster turbines in the mountains will be detrimental for all these good experiences we seek."*

According to these actors, recreation is important not only for our sense of identity and community, but also for children's development. Once again, we see the actors touch on the importance of preserving identity, a point that is directly related to the underlying ethics of this debate that I am exploring in this thesis. I will return to this in the discussions chapter.

The wind parks might scare of animals and block ponds and peatlands, which will impact hunting, fishing and foraging. They might make the areas unsafe to use for skiing and hiking in the wintertime because of ice being thrown from the wind turbines' propeller blades. Walking dogs without leashes is put forth by some actors as an example of a recreational activity that is only possible in these areas and is therefore threatened by wind power development. In general, the actors feel, the wind parks will detract from the whole experience of being in nature, with all the peace and quiet it can afford.

When it comes to group of actors who are positive to wind power development in relation to recreation concerns, they are all landowners. Their main argument is that the accessibility that the roads and other infrastructure of wind parks will provide, might actually improve the recreational possibilities in the areas they are to be constructed. New regions will be reachable for recreational purposes, and new user groups like for example wheelchair users will have access to these regions. This will, according to the actors, increase the value of use of these areas for a lot of people.

4.2.13 Reindeer Herding

Another area-intensive interest that utilizes the same regions that are good for wind power development is reindeer herding. In Norway, reindeer herding is fundamentally linked to the Sámi way of life, both culturally and historically, which basically means that anything that threatens to disrupt reindeer herding is also a threat to Sámi culture (Blåhed & San Sebastián, 2021, p. 5). It's therefore not hard to see why most of the hearing answers given within the reindeer herding category are negative to wind power development. Out of the 57 hearing answers that site this interest as important, there is only 1 that speak of wind power development in Norway as a positive, while 53 actors view it as a negative (see figure 3). Perhaps unsurprisingly, these negative answers primary come from reindeer herding districts and Sámi and reindeer herding advocacy groups.

The main argument presented against land-based wind power is that reindeer herding requires large, contiguous spaces of untouched nature, and according to the actors, the human interference caused by wind power development would have devastating effects on these spaces. This would compound with other interest already in play in these areas, like cabin development, agriculture and forestry, roads and other infrastructure, hydroelectric power production, and tourism, putting further pressure on reindeer husbandry and therefore the Sámi culture as well:

> *"Reindeer herding is not only a workplace, but it is a way of life, an identity and culture, a space where the indigenous peoples have stayed, where the Sámi belong, where they have subsisted, where our identity has been formed, is and will remain. It is therefore totally unacceptable to destroy our future, culture and way of life. Furthermore, nature is totally destroyed in the district. The planned wind park is located in the middle of the district and will literally destroy it."*

Furthermore, the actors argue that the herds will not graze near the wind turbines and their adjacent infrastructure on account of their visual presence and the noise they emit, causing unnecessary stress for the animals. It also disrupts the ebb and flow of the seasonal grazing periods and patterns ingrained in reindeer herding traditions through generations. This causes great difficulty not only to the animals themselves, but also to the reindeer herding district in terms of extra work and higher costs. An additional point made in the hearing answers is that the traditional Sámi use of rangeland is in many ways the best form of nature conservation. There is also mention of our duty to protect our indigenous people, and seeing how central reindeer herding is to the Sámi culture and identity, it is by proxy our duty to protect the values, knowledge and practices contained within these traditions. This is central to my discussion of identity as an ethical barrier for land-based wind power development in Norway, which I will return to in the chapter 5.

4.2.14 Regional Autonomy

The freedom to choose how to best utilize local area and resources is a right that some actors in the hearing answers argue for. Out of the 46 actors in the regional autonomy interest category, 30 are opposed to wind power development on the basis that the

process is outside local control, whereas only 2 take a positive position (see figure 3). Amongst the actors who are negative we find governing bodies on both a county and municipal level, anti-wind power associations, cabin associations, hunting and fishing associations, agriculture and forestry interest groups, employers' and workers' rights associations, culture and history associations, tourism businesses, private power companies, and other interest groups.

The actors feel that the local population and governing bodies know their own region the best, and therefore should have the final say when it comes to what interests get prioritized:

"The process is outside of local control. Local governance will become very limited. The municipality will lose control over their own area. Additionally, developers are also often foreign companies."

The two actors who are pro wind power development, which both are public bodies on the municipal level, argue that it is within the rights of the local governing bodies to override decision on a national level that forbid wind power production on their land. The same right, however, is paramount for those actors who are against wind power development: municipalities should have the right to veto propositions about wind power development in their area, and anything else is according to these actors a threat to local democracy. It is only when there are very concrete national interests at stake that a breach of regional autonomy should be allowed. I will argue that this need for autonomy relates to the concept of *procedural justice* found in Sovacool & Dworkin's account of energy justice (2015, p. 435). This is important because energy justice is one of the three ethical barriers crucial to my project, which I will go into more detail on in the next chapter.

Some actors also argue that more regional autonomy might lead to less conflict and more acceptance of wind power. These actors are generally more neutral towards wind power development as a whole, they just feel that it is up to the municipalities to choose whether or not to implement wind power production in the area.

4.2.15 Tourism

The unique landscape of Norway, with its huge mountains and deep fjords, is becoming an increasing draw for tourist. The peace and quiet of untouched nature is fundamental for tourism ventures in less populated areas, where activities like hiking, fishing and hunting are part of the attraction. Naturally, wind power development will alter these areas dramatically, which is why most of the actors in the tourism category are against wind power development. Of the 126 actors who populate this category, only 2 are for land-based wind power development in Norway (see figure 3). 5 actors take a neutral stance, while the remaining 119 are negative to the idea. The ones who are negative (mostly tourism businesses, anti-wind power advocacy groups, landowners, political parties, public bodies on a municipal level, and village associations) argue that it will be harder or even impossible to draw tourists without access to the main commodity sells

them on Norway in the first place: our untouched nature. Wind parks will use area that could otherwise be used for cabins, hotels, treks and tours, among other things:

"Tourists do not come here to see wind turbines standing there like disgraceful symbols of rampant capitalism that has won over nature. Not only will mass tourism be harmed by this, but also the local tourism actors that do high quality tourism in the form of cabin and rorbu rental, fishing tourism and high-end hotels. They will have lessened possibilities to sell unplundered nature."

They will also, according to the actors, lessen access to wild nature, diminish the appeal of this nature, and make nature-based activities like skiing, fishing and hunting less attractive. In order to have a healthy and growing tourism industry, the actors argue that it is paramount to keep our natural and cultural values intact. Without them, there is not much left for tourists to experience in the more sparsely populated parts of Norway. An additional point made by some actors is that the tourism industry provides jobs, and the wind power industry will not be able to provide as many jobs. There are, on the other hand, a couple of actors found in the landowner actor group that argue that the added income raised from wind power production can be funneled into the tourism industry, thereby improving the available tourism options, for example by building more cabins and hotels, and helping with the tourist draw that way.

4.2.16 Wildlife

Humans are far from the only occupants in the areas that are proposed for wind power development in Norway. There are also other mammals, birds and insects of all sorts who call these places home. There are a lot of actors who hold a wildlife interest in the hearing answers (178 to be precise), none of whom are positive towards wind power development (see figure 3). There is representation from most actor categories here, with the exceptions being wind power developers, private industry, government agencies, publicly owned enterprise, and other public bodies. The primary argument laid fort here is that the wind parks will displace the wildlife already living and breeding in the area:

"*The climate-political reason for large-scale wind power development dissipates when the development destroys the exact same values and resources that climate-politics should preserve: the natural diversity that both humanity and the ecosystems are dependent on"*

Furthermore, the wind turbines themselves are, according to the actors, capable of killing a huge number of insects and birds with their rotating propellers. They can also be in the way of the migration patterns of birds. Additionally, the actors argue that the noise the wind turbines make can cause stress for the animals, having a negative impact on their well-being and health. Fish might also be harmed by the wind parks by leaking oil or other chemicals into nearby ponds. All of these problems pose a threat to biodiversity, which we know to be a crucial part of combating climate change (United Nations, 2024). If we are to salvage biodiversity, we need to keep large areas of nature untouched and undeveloped so that plants and animals can live and breed freely. This is interesting

because it is linked to what value we place on nature, which I will soon show you is an ethical barrier for land-based wind power development in Norway.

5. Discussion

With the threat of climate crisis hanging like a bleak and ever-present backdrop, it is abundantly clear that we need clean, affordable energy sources like wind power if we are to successfully decarbonize the world (United Nations, 2023). The findings I have presented above mirror this sentiment, where many actors who are positive towards land-based wind power development speak of it as a competitive, cost-effective way of supplying the world with green energy to meet climate goals. Yet, what also quickly becomes apparent throughout the findings is that an overwhelming majority of the actors show at least some kind of reserve against land-based wind power development. In fact, as a result of all this negative feedback in the hearings, the plans for a national framework for land-based wind power development in Norway were scrapped (Solberg et al., 2019). The outcome of the hearings is less important in the context of this thesis than the arguments themselves, and they are plentiful. Although some of them have to do with how to best allocate space and resources, many of them do not; the health and well-being of human/non-human animals, sound and light pollution, and risk of depopulation being just some examples of issues raised by actors who hold a negative stance towards wind power development in their region. It is also a subject which engages a surprising number of actors, many of which are outside of what one would believe is common in relation to the discourse, such as employers' and workers' rights unions, dog clubs and kennels, and even musician's and DJ's associations.

If this is not purely a discussion about area and resource management, then what else could be at stake here? And why is there so much apparent skepticism towards wind power development found throughout the discussions in the public hearing answers? A possible answer to the latter question might be that the actors that are positive towards the technology have simply not chimed in on the hearings, resulting in a skewed picture of the situation. But given the size of the sample and the variation of actors represented, this seems somewhat unlikely. Furthermore, the number of times an argument is repeated does not necessarily corelate with how urgent, accurate or strong the argument is, so these rudimentary statistics will not answer whether or not land-based wind power development is to be deemed a good idea for a sustainable future. What is important here to the context of my study, however, is that an abundance of actors with diverse interests are presenting reasons for why they perceive wind power development on land to be *right* or *wrong*, which gives the debate a clear ethical dimension. Could it be that moral concerns of justice, identity or even the integrity of nature itself is what's at the

heart of the sociotechnical controversies we see here? If so, unearthing these concerns should help us determine what ethical considerations are necessary if land-based wind power development is going to be a viable climate mitigation effort in Norway.

In this chapter I will identify and discuss the major ethical barriers found in the debate around land-based wind power development in Norway. First, I will examine wind power as a potentially large technological system and discuss how the technology's relative youth might contribute to its divisiveness. Next, I will explore how different views on nature's value breeds conflict in the debate around land-based wind power development in Norway. After that, I will discuss how the concept of energy justice relates to this debate and how the dimension of procedural justice might be a particular hotbed for conflict. Lastly, I will examine how wind power development in Norway can be perceived as a threat to and as a possible way to preserve identity, and how notions of ecological selfhood might help resolve this tension.

5.1 The Shape of Wind Power to Come

Like most other technological implementation on such a grand scale, the case of land-based wind power development in Norway is incredibly complex because of its *sociotechnical* nature (Chandler, 2012, p. 256). The push and pull of technical and social aspects co-create a tangled, often messy web of interactions that, when examined closely, can tell us a lot about the power structures, politics and practices that helped shape it. What's particularly exiting about the case of land-based wind power development in Norway is that it allows us to observe in real-time how physical and non-physical artefacts influence each other in practice to give form and direction to a potential large technological system (Hughes, 1989, p. 51). This means that all the actors and interests presented in the findings, from the smallest farm to the value placed on regional autonomy, are artefacts with the potential to shape how wind power production in Norway might look like in the future. Although harnessing wind energy is nothing new, doing it on a larger, commercial scale *is*, at least in a Norwegian context (Bye & Solli, 2007, p. 106). Being a relatively young technological system means it is still quite malleable on account of not having gained much *momentum* yet (Hughes, 1989, p. 76). I would argue that this is part of the reason for why wind power is such a divisive subject in today's discourse around climate mitigating technologies: there's simply no substantial unity of artefacts, no agreed upon direction to move in, which in turn makes the discourse fertile grounds for *controversies*.

I base my understanding of controversies on the one found in the ANT tradition, where they are viewed as a means to both trace social connections and uncover deficiencies in knowledge stability (Callon, 1998, p. 260; Latour, 1987, p. 42, 2005, p. 30). Even more importantly, these nodes of connection can signify conflict of morality, which allows us to say something about *who*, *what* and *where* is given ethical significance as well (Nelkin, 1995, p. 445). The situated essence of knowledge tells us something about the social structures it is produced through (Haraway, 1991b, p. 201). I will argue along with Hannah et al. that similar to knowledge, morality is also situated, and must therefore be understood through the partial ethical perspectives of those involved in a given debate (2020, p. 749). By this rational, if we unpack the controversies that exist in the Norwegian debate around land-based wind power development, we should then be able

to uncover underlying moral beliefs, values and stances that work in favor of or run counter to wind power development. For example, when actors argue for preserving landscapes and sites of historical or cultural value based on the importance they have for the actors' sense of community and heritage, what the actors actually might be trying to preserve is their own identity. By protecting their common surroundings, they are also in essence protecting their ecological self (Næss, 1995, p. 230). So, when wind power development threatens to significantly alter or even replace these common surroundings, it is perceived as morally impermissible by the actors because wind power therefore also poses a direct threat to their identity.

Ethical disputes like the one in the above example need to be navigated in such a way that we can reach technological stability and thereby close the given controversy (Skjølsvold, 2015, p. 79). By doing so, we should be able to incrementally shape land-based wind power development towards a place of social acceptance. Adapting to both local and global moral values will therefore have a great impact on determining the *technological style* of the wind power system in Norway (Hughes, 1989, p. 68). For instance, changing the design of wind turbines to smaller, vertically axled turbines could be one way of adapting to local demands of safeguarding flying wildlife like birds and insects (Sørstrøm, 2023). Here, the traditional horizontally axled turbines would be the *reverse salients* causing the system to lag, and the system could therefore be improved by replacing them (Hughes, 1989, p. 73). On the coming pages I will identify and discuss some of the predominant ethical conflicts that appear throughout my findings. Looking at these conflicts through the eyes of Haraway's cyborg allows me a disembodied, partial view with which to examine technological black boxes and established dichotomies, which is paramount to account for the many voices and opinions that populate the discourse (1991a, p. 180).

5.2 Nature vs. Climate

Out of the top three interests I've identified throughout the hearing answers, two of them are directly concerned with the natural world: the number one interest category with a total of 242 answers is *natural environment*, with *wildlife* trailing behind on a not too distant third with 178 answers. I would argue that the sheer number of responses given in these two closely related interest categories warrants a more thorough examination, and that this particular examination would be a good jumping off point for my investigations of the findings. What is it about nature and its inhabitants that engage so many of these actors?

A reasonable place to start answering this question is by exploring the arguments given by the actors who hold a positive stance towards wind power development within the natural environment and wildlife interest categories. Since there are no actors who argue that wind power production will have a positive effect on wildlife, I will begin with looking at the arguments produced by the 14 actors who believe that wind power will be beneficial for the natural environment. These actors comprise wind power developers, consultants, landowners, private industry, publicly owned enterprises, other private business, and interestingly, environment and wildlife associations. I will get back to why this is of interest in a minute.

One of the most common arguments from the actors that are positive to wind power development is that it is an affordable and sustainable way of reducing carbon emissions that can be realized right now. The actors say that we would have to sacrifice some areas of untouched nature in order to produce wind energy, but that this is a necessary cost which would soon be offset by the positive effects a shift away from fossil fuels would have for the natural environment. Some of these actors also believe developing wind power to be a bigger contribution to decarbonization of the world than keeping natural areas untouched and intact. While most wildlife associations are negative to land-based wind power development, there are a couple of them who hold a positive stance towards the idea based on the arguments I've presented here. This was mildly surprising to me since I would have thought that the conservation of nature would trump any other interests for these actors, but also most enlightening since it crystalizes just how complex this debate really is. It is not about pitting the climate up against nature, choosing a side and then duking it out for the win. Rather, it is about all the incredibly tough choices we need to make in order to save both, all with a distinct set of trade-offs. With regards to the discourse around land-based wind power development in Norway, nature/climate has become somewhat of a false dichotomy in itself, masking a number of different understandings of the environment, nature and sustainability (Bye & Solli, 2007, p. 122).

According to Routley, a fundamental flaw at the heart of most western ethics is the anthropocentricity stemming from the *freedom principle*: it allows us to treat nature as unimportant outside of humanity's dealings with it (1973, p. 207). Within such a view, the natural world and the non-human animals we co-inhabit it with are only valuable in so far they are valuable to us – they are means to an end and therefore only have *extrinsic value* (Zimmerman & Bradley, 2019). I would argue that the freedom principle, which, to reiterate, permits us to do as we please as long as we do not irreparable harm others or ourselves, is muddying the waters considerably for the actors who hold a positive stance towards land-based wind power development in Norway based on an interest in the natural environment. The arguments they present are primarily geared towards solving the climate crisis for the sake of humankind's longevity. There's little to no mention of nature as much more than leverage in our favor, which makes saving species and keeping precious habitat intact feel more like mere happenstance or a by-product instead of part of the main goal. For example, when actors argue that we need to use parts of untouched nature for wind power production to meet energy demands or contribute to decarbonization, they call this a necessary cost, alluding to nature's status as a resource we control and can barter with. In line with Sovacool & Dworkin, I would claim that there is nothing inherently wrong or *evil* about reasoning like this, since harm is not part of the actors' intent (2015, p. 436). It is simply a consequence of acting mainly out of human interest, which Routley describes as poor guide to what is desirable in an environmental sense (1973, p. 210). Further complicating this matter is the fact that the most dire ramifications of climate change will happen in the future, making it harder to feel morally responsible for them (Sovacool & Dworkin, 2015, p. 436).

The kind of thinking highlighted above is rooted in an anthropocentric worldview that places human beings as the supreme beginning and end of the moral community (Næss, 1974, p. 183). It serves to deepen the nature/culture divide, a dichotomy that has alienated us from the natural world by bestowing mankind with a false sense of importance (Klemmer & McNamara, 2020, p. 504). If we look at this divide through the

eyes of Haraway's cyborg, a different picture emerges: Human culture is neither above nor separate from nature, but firmly placed *inside it* (1991a, p. 154). Basically, everything humans make that is considered culture, be it technology, art, language or clothing, stems from and happens within nature. This means that we are as much a part of biodiversity as every other living thing and are dependent on the same ecosystems and processes to survive (Haraway, 1991a, p. 151). By this line of reasoning, it follows that nature is valuable and it should therefore be considered morally impermissible to act in ways that threaten to harm it, at the very least from a standpoint of self-preservation. But does nature have moral value outside of our dealings with it? And if so, what consequences could such a notion have for land-based wind power development in Norway?

5.2.1 Developing a Case Against Anthropocentrism

Examining common arguments against wind power development laid forth by actors who hold natural environment and/or wildlife as a primary interest, does not necessarily help the potential case against anthropocentricism. Almost every kind of actor is represented here, with political parties, environment and wildlife associations, and anti-wind power advocacy groups being the three biggest. The exceptions are wind power developers, private industry, public bodies on the county level, government agencies, publicly owned enterprise, and other public bodies. Reducing carbon emissions is a key concern also for the actors who hold a negative stance towards wind power, but they argue that the best way to achieve this is not by facing out fossil fuels with wind power, but instead by keeping forests and peatlands untouched. These ecosystems are important for binding CO2 and disrupting them could have dire consequences for the environment (United Nations, 2024). Biodiversity is also a major concern when it comes to combating climate change, so leaving areas untouched for plants and animals to live and breed on is of the essence. Pollution from the wind parks themselves and the harm they might potentially cause to wildlife are further arguments against wind power development presented by these actors. The permanent way wind turbines and adjacent infrastructure alter the environment is a reoccurring concern as well. On the surface, all these arguments seem to be about the integrity of nature itself and the importance of safeguarding it on this basis. But it is not at all made clear *who* are to be the beneficiaries of preserving biodiversity and the environment. It might just as well be that present and future generations of humans are the only entities that are given moral importance, a line of thinking that is explicitly reasoned for by some of the actors. If this is the case, then it's starting to look a lot like another instance of resource and pollution management, which is textbook shallow ecological rationale (Næss, 1974, p. 121).

In many ways, climate change mitigation through technology can seem like trying to fix our problems with more of the same problem that got us in this mess in the first place. Yet, we are at a critical point where every day of indecision and inaction is a step further towards climate catastrophe. With global power demands constantly on the rise, turning back is not a viable or even desirable option (United Nations, 2023). What's primarily been at stake in the arguments presented for and against wind power development thus far in this discussion, is the future of human beings and our own interests, be it locally or globally. But as Routley has shown us, accounting for human interest will not be enough to achieve the gargantuan task of safeguarding the environment, for anthropocentrism is the archaic crutch that keeps us from moving fast enough to prevent worldwide disaster

(1973, p. 210). On this basis I would argue that we need to think bigger and more long-term: We need to seek out ways to permanently secure the value of *all* living things and anchor this value in our social structures, practices and political discourses. Such an idea is in keeping with Næss' concept of *biospherical egalitarianism*, which aims to recognizes the equal right to self-realization shared by *all* living things (also on a systemic level) (1974, p. 124). It also invokes Haraway by pointing out that we are all informed and connected through the same practices, discourses and power structures that inform knowledge production and technoscience (Johnson, 2020, p. 123). But is there anything in the hearing answers to support this claim?

5.2.2 The Value of Nature

The notion of ecosystems and wildlife as moral entities is not lost on the actors throughout the data material, where some of them explicitly state the impermissibility of acting in ways that undermine nature's intrinsic value. Some even go as far as claiming that any kind of disruption of nature is wrong based on this premise, but since it would be impossible to continue modern life without meeting energy demands, this line would be too strict. A more fruitful approach suggested by some actors is constructing wind parks where there already is infrastructure in place, like for example in industrial or urban areas. This would neatly circumvent the need to even discuss developing untouched natural areas for wind power production, but I would argue that some of the other challenges related to land-based wind production, such as noise and light pollution, and threats to health, will not be solved through such a proposal. It is also not unthinkable that this would pose a whole new set of problems as well.

Other actors who are positive towards land-based wind power development in Norway argue that the technology involved in wind power production will gradually become more advanced, lessening their environmental impact in the future. This is an interesting avenue of thought, because if we could steer wind power technology in a less invasive direction where local environmental demands determine technological style, then a lot of the issues raised around harm towards wildlife and habitat would dissipate. It is important to be weary of *technological reductionism* when engaging in this sort of thinking: The success of a given technology depends on much more than the brilliance of its design (Ask & Søraa, 2021, p. 54). Technology is also shaped by factors like economy, identity, availability and environment. According to Hughes, technology has the power to embody our values (2005, p. 154). If this holds true, then I would argue that actors who are against land-based wind power development in Norway because they see it as a threat to nature's intrinsic value, also recognize the anthropocentric values embedded in western ethics that current wind power technology embodies. For example, when wind turbines threaten to cause birds, bats and insects harm, it is only viewed as morally wrong under the freedom principle that drives most modern western ethics when these actions also have consequences for human beings (Routley, 1973, p. 207). Seeing how immensely complex ecology and natural processes are, it can be quite difficult to establish how harm to these creatures might eventually also cause harm to us. But by acknowledging and safeguarding the intrinsic value of nature and all its inhabitants, the actors are effectively advocating for cutting the middle(hu)man: there is no need to prove how actions that harm nature might also be harmful to us, for it would be morally wrong in the first place to use the natural world solely as a means to an end.

I believe that how we value nature is a key ethical barrier that drives conflict in the debate around land-based wind power development in Norway. While many actors hold that sacrificing areas of untouched nature as necessary if we are to secure energy production for a growing global population, both now and in the future, others firmly believe that it is impermissible to disrupt nature because of its intrinsic value. Here we see a type of controversy where there is a choice between environmental values and other political priorities, specifically access to energy services (Nelkin, 1995, p. 448). Furthermore, where the different ethical perspectives are located is important: They are situated and therefore context dependent (Hannah et al., 2020, p. 749). This means that a wind power developer will for example have a very different ethical starting point than a tourism business. What makes deliberations around energy production and untouched nature so complicated, is that we need both in order to uphold and advance modern society.

I would suggest a shift in western ethical foundations towards Næss' conception of biospherical egalitarianism as a possible way forward to embody nature's intrinsic value in climate change mitigating technology like wind power production. While it is hard to imagine wind power production on land that leaves marshes, forests, lakes and mountains wholly untouched, and I am not trying to champion some unattainable utopia here, I do think that the sociopolitical implications of redefining the moral community would help stimulate innovation in wind power technology, reducing its environmental footprint considerably. By following *the principle of diversity*, which tells us that a cooperative mindset is the key to success and survival, we could firmly reinsert ourselves as part of local and global biodiversity (Næss, 1974, p. 124). This would open up for all walks of life to participate in the discourse around wind power development, leading to the co-creation our ecotechnological environment (Hughes, 2005, p. 170). If nature mattered morally on account of its intrinsic value, I am sure that the discourse around land-based wind power development in Norway would look a whole lot different. Furthermore, if wind turbines were more integrated with nature, this would contribute to alleviating some of the current tensions surrounding wind power development on a local level by addressing concerns not only surrounding natural environment and wildlife, but also adjacent interest categories such as aesthetics, health and recreation.

Preserving biodiversity is without a doubt tremendously important if we are to avoid climate crisis (United Nations, 2024). On the other hand, we need to meet growing global energy demands if we are to uphold modern society (United Nations, 2023). These interests are often manifested as a conflict between nature and climate in the debate around land-based wind power development in Norway, a dichotomy which provides fertile grounds for ethical controversy. As I've shown here, the intrinsic value of nature might serve as a guiding star with which to navigate these treacherous waters. But this is far from the only ethical concern uncovered through the public hearing answers. An argument for producing wind energy in Norway laid forth by actors who hold an interest in the natural environment is that, because we are a nation rich in natural resources, we have a duty towards the global community to provide clean energy, thereby contributing to a reduction in emissions.

5.3 A Question of Justice

The notion of shaping a fair, global energy system and Norway's duty towards achieving this goal is echoed in the findings, particularly amongst those actors who populate the energy interest category. Although it's one of the smaller categories with only 36 actors chiming in on the issue, I would argue that it warrants a close look based on its direct relevance to energy as a resource. The majority of the actors who hold this interest are positive towards land-based wind power development in Norway. Only 3 of these actors are fully negative to the idea, while an additional 3 are neutral. Why is there so much support for wind power in this particular category, when the rest of the findings tend more towards resistance? And what is the rationale for being against wind power development based on energy interests?

The actors who are pro wind power within the energy interest category span quite widely: there's developers, landowners, wildlife associations, private industry, employers' and workers' rights associations, public bodies on the county and municipal level, private power companies, publicly owned enterprise, government agencies, consulting businesses, and other private businesses. What we see here is that, although there are advocacy groups and organizations present, the actors are primarily from the private business and economic sectors group, and the public bodies and political parties group (although, no political parties are represented here). Of note is also that some wildlife associations who hold an energy interest are positive towards wind power. This resonates with what I discussed earlier regarding the dichotomy of nature/climate: instead of taking a purely conservationist stance, these wildlife associations acknowledge the importance of wind power as part of climate change mitigating strategies and view them as a necessary step towards a sustainable future. They do however at the same time stress the significance of preserving biodiversity and untouched natural areas, thereby effectively straddling the nature/climate divide (Bye & Solli, 2007, p. 122).

I would argue that we see two principles of energy justice at play here: first of all, there's obviously a *sustainability* concern, where managing resources in such a way that they do not deplete is key (Sovacool & Dworkin, 2015, p. 439). The wildlife associations are telling us that if we develop too much untouched natural area for wind power production, this will cause untouched nature (here understood as a resource) to eventually exhaust. On the other hand, if we do not develop at least some of these areas, we are potentially causing harm to the environment by not phasing out fossil fuels with cleaner energy production. This ties into the principle of *responsibility* since it has to do with reducing harm to the natural world caused by our energy system (Sovacool & Dworkin, 2015, p. 440). In addition to the weight put on the relative cleanness of wind power, actors who are positive towards land-based wind power development within the energy interest category emphasize its cost efficiency, not only in terms of costs related to setting up and producing power, but also when it comes to how affordable the energy is for the consumers. According to the actors, this energy will not only help with the electrification of Norway, but also contribute clean affordable energy internationally. This will help strengthen the worlds energy system, thereby fulfilling duties towards the global society and at the same time future generations.

Here we have even more principles of energy justice blending into the discussion. There seems to be an agreement on the basic right to energy services and how we are duty-bound as a nation to contribute to this. This is in line with the principle of *availability*, which tells us that all people have the basic right to access the energy grid (Sovacool & Dworkin, 2015, p. 439). At the same time the arguments touch on the principle of *intergenerational equity*, because the energy should be distributed fairly to secure that everybody has a base level of wellbeing (Sovacool & Dworkin, 2015, p. 440). Furthermore, this duty extends to future generations and therefore comprises the principle of *intragenerational equity* as well. The focus these actors have on the cost efficiency of wind power production, and hence ability to supply energy at a relative low price for both private consumers and business, is directly linked to the principle of *affordability*, which pertains to the right people of all socioeconomic standings have to energy services priced at a reasonable level in relation to their income (Sovacool & Dworkin, 2015, p. 439).

As we have seen here, the arguments presented by actors who are positive towards land-based wind power in Norway based on energy interests cover six principles of energy justice: availability, affordability, sustainability, intergenerational equity, intragenerational equity, and responsibility. This means that these actors are speaking up on behalf of wind power's potential contribution to the energy system when it comes to impact on *costs* and *benefits*, i.e. its capacity to distribute economic, environmental and social consequences more evenly, and secure fair access to energy services for more people (Sovacool & Dworkin, 2015, p. 437). However, this leaves two principles blatantly absent from the discussion: the principles of *due process* and of *good governance* (Sovacool & Dworkin, 2015, p. 439). These principles have to do with *procedures* and pertain to the fairness and transparency of decision-making processes (Sovacool & Dworkin, 2015, p. 437). The three actors who are against land-based wind power development because of energy interests base their skepticism on the rationale that already existing forms of energy production like hydroelectric power are superior to wind power when it comes to both costs and benefits, but do not mention procedures at all. This means we will not find an answer to why procedural energy justice is left out of the debate here. There is however another interest category that is more closely related to participation in decision-making process, namely that of regional autonomy.

5.3.1 Procedural Energy Justice

With its population of 46 actors, regional autonomy, like energy, is one of the smaller interest categories. This does not however make it less compelling, especially seeing how relevant it is to the issue of procedural energy justice. Most of these actors (30) are negative towards land-based wind power development, with only 2 being positive, while the remaining 14 hold a neutral stance. It's on the municipality level that we find the two actors who are pro wind power development, who argue that it if a given locality wants wind energy to be produced on their land, this must outweigh any and all decisions about wind power development on a national or international level. The same right of autonomy is what's at stake for the actors who hold a negative view on land-based wind power production: it is imperative that local governing bodies can veto propositions of wind power development in their area. These governing bodies have intimate knowledge about their domain and should therefore rightfully control what interests are prioritized where. A breach of this right should only be allowed when there are concrete national interests

at stake. The actors who hold this view are found in many different actor categories: Governing bodies on both a county and municipal level, anti-wind power associations, cabin associations, hunting and fishing associations, agriculture and forestry interest groups, employers' and workers' rights associations, culture and history associations, tourism businesses, private power companies, and other interest groups. This span tells us that this is not just an issue for local government, but also for the people and businesses that populate these areas. Those who hold a neutral stance towards wind power within the regional autonomy category are very much proponents of local rights of disposal and governance, even though the specific case of land-based wind power does not engage them significantly one way or the other.

Fair participation in decision-making processes is clearly a primary concern for these actors, and I would therefore argue that the principle of *due process* found in Sovacool & Dworkin's conception of energy justice is at the heart of the matter (2015, p. 439). Furthermore, the want to have decision-making processes happen locally through the channels that possess the deepest knowledge of a given regions environment and community ties in with the principle of *good governance*, which tells us that transparency, fairness and accountability is key to secure just procedures in relation to energy production and distribution. This would contribute to shortening the distance between the local populace and decision-makers considerably, which ultimately could result in better flow of information of a higher quality, in turn alleviating some of the conflicts that have arisen around land-based wind power development in Norway. This aligns with a point made by Næss: striving to reach global goals through sectorized task-management and long-term planning threatens to make tasks-at-hand meaningless because of the sheer magnitude of context (Næss, 1974, p. 122). If we instead use local community as a starting point for our decision-making processes by *applying the labor unity principle*, we could return a sense of control and accountability to energy justice procedures by minimizing external interruptions. I would argue that the feelings of powerlessness stirred up by what is perceived by some as convoluted processes and lack of participation options is an explosive part of the fuel that fan the flames of discontent in the debate around land-based wind power development in Norway.

Justice is clearly an ethical dimension we need to take seriously if we are to ensure fair production, distribution and decision-making processes in our energy system. Although the actors feel that land-based wind power production in Norway will contribute in significant ways to energy justice when it comes to a more just dispersal of costs and benefits, there is as we have seen some evidence that point towards a lack of procedural energy justice being a root cause for some of the controversies that has arisen locally around the implementation of this climate mitigating technology. The partial views afforded to us by Haraway's theory of situated knowledges might be useful if we are to correct this: a truly democratic process needs to account for everyone affected by technoscience in equal measure, and even the tiniest whisper of a voice should have the same weight when it comes to shaping the social structures that contain our reality (1991b, p. 201). Letting all these partial voices contribute to the debate on a local level could contribute to a more just energy system. Furthermore, by acknowledging that energy production is primarily an economic endeavor, which is in principle guided by the same democratically constructed policies and practices as any other business, we shine a light on the impermanent nature of this endeavor and how local participation play a role in altering its guiding principles (Heffron & McCauley, 2017, p. 29).

Although lack of participation options (whether perceived or real) accounts for some ethical controversy here, given the amount of negative feedback in other areas of the public hearings, there seems to be more at stake in the discourse around land-based wind power in Norway than what the principles of energy justice cover. For good or ill, wind power technology seems to go hand-in-hand with a promise of an altered reality on a most fundamental human level.

5.4 A Physical Manifestation of Identity

Reindeer herding is in many ways a physical manifestation of Sámi culture and heritage; it is linked to their identity and way of life to such an extent that it would be hard to imagine Sámi culture even existing without it (Blåhed & San Sebastián, 2021, p. 5). This fact is clearly stated by the actors in the hearing answers, where almost all save 4 of the 57 actors who hold the interest of reindeer herding are negative towards land-based wind power development in Norway on the basis that wind parks and their adjacent infrastructure come in direct conflict with this tradition. Only 1 of the 4 actors who are not against wind power development hold a positive stance, while the remaining 3 are neutral. The actor who is positive to wind power development is an environment and wildlife association, who argues that while wind power is a necessity, it needs to be set up in such a way that it does not interfere with reindeer herding. Among the actors who hold a negative view on wind power production we find public reindeer herding districts, reindeer herding and Sámi associations, public bodies on a municipal and county level, political parties, environment and wildlife associations, anti-wind power associations, landowners, village associations, hiking, trekking and tourism associations, tourism businesses, other private business, and other associations. Although there's a wide range of different actors involved here, they are fairly unified in their argumentation: reindeer husbandry, and by extension Sámi culture, is already in conflict with other interests like cabin development, agriculture and forestry, roads and other infrastructure, hydroelectric power production, and tourism, and wind power development would only serve to add to this conflict. Furthermore, they argue that we are duty-bound to protect our indigenous people and the traditions ingrained in their culture, and any threat to reindeer herding is therefore also seen as a potential to lose important knowledge, values and practices hardwired into these traditions.

How nature is an ever-present and inseparable part of Sámi identity through reindeer husbandry is quite obvious. At first glance they are less alienated from the natural world then the majority of other people in Norway, who one would assume prescribes to core moral believes found in the western tradition that places an inflated importance on human beings (Klemmer & McNamara, 2020, p. 504). But I would argue that there's more going on here than meets the eye. Could it be that some of the other conflicts around land-based wind power development in Norway in a similar way stem from this development being perceived as a threat to individual and collective identity?

5.4.1 The Recreational Self

To start exploring the claim that wind power development can be perceived as a threat to identity, let's have a closer look at the second biggest interest category that I quite sneakily omitted from the top three list earlier: *Recreation*. Recreational pursuits include activities like hiking, biking, hunting, fishing and mountain climbing, to name but a few. A total of 188 actors site this interest as important, where only 4 of those, all of them landowners, are positive to land-based wind power development. 12 actors take a neutral position, while the remaining 172 are negative to the idea of using area for wind power production. Those who argue for wind power development on the basis of recreational interests, do so on the premise that the roads and other infrastructure provided by wind parks will improve recreational possibilities in the given area. They will grant access to new regions that was previously unreachable and make it possible for new user groups, like for instance wheelchair users, to enjoy recreational pursuits. On the other hand, the actors who hold a negative stance towards land-based wind power development claim the exact opposite: wind parks and adjacent infrastructure will make it harder, not easier, to use these areas for recreational purposes. While this certainly is interesting, it is primarily a practical discussion and apart from the admirable desire of wanting to include a minority like wheelchair users, it has very little to do with neither ethics nor identity. So, the question therefore rightly becomes: what does recreation have to do with identity?

Part of the answer to this question is put forth by the actors themselves: the experience of recreational pursuits in untouched nature is important for our sense of identity and community. Seeing as humans are constituents of nature and thus as much an element of ecology as any other animal, it makes a whole lot of sense that we identify with it (Haraway, 1991a, p. 151). It is our home – *"oikos"* (Fox, 1995, p. 31). According to Næss' conception of the ecological self, we do not only identify with all life by recognizing life as a shared property, but also with features of our homeplace (Næss, 1995, p. 230). Our familiar surroundings, both on natural, economic and social plane, are weaved into the very fabric of who we are: they are part and parcel of our identity. In line with this understanding of the ecological self, recreational activities in familiar surroundings are beneficial because they help us stay connected with our identities. On this basis, I would argue along with Næss that when something threatens to alter or even destroy our surroundings in significant ways, it will be perceived as possible loss of identity (1995, p. 230). So, when the actors take up a negative position towards wind power development in their local area based on recreational interests, it is not only to defend the importance of these activities and the spaces they are performed in, but ultimately the actors are also defending *themselves*. This sentiment resonates through other interest categories as well: cultural and historical interests, as well as aesthetic interests, are according to the actors directly linked to feelings of identity and belonging. The same goes for cabin culture, where a reported closeness to nature is a key part of the experience. Tourism interests are also closely tied to identity, seeing as this is part of the product being sold. Paradoxically enough, the line of reasoning presented by all these actors turns nature into an end in itself through acknowledging its key role to *human* existence (Næss, 1995, p. 232).

As I have discussed earlier, linking natures moral worth to our own inherent value is not necessarily the best way forward if we are to stand a fighting chance of creating a truly

egalitarian sociotechnical world, but I am certain that wind power development perceived as a threat to identity is a contributing factor to some of the local conflicts we see around the implementation and use of this climate mitigating technology in Norway. Mapping out the ethical bedrock of conflicts such as these could help us navigate them safely. By giving credence to all the partial perspectives involved in densely complex matters like combating climate change, we could ensure agreement on what course we should take moving forward, effectively tailoring our sociopolitical reality to suit our collective best interests. If we are to address the often unequal social structures that constitute our *"objective"* reality, it has to be done from a place of connectedness: we need a unified front that accounts for all possible contexts and locations (both spatial and temporal) our perspectives might stem from (Haraway, 1991b, p. 201).

5.4.2 Wind Power Development as an Act of Self-Preservation

While the general consensus across the public hearing answers is that wind power development poses a threat to collective and individual identity, there are some actors that speak to the contrary. A handful of these are found in the *agriculture and forestry* interest category. Although the majority of the 56 actors in this category are against wind power production in Norway, there are 7 landowners that argue that the added income gain from wind power production on their land will help keep the lights on in their farms, possibly ensuring the survival of long-standing traditions built into farming activities. By allowing some of their land to be allocated to wind production purposes, they see a chance to carry on these traditions and the culture containing them, not only for the sake of themselves, but for future generations of farmers as well. This sentiment is echoed in the *local population* interest category, where the 10 of 51 actors (comprising landowners and private industry) are for wind power development in Norway on the basis that wind parks will stave of depopulation and might actually make the area more attractive by providing new job opportunities. The same holds true for the *local value creation* interest group: 20 of the totally 70 actors who have answered here, spanning landowners, employers' and workers' rights associations, wind power developers, public bodies on a municipal level, private industry, publicly owned enterprise, and other private business, see wind power development as beneficial to local community and its attractiveness through job creation. While this is primarily an economic concern, I would argue along with Næss that finances are as integral to the make-up of our surroundings as the natural and social dimensions are, and is therefore essential to the sense of identity ingrained in the ecological self (Næss, 1995, p. 230).

Because of some of the shortcomings in Næss' conception of the ecological self, it is otherwise an unfit tool for further excavating how wind power development might be related to preserving identity. First of all, a stringent focus on holism makes the ecological self *nonrelational* (Curtin, 1994, p. 205). This partially blinds it to the impact things such as community and tradition has on shaping and upholding identity. Secondly, the theory uses care for nature as a rung in the ladder towards self-realization, undermining its claim to be *anti-anthropocentric* (Plumwood, 1993, p. 175). This also enforces a hierarchical structure to the ecological self, which seems jarringly out of place for a theory that has its roots in egalitarianism (Curtin, 1994, p. 203). Thirdly, claiming that self-actualization is the ultimate goal for the human self only serves to deepen the culture/nature divide, a dichotomy deep ecology aims to dissolve, since it works on a presupposition that there is a difference between mankind and the rest of the natural

world (Warren, 2015). I am not saying that Næss' theory of ecological self is without merit, merely that these are good reasons for why it might be ill suited to explain the positive relationship between identity and land-based wind power development in Norway found in the public hearing answers on the grounds that it puts culture and hence also tradition somewhat at odds with nature, thereby making their connection to an ecological identity a bit fuzzy. Furthermore, by referring to self-actualization as an end-goal instead of a way of being-in-the-world, humans are basically incomplete before this admittedly quite lofty goal has been reached. I would instead purpose an ecofeminist understanding of identity along the lines of Plumwood's *ecological personhood* as a good springboard for a discussion around wind power development as a way to preserve identity: we are at once both part of nature as *ecological selves* and separate from nature as *individual selves* (Plumwood, 1993, p. 184).

Seeing as ecological personhood views the self as both interdependent and relational, it expands self-interest to include caring for the ecological well-being of others (Warren, 2015). This means that how we relate to others matter and that relationships themselves carry imbedded moral weight. Through its contextual essence, ecological personhood also aims to include cultural and historical perspectives, which allows us to view the practices, values and knowledge ingrained in traditions as formative for a sense of identity. Traditions are important because they link the self simultaneously to the past and the future, and I believe it is exactly this link the actors hope to keep intact by welcoming wind power development into their communities. If they do not, then there might not be anywhere or anyone left to keep traditions ingrained in for example farming or forestry activities alive, meaning these identities would unfortunately cease to exist. Temporally, this might be seen as an act of self-preservation. On a more immediate level, Dōgen's account of the *relational self* might shed some light on how day-to-day practices help anchor our sense of self to our environment: ecological consciousness is ever-present and can be engaged with simply by engaging with ordinary tasks (Curtin, 1994, p. 207). It is not something to attain through some sort of incremental self-realization, but is always imbedded in our concrete existence. I would argue that it is this consistency of ordinariness provided by our surroundings that help uphold a sense of identity, and this is precisely what's at stake for many actors in the debate around land-based wind power development in Norway. For them, it is not the threat of losing their livelihood or even their home that looms closest on the horizon, but the very threat of losing important pieces of *themselves*.

6. Conclusion

Access to clean, affordable energy sources is key if we are to succeed in decarbonizing the world and satiate the energy needs of an ever-growing global population (United Nations, 2023). However, the scale and complexity of this problem is unlike anything we have seen before in our history. Simply put, we need alternative energy sources to cover energy demands, and land-based wind power might be part of the solution. With its huge mountain ranges and far-reaching coastlines, Norway seems like the perfect spot to set up facilities that harness wind energy. Yet, the development of land-based wind power in Norway has been met with considerable amounts of resistance from a myriad of different actors. By analyzing a data set collected from answers given to a public hearing in 2019 on the proposed national framework for land-based wind power development in Norway laid forth by The Norwegian Water Resource and Energy Directorate's (NVE), I have explored some of the ethical and practical barriers that need to be addressed if we are to successfully implement this climate change mitigating technology in Norway.

My study points to three ethical barriers as the primary drivers for conflicts around land-based wind power development in Norway: First, there are unresolved tension around *the value of nature* stemming from the anthropocentric essence of the core ethical systems fundamental to most social structures, practices and political discourses found in the western world. They allow us to treat the natural world as little more than a tract for humanities doings, leaving the intrinsic value of nature by the wayside. Since technology holds the power to embody our values, this anthropocentrism is built into climate change mitigating technology such as land-based wind power production (2005, p. 154). A possible way to amend this might be a shift in western ethical foundations in the direction of Næss' biospherical egalitarianism, which recognizes the intrinsic value of all living things based on their equal right to self-realization (1974, p. 124).

Secondly, there are ethical controversies related to the concept of *energy justice*. Although there is evidence that land-based wind power production in Norway will contribute in significant ways to a more just dispersal of costs and benefits, a lack of *procedural energy justice* is a root cause for conflict. Some actors simply feel that they do not have a say in the discourse, which needs to change if we are to facilitate democratic process and close this controversy. By applying the principles of *due process* and *good governance* found in Sovacool & Dworkin's conception of energy justice, we could shorten the distance between the local populace and decision-makers considerably

through ensuring fair participation, transparency and accountability in these processes (2015, p. 439). Furthermore, if we recognizing energy production as a primarily economic endeavor, we at the same time acknowledge that it is guided by the same democratically constructed policies and practices as any other business. (Heffron & McCauley, 2017, p. 29). These guiding principles are impermanent and can be altered by local participation.

The third and last ethical controversy has to do with how land-based wind power development in Norway is simultaneously perceived as both a threat to and a possible way to preserve individual and collective *identity*. Our familiar surroundings are weaved into the very fabric of who we are: they are part of our identity, our *ecological self* (Næss, 1995, p. 230). Therefore, threats to our surroundings will be perceived as possible loss of identity. By defending their local environment against the changes that come with wind power development, the actors are at the same time defending *themselves*. On the other hand, the potential financial gains that come with wind power development can serve to keep local communities and traditions related to farming and forestry practices alive. Dōgen's account of the *relational self* helps us see how our identities are ever-present in the day-to-day dealings of the concrete existence experienced through traditions and community (Curtin, 1994, p. 207). I would suggest that giving credence to all the partial perspectives involved in this conflict around identity loss would let us better map out a common course moving forward, effectively tailoring our sociopolitical reality to suit our collective best interests.

Basing the study on the broad sample provided by the public hearings lets me sheds light on the issue of land-based wind power development in Norway from many different angles at once, possibly contributing to counteract bias in the process. However, this study is limited in so far that it is a document analysis which draws from a single empirical source, making corroboration difficult. I would recommend future research on the subject to be conducted through interviews or another appropriate method as a means to verify the findings presented here. Furthermore, it could be interesting to replicate the study in another country and compare the results. Also, because of time constraints and the sheer volume of the data material, there might still be other ethical and practical barriers in relation to land-based wind power development in Norway left untouched that could form the basis for future research on the subject.

References

Anderson, J. (2020). The self in deep ecology: A response to Watson. *Asian Philosophy*, *30*(1), 30–39. https://doi.org/10.1080/09552367.2020.1733215

Arneson, R. (2013). Egalitarianism. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2013). https://plato.stanford.edu/archives/sum2013/entries/egalitarianism

Ask, K., & Søraa, R. A. (2021). *Digitalisering: Samfunnsendring, brukerperspektiv og kritisk tenkning* (1. utg.). Fagbokforlaget.

Barry, E. (2022, January 18). These Are the Countries Where Twitter, Facebook and TikTok Are Banned. *Time*. https://time.com/6139988/countries-where-twitter-facebook-tiktok-banned/

Bijker, W. E., & Pinch, T. J. (1984). The Social Construction of Facts and Artefacts: Or How the Sociology of Science and the Sociology of Technology Might Benefit Each Other. *Social Studies of Science*, *14*(3), 399–441.

Blåhed, H., & San Sebastián, M. (2021). "If the reindeer die, everything dies": The mental health of a Sámi community exposed to a mining project in Swedish Sápmi. *International Journal of Circumpolar Health*, *80*(1), 1935132. https://doi.org/10.1080/22423982.2021.1935132

Børstad, J., Måsø, J. R., Kringstad, K., & Strand Mølster, E. (2021, October 11). Samers rettigheter ble krenket da vindkraftanlegg ble bygget på Fosen. *NRK*. https://www.nrk.no/trondelag/vindkraftutbygging-pa-storheia-i-trondelag-_-norske-samer-mener-strider-mot-urfolks-rettigheter-1.15685096

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101.

Brennan, A., & Norva, Y. S. L. (2022). Environmental Ethics. In E. N. Zalta (Ed.), *Stanford Encyclopedia of Philosophy* (Summer 2022). https://plato.stanford.edu/archives/sum2022/entries/ethics-environmental/

Brymer, E., Crabtree, J., & King, R. (2021). Exploring perceptions of how nature recreation benefits mental wellbeing: A qualitative enquiry. *Annals of Leisure Research*, *24*(3), 394–413. https://doi.org/10.1080/11745398.2020.1778494

Bye, R., & Solli, J. (2007). Vindkraft i Norge: Fra ulønnsom til miljøfiendtlig teknologi? In M. Aune & K. H. Sørensen (Eds.), *Mellom klima og komfort: Utfordinger for en bærekraftig energiutvilking* (1. utgave, pp. 105–123). Fagbokforlaget.

Callon, M. (1998). An Essay on Framing and Overflowing: Economic Externalities Revisited by Sociology. *The Sociological Review*, *46*(1_suppl), 244–269. https://doi.org/10.1111/j.1467-954X.1998.tb03477.x

Cambridge University Press & Assessment. (2023). Https://dictionary.cambridge.org/dictionary/english/controversy. In *Cambridge Dictionary*. Cambridge University Press & Assessment. https://dictionary.cambridge.org/dictionary/english/controversy

Chandler, J. A. (2012). "Obligatory Technologies": Explaining Why People Feel Compelled to Use Certain Technologies. *Bulletin of Science, Technology & Society*, *32*(4), 255–264. https://doi.org/10.1177/0270467612459924

Curtin, D. (1994). Dōgen, Deep Ecology, and the Ecological Self. *Environmental Ethics*,

16(2), 195–213.

Darwin Holmes, A. G. (2020). Researcher Positionality—A Consideration of Its Influence and Place in Qualitative Research—A New Researcher Guide. *Shanlax International Journal of Education*, *8*(4), 1–10. https://doi.org/10.34293/education.v8i4.3232

Descartes, R., & Moriarty, M. (2008). *Meditations on first philosophy: With selections from the Objections and replies*. Oxford University Press.

Douglas, H. (2022). Data Analysis Techniques for Qualitative Study. In M. R. Islam, N. A. Khan, & R. Baikady (Eds.), *Principles of Social Research Methodology* (pp. 427–433).

Eika, L., & Vestad, O. L. (2022). *Utviklingen i bønders inntekter mellom 2004 og 2020*. Statistisk sentralbyrå.

Flemmer, C., & Flemmer, R. (2023). Wind turbine infrasound: Phenomenology and effect on people. *Sustainable Cities and Society*, *89*, 104308. https://doi.org/10.1016/j.scs.2022.104308

Fox, W. (1995). *Toward a Transpersonal Ecology: Developing New Foundations for Environmentalism*. State University of New York Press.

Geertz, C. (1973). Thick Description: Toward an Interpretive Theory of Culture. In *The Interpretation of Cultures: Selected Essays* (pp. 3–30). Basic Books.

Hannah, S. T., Thompson, R. L., & Herbst, K. C. (2020). Moral Identity Complexity: Situated Morality Within and Across Work and Social Roles. *Journal of Management*, *46*(5), 726–757. https://doi.org/10.1177/0149206318814166

Haraway, D. J. (1991a). A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century. In *Simians, cyborgs, and women: The reinvention of nature* (pp. 149–181). Routledge.

Haraway, D. J. (1991b). Situated Knowledges. In *Simians, cyborgs, and women: The reinvention of nature* (pp. 183–201). Routledge.

Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.

Heale, R., & Twycross, A. (2015). Validity and reliability in quantitative studies. *Evidence Based Nursing*, *18*(3), 66–67. https://doi.org/10.1136/eb-2015-102129

Heffron, R. J., & McCauley, D. (2017). The concept of energy justice across the disciplines. *Energy Policy*, *105*, 658–667. https://doi.org/10.1016/j.enpol.2017.03.018

Hughes, T. P. (1989). The Evolution of Large Technological Systems. In W. Bijker, Hughes, Thomas Parke, & T. Pinch (Eds.), *The Social Construction of Technological Systems* (pp. 51–83). MIT Press.

Hughes, T. P. (2005). *Human-built world: How to think about technology and culture*. University of Chicago Press.

Johnson, E. (2020). Why does ANT need Haraway for thinking about (gendered) bodies? In A. Blok, F. Ignacio, & C. Roberts (Eds.), *The Routledge Companion th Actor-Network Theory* (pp. 121–132). Routledge.

Klemmer, C. L., & McNamara, K. A. (2020). Deep Ecology and Ecofeminism: Social Work to Address Global Environmental Crisis. *Affilia*, *35*(4), 503–515. https://doi.org/10.1177/0886109919894650

Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*.

Harvard University Press.

Latour, B. (1996). On Actor-Network Theory: A Few Clarifications. *Soziale Welt*, *4*(47), 369–381.

Latour, B. (2005). *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press.

Macnaghten, P., & Urry, J. (1999). *Contested natures* (Reprint). SAGE.

Mårtensson, P., Fors, U., Wallin, S.-B., Zander, U., & Nilsson, G. H. (2016). Evaluating research: A multidisciplinary approach to assessing research practice and quality. *Research Policy*, *45*(3), 593–603. https://doi.org/10.1016/j.respol.2015.11.009

Maxwell, J. A. (2009). Designing a Qualitative Study. In L. Bickman & D. J. Rog (Eds.), *The SAGE handbook of applied social research methods* (2nd ed, pp. 214–253). SAGE.

Morgan, H. (2022). Conducting a Qualitative Document Analysis. *The Qualitative Report*. https://doi.org/10.46743/2160-3715/2022.5044

Næss, A. (1974). *Økologi, samfunn og livsstil: Utkast til en økosofi* (4. forøkede og omarbeidede utgave). Universitetsforlaget.

Næss, A. (1977). Spinoza and ecology. *Philosophia*, *7*, 45–54.

Næss, A. (1995). Self-Realization: An Ecologcial Approach to Being in the World. In G. Sessions (Ed.), *Deep Ecology for the Twenty-First Century* (pp. 225–239). Shambahala.

Nelkin, D. (1995). Science Controversies. The Dynamics of Public Disputes in the United States. In S. Jasanoff, G. Markle, J. Peterson, & T. Pinch (Eds.), *Handbook of Science and Technology Studies* (pp. 444–456). SAGE Publications, Inc. https://doi.org/10.4135/9781412990127

Odum, E. P., & Barrett, G. W. (2005). *Fundamentals of Ecology* (5. ed). Brooks/Cole.

Patton, M. Q. (2010). *Qualitative research & evaluation methods* (3. ed., [Nachdr.]). Sage.

Plumwood, V. (1993). *Feminism and the mastery of nature* (Digital printing). Routledge.

Rees, E. (2013). Cabins and National Identity in Norwegian Luterature. In S. Isomaa, P. Lyytikäinen, K. Saarikangas, & R. Souminen-Kokkonen (Eds.), *Imagining Spaces and Places* (pp. 125–142). Cambridge Scholars Publishing.

Regjeringen. (2023, November 24). *Kva er ei høyring?* https://www.regjeringen.no/no/dokument/hoyringar/kva-er-ei-hoyring/id2459635/

Rivrud, K., & Moland, A. (2024, February 9). Skien-ordføreren om vindkraft til Google-senteret: – Da skal jeg lenke meg fast. *NRK*. https://www.nrk.no/vestfoldogtelemark/ordforer-lenker-seg-fast-om-det-kommer-vindmoller-i-skien-1.16755438

Routley, R. (1973). Is There a Need for a New, and Environmental, Ethic?. *Proceedings of the XVth Wold Congress of Philosophy*, 205–210.

Rydland Ørnhaug, E., Mudenia, H., Alette Bjørnback Varsi, L., Rønning, M., Skei, L., Iversen Orlich, A., Jobling, W., Skurtveit, S., & Pettersen, J. (2023, October 11). Aksjonistene er fjernet fra Stortinget. *NRK*. https://www.nrk.no/trondelag/to-ar-siden-hoyesterettsdommen-om-vindkraft-pa-fosen-_-nye-demonstrasjoner-utenfor-stortinget-1.16589436

Sarkar, S., & Elliott-Graves, A. (2016). Ecology. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Winter 2016). https://plato.stanford.edu/archives/win2016/entries/ecology/

Shelley, J. (2019). The Default Theory of Aesthetic Value. *The British Journal of Aesthetics*, *59*(1), 1–12. https://doi.org/10.1093/aesthj/ayy044

Skjølsvold, T. M. (2015). *Vitenskap, teknologi og samfunn: En introduksjon til STS*. Cappelen Damm akademisk.

Solberg, E. L., Skei, L., & Befring, Å. M. (2019, October 19). Regjeringen dropper nasjonal rammeplan for vindkraft. *NRK*. https://www.nrk.no/norge/regjeringen-dropper-nasjonal-rammeplan-for-vindkraft-1.14744999

Sørstrøm, S. E. (2023, November 13). Vi kan produsere ren energi uten å ødelegge natur. *Adresseavisen*. https://www.adressa.no/midtnorskdebatt/i/bg1jXB/vi-kan-produsere-ren-energi-uten-aa-oedelegge-natur

Sovacool, B. K., & Dworkin, M. H. (2015). Energy justice: Conceptual insights and practical applications. *Applied Energy*, *142*, 435–444. https://doi.org/10.1016/j.apenergy.2015.01.002

United Nations. (2023, December 3). *7. Affordable and Clean Energy*. https://www.un.org/sustainabledevelopment/energy/

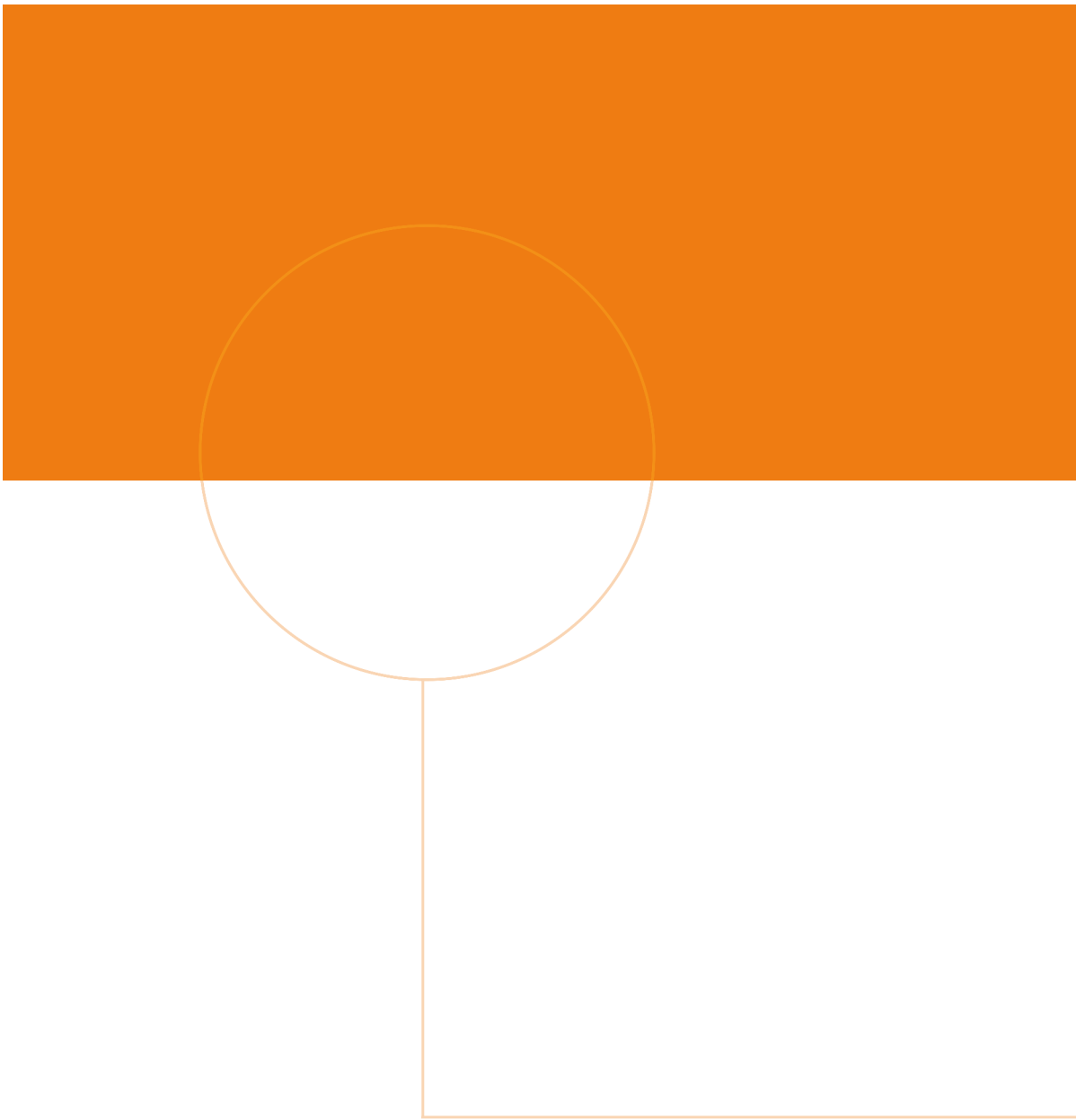
United Nations. (2024, March 4). *15. Life on Land*. https://www.un.org/sustainabledevelopment/biodiversity/

Van Der Velde, Y., Temme, A. J. A. M., Nijp, J. J., Braakhekke, M. C., Van Voorn, G. A. K., Dekker, S. C., Dolman, A. J., Wallinga, J., Devito, K. J., Kettridge, N., Mendoza, C. A., Kooistra, L., Soons, M. B., & Teuling, A. J. (2021). Emerging forest–peatland bistability and resilience of European peatland carbon stores. *Proceedings of the National Academy of Sciences*, *118*(38), e2101742118. https://doi.org/10.1073/pnas.2101742118

Warren, K. J. (2015). Feminist Environmental Philosophy. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (Summer 2015 Edition). https://plato.stanford.edu/archives/sum2015/entries/feminism-environmental/

Yonge, O., & Stewin, L. (1988). Reliability and Validity: Misnomers for Qualitative Resarch. *The Canadian Journal of Nursing Research*, *20*(2), 61–67.

Zimmerman, M. J., & Bradley, B. (2019). Intrinsic vs. Extrinsic Value. In E. N. Zalta (Ed.), *The Stanford Encyclopedia of Philosophy* (2019th ed.). https://plato.stanford.edu/archives/spr2019/entries/value-intrinsic-extrinsic/



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