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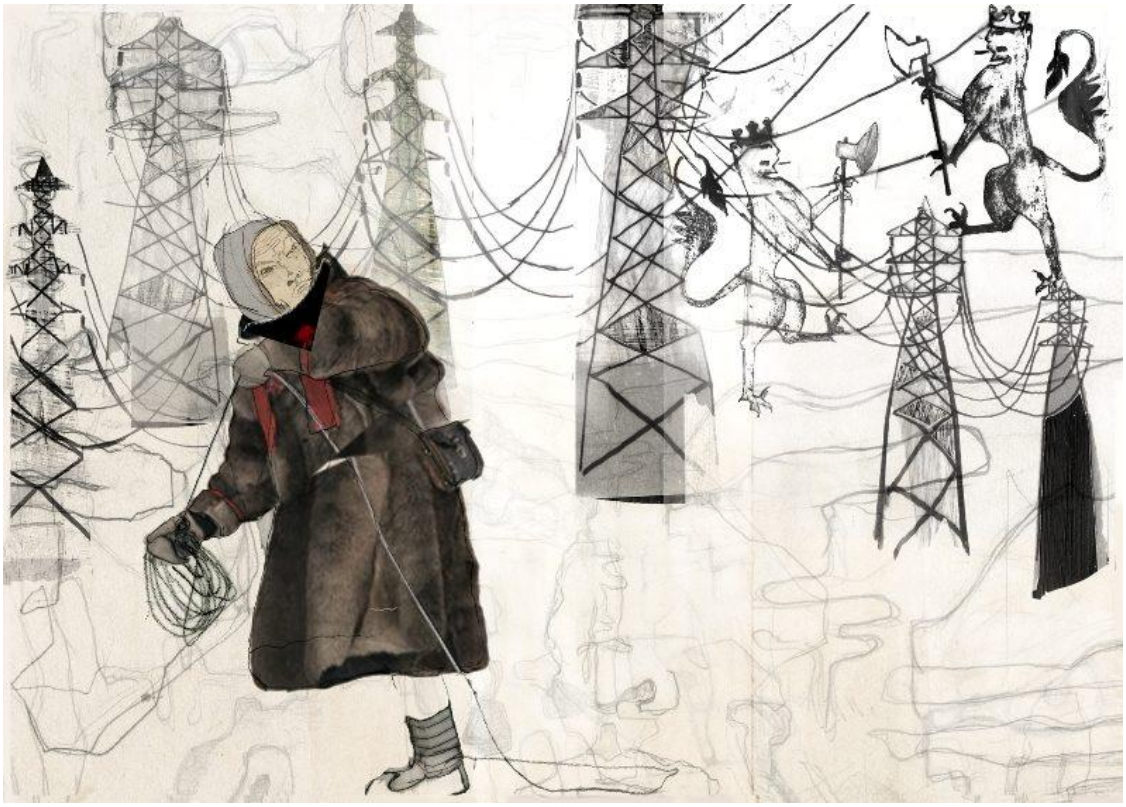
NORGE

Ávjovári luonddugáhttenlihttu
Naturvernforbundet i Ávjovárri

WIND POWER OR REINDEER HUSBANDRY?

THEMATIC REPORT 3

Overview, summary and conclutions



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Thematic report 3

Wind power or reindeer husbandry

Short version

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WIND POWER – a report series from Motvind Norge

Wind power is commonly seen as renewable energy, but the construction of wind power plants has severe negative impact on health and quality of live for those who live near the turbines, and loss of biodiversity. According to the UN's panel on nature and biodiversity, IPBES, land degradation caused by human activities and loss of biodiversity is as big a threat to life on earth as climate change is. Construction of infrastructure and loss of nature is irreversible, not renewable.

In Norway approximately 100 licences for wind power plants have been granted, and about 50 of them are fully developed this far. Protests are intensifying as the impacts of these industrial plants exhibits.

Motvind Norge's series of reports, «Wind power», is seeking to increase the knowledge of the wind power industry. The first report was concerning land loss and land degradation, the second about reindeer husbandry and indigenous rights.

This report, edited in four parts, takes a broad perspective on the relationship between wind

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1 Motvind Norge (Headwind Norway) is a organisation founded in 2019, exclusively working against building of wind power plants in Norway. It is based on a lot of local groups working to stop wind power plans in their areas.

2 Ávjovárri is an old name of a Sámi village or district in Inner Finnmark, Northern Norway. It is now used as a common name of the municipalities Guovdageaidnu/Kautokeino and Kárášjohka/Karasjok, sometimes also concluding one or more neighbouring municipalities.

power and reindeer husbandry, with a particular emphasis on experiences from wind power plants in reindeer herding areas.

Future reports will cover a range of topics, including infra sound, audible noise and health issues, and the economic aspects of wind power construction.

Motvind Norge claims that wind power construction is not the solution to the climate crisis. Our goal is to stop the construction of wind power plants in Norway.

Preface

As of 2020, a massive amount of wind power development is ongoing in Norway. In sum these industrial wind power constructions are the biggest infrastructural development that has ever taken place in Norwegian nature. Parts of our nature already is, or is going to be, damaged beyond repair. This destruction happens under the pretext of providing green energy and saving the world from climate catastrophe.

Construction of wind power damages not only nature, but also the pastures that grazing animals depend on. In this report, we will be focusing on in which ways wind power construction in areas where reindeer husbandry is practiced affect the reindeer, how it impacts reindeer husbandry as a livelihood, and Sámi3 culture where reindeer husbandry is important for the continuation and strengthening of culture, language and livelihoods.

In 2004, NVE[4] and the Norwegian Reindeer Husbandry Administration released a report titled *Vindkraft og reindrift* (Wind power and reindeer husbandry). At that time, experiences of wind power in areas with reindeer pastures were minimal, and the idea behind the report was to develop a way for these two kinds of land use could coexist. 16 years later, experiences have accumulated. In this report, which we have titled *Vindkraft ELLER reindrift? / Wind power OR reindeer husbandry?*, we summarize experiences and findings from this period.

The initiative behind this report comes from Naturvernforbundet i Ávjovárri, a local branch of Friends of the Earth Norway. We are located in Guovdageaidnu og Kárášjohka, Norway's two largest municipalities for reindeer husbandry.

The editors of the report are Peer Gaup, Piera Jovnna Somby and Svein Lund. Ragnhild Sandøy, editor for Motvind Norge, has contributed to text and editing. Many others have contributed text, illustrations, information and critical feedback. We especially wish to thank Arvid Jåma, Mads Kappfjell, Betty Kappfjell, Gudmund Sundlisæter, Anne Nesbakken, Ánde Somby, Bård S. Solem, Mads Løkeland, Christina Fjeldavli and Arne Müller. The latter has written the entire chapter on experiences in Sweden.

The report has grown to be much bigger than we initially thought. The full Norwegian version consists of four parts, where the first part contains the introduction, summaries and key findings in the conclusion. The other three parts go deeper into questions concerning wind power and the political process, the conditions reindeer herders are working under, and the impacts of wind power on reindeer pastures. It is the first of these parts which we now publish also in Sámi and English.

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3 The name of the people and their land is in their own language Sápmi. In English the people's name is sometimes written Sámi, Sámi or Saami. In older time the people was also called Lapps, but this word is no longer accepted.

4 NVE = Norges Vassdrags- og Energidirektorat, The Norwegian Water Resources and Energy Directorate, is a state organ which among others give licences for water and wind power plants.

We wish to thank for financial contributions: Naturvernforbundet (central organization, the regional organisations in Finnmark, Troms, Nordland and Trøndelag, and the local organization in Tromsø), and Motvind Norge.

The reports are published in Motvind Norge's report series, and on the web pages of Naturvernforbundet i Finnmark. All of them may be shared and distributed further.

This is the first version of the report, published in Norwegian 18.06.2020. However, the cases discussed are constantly evolving. There is still much information we have not been able to include, and we are therefore aiming to publish an updated edition in the autumn of 2020. We will also use this as an opportunity to correct mistakes and add material. All readers who wish to provide feedback or criticism are welcome to write to us at: avjovarri@naturvernforbundet.no.

The English language version is built on the Norwegian text, but we have added som explanations in footnotes as a help for foreign readers.

Table of contents for the complete Norwegian language version

Part A – Overview, summary, conclusion
Part B – Reindeer husbandry, wind power and adverse effects
Part C – Experiences of wind power in reindeer herding areas
Part D – Legislation, licensing process, knowledge base and influencers

Table of contents for this shorter English version

A1. Introduction: Wind power and reindeer husbandry – Can they co-exist?

Part of the planning area for Davvi wind power plant, in Lebesby (Davvesiida) / Tana (Deatnu) municipalities in Finnmark. On the right is the mountain Rásttigáisseaibbuš, and in the middle the mountain Vilgesrášša. Construction of wind turbines is planned from the centre of the image towards the horizon on the left side.
(Photo: Rolf Erik Poppe)

In recent years we have seen an explosion of interest in new wind power projects, encouraged by incentives from a Norwegian-Swedish support scheme called “green certificates”. Roughly half of the wind power initiatives have been in areas with reindeer husbandry, causing conflicts on both sides of the border.

One of the reindeer herders in a district where a wind power plant recently has been constructed, says that they accepted the construction not understanding the severity of the implications. Now that they see the negative impacts, it is too late to regret. In addition to the infrastructure which already causes major problems, the authorities have granted permission for a large expansion of the plant. This is just one of several examples where reindeer herders and others who are part of herding often know far too little about wind power. On the other hand, the developers as well as government administrations know far too little about reindeer husbandry. Both the environmental movement and the population in general have poor knowledge of both, and particularly about how they collide and conflict.

Several hundred pages about the relationship between wind power and reindeer husbandry have been written by public authorities, consultancy firms and researchers. Some of this is referred to in footnotes throughout this report and in the bibliography in the

Norwegian version. Knowledge of impacts from wind power development is currently a thematic area in rapid development, and 10-20 year old assessments are out of date when it comes to assessing more recent experiences in reindeer herding areas. A large number of these reports and documents have been assigned by developers or by organizations and institutions which are supporting further expansion of wind power. They want to find a way to ensure that reindeer pastures won't be a hindrance to such expansions. The experiences of the reindeer herders themselves have only to a small degree been visible in the material produced. The findings are out of date or not known to the public. This is the background on which this report has been written.

During their work with a national framework plan for onshore windpower (Nasjonal ramme for vindkraft på land), the Norwegian Water Resources and Energy Directorate (NVE) created the terms "hard exclusions" and "soft exclusions" as criteria for excluding or limiting wind power in specific areas. If we are to use these terms invented by the energy authorities themselves, should not reindeer pastures be a criteria that warrants "hard exclusion"?

The documentation in this report is specifically about how wind power affects reindeer husbandry, but it should also be relevant in other areas. We are hoping that the report will be a useful contribution to the debate around wind power in general.

The report is first and foremost concerned with areas within Norway. One chapter is concerning Sweden, and much of the material is relevant for the situation in both countries. Our hope is that the report will be read also on Swedish side of the border and it other countries, not at least in the countries investing in wind power plants in Norway and Sweden.

To summarize, the main purpose of this report is to question whether the construction of wind power plants is compatible with continued reindeer husbandry. The 2004-report from NVE and the Norwegian Reindeer Husbandry Administration5 on wind power and reindeer husbandry formulates it as follows (our translation):

"The licensing process gives municipalities and all interested parties the opportunity for public participation through meetings and public hearings regarding alternative solutions and mitigation measures. This ensures equal treatment and predictable outcomes in order for wind power development in Norway to be environmentally and economically viable, and safeguards local, regional and national interests with regards to land use and energy production." [6]

This statement sounds reassuring, but we want to investigate whether the experiences of reindeer herders from the licensing process and construction of the wind power plants is truly in compliance with such a statement.

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5 Reindriftsforvaltningen / Reindeer Husbandry Administration existed from 1979 to 2014, and was then included in Landbruksdirektoratet / Directorate of Agriculture.

6 https://www.nve.no/media/2249/vindkraft-og-reindrift_2004.pdf

A2. The biggest threat towards reindeer husbandry?

Reindeer husbandry has been practiced in Nordkalotten[7] for centuries. Conflicts concerning land use have been frequent throughout this period, as society at large have demanded that reindeer pastures should be available to agriculture, development of roads, for military use, mining, hydropower, houses, cabins and other infrastructure developments. The loss of pasture caused by wind power industry today is a lot more comprehensive and works at a faster speed than ever before.

This development and rapid expansion of wind power projects, occurred with such speed and intensity that neither reindeer herders nor other affected parties were prepared for how much and how quickly pasture would be lost.

Illustrasjon: Christina Fjeldavli

To date, we know of around 100 plans for wind power development in areas with Sámi reindeer husbandry. Many of these have already been realized, others are currently under construction, and others again have been granted license but have yet to be built. Some are undergoing the licensing process now, whilst others have been rejected or the process has been paused. At least 33 reindeer herding districts, nearly half of the districts in Norway, have been exposed to plans or construction of the wind power plants within their grazing lands.

According to the NVE, 12 wind power plants are operative within areas that are grazing land for reindeer early 2020. This makes up 28,5 % of all wind power plants currently operating in Norway, and represents 37,5 % of the total energy production from wind power. Nine plants are under construction, and two have been granted a license but

7 The geographical area covering the northernmost parts of Finland, Norway, Sweden and North-West Russia, sometimes referred to as Cap of the North in English.

have not yet started being developed. As the wind turbines and their use of area is increasing in size, we can assume that the amount of wind energy generated in areas with reindeer husbandry will double within a few years' time. On top of this are the projects currently applying for licenses that have not yet been approved.

Below we have made a table to show where the current wind power plants are located, organized by municipality and reindeer herding district. It shows the status of the plans, the expected output effect of the wind turbines, and who the license applicant is.

The table only includes the plans that have been reported to NVE and where licenses have been applied for. For projects that wind power developers are working on, but where a license has not yet been applied for, we have limited information and have thus only been able to include a few of these. Unfortunately, there is no full directory of what different developers are planning in Sápmi.

Name of project	County/ municpality	Reindeer herding district	Status	MW	Applicant
Eliastoppen	FM Berlevåg	7 Rákkonjárga	Notification withdrawn	40	Norsk miljøkraft
Laukvikdalsfjellet	FM Berlevåg	7 Rákkonjárga	Notification withdrawn	33	SAE Vind
Raggovidda 1	FM Berlevåg	7 Rákkonjárga	In operation	97	Varanger Kraftvind
Raggovidda 2	FM Berlevåg	7 Rákkonjárga	Licence granted	97?	Varanger Kraftvind
Raggovidda 3	FM Berlevåg	7 Rákkonjárga	Licence granted	97?	Varanger Kraftvind
Båtsfjordfjellet	FM Båtsfjord	6 Várjjatnjárga	Application process suspended	120	Finnmark Kraft
Hamnefjell	FM Båtsfjord	7 Rákkonjárga	In operation	120	Hamnefjell vindkraft
Digermulen	FM Gamvik	13 Lágesduottar	Application sent to NVE	100	Fred Olsen
Nordkyn	FM Gamvik, Lebesby	9 Čorgas	EIA in process	750	Statkraft
Hammerfest	FM Hammerfest	20 Fála	**Rejected**	110	Statkraft
Dønnesfjord	FM Hasvik	19 Sállan	Under construction	48	Dønnesfjord vp
Sørøya	FM Hasvik	19 Sállan	Application withdrawn	15	Vindkraft Nord
Fálesrášša	FM Kvalsund	21 Gearretnjárga	**Rejected**	160	Aurora
Kvalsund	FM Kvalsund	22 Fiettar	**Rejected**	128	Aurora
Laksefjorden	FM Lebesby	13 Lágesduottar	Application	100	Fred Olsen
Kjøllefjord	FM Lebesby	9 Čorgaš	In operation	39	Kjøllefjord vind
Skjøtningberg	FM Lebesby	9 Čorgaš	EIA programme approved	400	Norsk miljøkraft

Davvi	FM Lebesby, Tana	13 Lágesduottar 14A Spierttagáisá	Application under consideration	800	Grenselandet
Snefjord	FM Måsøy	16 Kárášjoga oarjeb.	Application sent	160	Finnmark Kraft
Måsøy sør (?)	FM Måsøy	16 Kárášjoga oarjeb.	Planning stage	?	Njordr
Smørfjord sør	FM Porsanger	16 Kárášjoga oarjeb.	Planning stage	?	Njordr
Børselv	FM Porsanger	14A Spierttagáisá	Planning stage	?	Njordr
Magerøya	FM Nordkapp	16 Kárášjoga oarjeb.	**Rejected**	50	Statkraft
Bugøynes	FM Sør-Varanger	4 Mátta-Várjjaga oarjebealli	Licencing process suspended	90	Hydro energi
Bjørnevatn	FM Sør-Varanger	5A Báhcaveaddji	EIA programme approved	60	Troms kraft
Skallhalsen	FM Vadsø	6 Várjjatnjárga	Rejected	65	Statkraft
Domen	FM Vardø	6 Várjjatnjárga	Licencing process suspended	100	Norsk miljøkraft
Seglkollfjellet	FM Vardø, Båtsfjord	6 Várjjatnjárga	Licencing process suspended	350	Varanger Kraft
Kalvvatnan	N Bindal, TL Namsskogan	18 Voengelh-Njaarke (Kappfjell/Bindal)	**Rejected**	235	Fred Olsen
Straumøya	N Bodø	28-30 Saltfjellet	Application withdrawn	25	Statkraft
Sørfjord 1	N Hamarøy	39 Frostisen	Under construction	340	Sørfjord vp
Sørfjord 2	N Hamarøy	39 Frostisen	Licence granted	100	Sørfjord vp
Nygårdsfjellet	N Narvik	21 Gielas	In operation	32	Nygårdsfjellet vp
Skogvatnet	N Narvik	39 Frostisen	Rejected	100	Statskog
Sjonfjellet 1	N Rana, Nesna	21 Røssåga / 23 Toven	Licencing process suspended?	360	Norsk grønnkraft / Freyr
Sjonfjellet 2	N Rana, Nesna	21 Røssåga / 23 Toven	Application withdrawn ?	310	Nordnorsk vindkraft / Freyr
Kvalhovudet	N Rødøy	25/26 Hestmannen	Application withdrawn	33	Nordnorsk vindkraft
Seiskallåfjellet	N Rødøy	25/26 Hestmannen	Application withdrawn	147	Nordnorsk vindkraft

Kovfjellet	N Vefsn	20 Jillen-Njaarke	Application withdrawn	57	Nordnorsk vindkraft
Mosjøen	N Vefsn, Grane	20 Jillen-Njaarke	**Rejected**	305	Fred Olsen Renewables
Stortuva	N Vefsn	20 Jillen-Njaarke	Application withdrawn	205	Nordnorsk vindkraft
Øyfjellet 1	N Vefsn	20 Jillen-Njaarke	Under construction	1360	Øyfjellet Wind
Øyfjellet 2	N Vefsn	20 Jillen-Njaarke	Licence granted	400	Øyfjellet Wind
Stokkfjellet 2	TL Selbu	Gåebrien (Riast Hylling)	Licence granted	90	Trønderenergi
Stokkfjellet 1	TL Selbu	Gåebrien (Riast Hylling)	Under construction	206	Trønderenergi
Haugrossåsen	TL Steinkjer, Namsos	10 Tjåehkere (Østre Namdal)	Application withdrawn	250	RWE
Mariafjellet	TL Lierne	10 Tjåehkere (Østre Namdal)	Application under consideration	150	Vindkraft Nord
Grøndalsfjellet	TL Namskogan	10 Tjåehkere (Østre Namdal)	EIA in process	200	Vindkraft Nord
Nordre Grøndalsfjellet	TL Namskogan	10 Tjåehkere (Østre Namdal)	Application withdrawn	110	Ulvik Kiær
Grønningsfjella	TL Overhalla, Høylandet, Namsos	11 Åarjel-Njaarke (Vestre Namdal)	Application withdrawn	378	Statskog
Ytre Vikna	TL Nærøysund	11 Åarjel-Njaarke (Vestre Namdal)	Licence granted	70	Trønderenergi
Vikna	TL Nærøysund	11 Åarjel-Njaarke (Vestre Namdal)	Licence granted	9	NTE
Hundhammerfjellet	TL Nærøysund	18 Voengelh-Njaarke (Kappfjell/Bindal)	In operation / under construction	55	NTE Energi
Rapheia	TL Namsos	6 Fovsen-Njaarke	**Rejected**	48	Statskog
Blåheia	TL Åfjord	6 Fovsen-Njaarke	Rejected	200	Sarepta
Bessakerfjellet 1	TL Åfjord	6 Fovsen-Njaarke	In operation	57	Trønderenergi
Roan 1	TL Åfjord	6 Fovsen-Njaarke	In operation	255	Fosen Vind
Storheia 1	TL Åfjord	6 Fovsen-Njaarke	In operation	288	Fosen vind
Innvordfjellet	TL Flatanger, Namsos	6 Fovsen-Njaarke	Licence granted	115	Zephyr
Sørmarkfjellet 2	TL Flatanger, Osen, Åfjord	6 Fovsen-Njaarke	Licence granted	130	Trønderenergi

Bessakerfjellet 2	TL Åfjord	6 Fovsen-Njaarke	Licence granted	57	Trønderenergi
Harbaksfjellet 2	TL Åfjord	6 Fovsen-Njaarke	Licence granted	124	Fosen vind
Roan 2	TL Åfjord	6 Fovsen-Njaarke	Licence granted	255	Fosen Vind
Storheia 2	TL Åfjord	6 Fovsen-Njaarke	Licence granted	288	Fosen vind
Beingårdsheia	TL Flatanger, Namsos	6 Fovsen-Njaarke	Notification process suspended	140	Ulvig Kiær
Aunkrona	TL Flatanger	6 Fovsen-Njaarke	Notification withdrawn	70	Statkraft
Rørvassheia	TL Flatanger, Osen	6 Fovsen-Njaarke	Notification withdrawn	170	Statkraft
Benkheia	TL Indre Fosen	6 Fovsen-Njaarke	Notification withdrawn	60	Statkraft
Leksvik	TL Indre Fosen	6 Fovsen-Njaarke	Notification withdrawn	100	Statkraft
Markabygda	TL Indre Fosen	6 Fovsen-Njaarke	Notification withdrawn	300	Trønderenergi
Rissa	TL Indre Fosen	6 Fovsen-Njaarke	Notification withdrawn	60	Statkraft
Jektheia	TL Namsos	6 Fovsen-Njaarke	Notification withdrawn	57	Statskog
Storsnøheia	TL Namsos	6 Fovsen-Njaarke	Notification withdrawn	54	Statskog
Mefjellet	TL Steinkjer	6 Fovsen-Njaarke	Notification withdrawn	273	Statskog
Staurheia	TL Steinkjer	6 Fovsen-Njaarke	Notification withdrawn	100	Fred Olsen
Steinheia	TL Steinkjer	6 Fovsen-Njaarke	Notification withdrawn	72	Statskog
Sørmarkfjellet 1	TL Flatanger, Osen, Åfjord	6 Fovsen-Njaarke	Under construction	443	Trønderenergi
Harbaksfjellet 1	TL Åfjord	6 Fovsen-Njaarke	Under construction	438	Fosen vind
Kvendalsfjellet	TL Åfjord	6 Fovsen-Njaarke	Under construction	401	Fosen vind
Sandvassheia / Follaheia	TL Steinkjer	6 Fovsen-Njaarke	EIA programme approved	200	Ulvig Kiær
Kvendalsfjellet	TL Åfjord	6 Fovsen-Njaarke	Licence granted	118	Fosen vind
Kopperå	TL Meråker	7 Gaasken-Laante (Færen)	**Rejected**	180	RWE Wind

Hyllfjellet	TL Verdal	7 Gaasken-Laante (Færen)	Application sent to NVE	200	RWE Wind
Ilfjellet	TL Rennebu	Trollheimen	Planning stage	?	Fred Olsen
Fakken	TR Karlsøy	10 Vannøy	In operation	60	Troms kraft
Maurneset	TR Nordreisa	36 Cohkolat	**Rejected**	10	Vindkraft Nord
Flatneset	TR Senja	15 Nord-Senja	Notification withdrawn	35	Troms kraft
Rieppi	TR Storfjord	24 Bassevuovdi	**Rejected**	80	Troms kraft
Måsvik	TR Tromsø	12 Ringvassøy?	Application withdrawn	15	Statkraft
Kvitfjell	TR Tromsø	14 Sállir / Kvaløy	In operation	200	Tromsø vind
Raudfjell	TR Tromsø	14 Sállir / Kvaløy	Under construction	340	Raudfjell vind
Sandhaugen	TR Tromsø	14 Sállir / Kvaløy	Licence withdrawn	15	Sandhaugen
Kroken	TR Tromsø	17-18 Tromsdalen	EIA programme approved	60	Fred Olsen

Who are the prosecutors behind the wind power industry?

The table above lists the applicants for licences provided by the NVE. It is not uncommon that the companies are selling the license to other companies after the license is granted, thus the owner of the project may be another company today – or tomorrow. Approximately 80% of wind power plants in operation in Norway are owned by foreign companies and investors, and this is also true for power plants in reindeer herding areas. The sale often takes place shortly after the license is granted and before construction begins. A wind power plant can be sold for hundreds of millions of NOK in profit for the selling company. There are also examples that individuals have earned more than one hundred million in transactions like these.

The list of applicants shows a heterogenous group of companies. The majority are private companies, often international. There are also several companies where public bodies like Statkraft8 and Statskog9 play a central role. Behind names like Finnmark Kraft, Troms Kraft, Trønderenergi and Zephyr are municipalities and county councils, as well as public bodies. The Finnmark Estate10 (FeFo) were previously on the ownership side of Finnmark Kraft, but this ownership became controversial to the extent that the board decided to withdraw from the company.

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8 Statkraft is an energy company owned by the Norwegian state, running hydro, wind, solar and gas power plants in many countries.

9 Statskog is a company owned by the Norwegian state, governing the state owned forests and mountain land in Norway.

10 Finnmarkseiendommen (Finnmark Estate) is from 2006 the formal owner of most uncultivated land in Finnmark. Its board is elected by the Sámi Parliament and the County Assembly.

A large proportion of Norwegian wind power investments are now owned by German interests. Here is an article from the German newspaper Die Welt am Sonntag about how German-owned companies are destroying Norwegian wilderness.

No reconciliation

In 2017, the Norwegian Parliament constituted a truth and reconciliation commission to investigate the Norwegian assimilation policy and injustice against the Sámi and the Kven/Norwegian Finnish people. This commission has been granted the task of mapping state policies and acts committed towards Sámi and Kven/Norwegian Finnish people from 1800 until today, and further back in history if necessary. They will also be mapping impacts of the assimilation policies today and aiming to propose measures for continued reconciliation.

The need for the commission comes from a long history where the Sámi in Norway were viewed as primitive human beings in need of becoming Norwegian both by language and culture. Reindeer husbandry was seen as a dying livelihood. Despite this, and despite the many developments of infrastructure and industry in reindeer herding areas, reindeer husbandry has managed to survive both as a livelihood and as an important carrier of Sámi culture.

In recent years, the Sámi right to land and water has been affirmed by the Norwegian Constitution, by the Biodiversity Act, and by a number of other laws. The Reindeer Husbandry Act builds on the right reindeer herders have to practice their livelihood and use their land areas. The Norwegian state has also ratified a number of international conventions on the rights of indigenous people and minorities.

Whilst official policies operate as if the injustice is over and the time for reconciliation is present, reindeer herders are fighting harder than ever to stop or limit infrastructural development and other encroachments that destroy nature and landscapes, removes pastureland and thereby also the possibility of continued reindeer husbandry. Such encroachments occur simultaneously across different parts of their pasture lands, in the form of mines, hydropower, cabin development, power lines, leading to piecemeal loss of land and grazing areas. Wind power is in a league of its own in this matter, executing pressure for a pace and scale of development by wind power companies and authorities that is without comparison historically.

Reindeer grazing on the Nussir mountain in Kvalsund, reindeer herding district 22 Fiettar. The reindeer herders in this area have been exposed to and threatened by development of hydropower, wind power, cabin development and power lines.
(Photo: Marion Palmer)

A3. Summary of the report

This is a summary of the whole report which is published in Norwegian. The summary follows the chapter subdivision, so that those who want more information about something can go to corresponding chapters in the other sections.

(B1) Some facts on reindeer husbandry

There is a great lack of knowledge about reindeer husbandry in Norwegian society, and this is one of the reasons why reindeer husbandry interests often are not respected in cases of nature intervention in reindeer grazing areas. To consider such interventions, we must look at all aspects of reindeer husbandry.

Herding fence for seperating reindeer, Sohparváđđa, Karasjok
(Photo: Mellet Solbakk)

There are about 3 million wild reindeer and 2 million tame reindeer in the world. Reindeer herding is run all over the northern part of the Eurasian continent. In the Nordic region, reindeer has been important to the people living there since the Ice Age and to Sámi culture as far back as history goes. Reindeer husbandry has its roots more than a thousand years back, and as a main industry with long relocations (?) it has been common in the Northern Calotte for at least 400 years.

There are now 2–300,000 domestic reindeer in each of the countries Norway, Sweden and Finland, and reindeer husbandry utilizes outfields in almost half of the land area. The Sámi reindeer husbandry area in Norway is a continuous area from Hedmark to Finnmark.

For reindeer herding families, reindeer herding is food, lifestyle and culture. Reindeer husbandry consists of six important components:

Operation - Landscape - Food - Language - Clothing - Family.

Out of the many aspects of reindeer husbandry, the authorities primarily puts focus on meat production.

Reindeer meat and entrails are used in a variety of dishes, and reindeer skins, bones and horns for useful and decorative objects. Reindeer products can be used for medical and cosmetic use. Without reindeer husbandry we will not have access to any of this.

Reindeer husbandry and related activities are essential in Sámi culture, nature based knowledge and language. Wind power development is now in the process of removing what the Sámi Rights Commission called "The natural resource base of the Sámi culture."

In principle, the reindeer can find its own food throughout the year, and only needs to be fed occasionally during winter under special circumstances. The reindeer is self-reliant and can only to some extent be controlled by humans. The reindeer herds follow routes of migration and pattern of movements that are difficult to change. These depend on geographical and climatic conditions and can only be controlled to a limited extent by reindeer herders.

There is a difference in how tame the reindeer act both within the same herd and between different flocks. Reinbucks are less shy than females.

As long as the reindeer find an adequate amount of food, they would preferably stay far away from human intervention. When food is short, the reindeer can overcome the fear and it will go to areas which it would normally keep away from.

If people disturb the reindeer herds, it can cause many adverse effects. It is particularly bad in the time of calving.

To understand how interventions in a reindeer pasture affect reindeer and reindeer herding, we need to know how reindeer utilize the landscape throughout the year. The reindeer depend on different grazing resources in different seasons of the year. There are often few possible routes of migration between the applicable grazing places. Human intervention has led to closing of previously possible relocation routes, and towpaths or grazing areas have disappeared. Thus there are now fewer options to choose between. Migrations routes have special protection in the reindeer husbandry law.

Interventions such as wind power in reindeer grazing areas must be assessed on the basis of the reindeer husbandry use of the area. Mainly it is not possible to replace lost areas, and interventions will often lead to a danger of intermingling with neighboring herds and conflicts between siidas and districts.

Most of the year, the reindeers walk freely and the herding consists mostly of making sure the reindeer is inside the area where it should be. Only during seasonal migrations and special events such as marking, separating and slaughtering do the reindeer owners directly intervene in collecting and leading or operating the flock. With

intervention in the pasture, the result could be that more intense herding is necessary.

From the 1960s and onwards motorized vehicles and other technical aids were applied in reindeer herding. This made the job easier in some ways, but required greater financial income from the herders and thus larger flocks. In many locations, reindeer herders settled in denser populated areas or closer to roads. Thus, some family members could take payroll work outside of reindeer husbandry. It was often women, who then got a weaker role in the reindeer herding.

Vehicles have replaced the reindeer for transport and the mechanization has changed the knowledge reindeer operators need and utilize. This has led to less contact with the animals and as a consequence of this they are less tame. The use of vehicles has also led to increased wear and tear in the terrain and to health problems for many reindeer herders.

Variations in terrain mean that encroachments can make far greater damage than it seems, measured in percentage of an area. In order to determine the effects of an intervention one must know the terrain and how the reindeer utilizes it. Maps explaining land use does exist, but they are not sufficient basis for making decisions. Reindeer herding depends on having physical facilities in the terrain, such as fences for marking, separating and slaughtering. Interventions can prevent them from being used as before. Barriers are necessary to prevent the reindeer from entering areas where they should not be.

Organiseringa av reindrifta er en kombinasjon mellom den indre samiske organiseringa og den ytre norske, og disse har ofte kommet i konflikt med hverandre. The organizing of reindeer husbandry consists of the internal Sámi ways of organizing and the organizing decided by the external Norwegian society, and conflict do often occur between the two parties.

Within Sámi reindeer herding, all reindeer are personally owned and marked with the owner's mark. The basic unit of the Sámi reindeer herding organization is "siida", which means both the reindeer herd, the people who work with and own the reindeer in the herd, and the area they graze on. Many siida's stay together through the year, while some are split or gathered after the seasonal grazings. Only some of the reindeer owners with their own brand have the status of independent drivers, called siida shares.

The entire reindeer grazing area in Norway is divided into over 80 numbered districts, which have fixed borders and a board elected by the reindeer owners. At a higher level, reindeer herding is administered by the County Governor and the Directorate of Agriculture.. The reindeer herding board is appointed by the Government and the Sámi Parliament. This reindeer husbandry management has no formal role in connection with windpower development matters, except that the County's reindeer husbandry department may object.

From the 19th century, the state has ruled reindeer herding, often in contradiction to the Sámi tradition. In recent years, the state has intervened more in reindeer husbandry and the Sámi autonomy has been reduced. The many interventions show that reindeer husbandry does not have control or autonomy when it comes to its own livelihood.

From the 1970s and 1980s, the State has tried to control the reindeer husbandry industry according to the pattern of Norwegian agriculture. The reindeer husbandry agreement has influenced unilateral meat production and flock structuring contrary to the Sámi tradition. This has had several unfortunate effects, such as increased vulnerability to predator attacks and increased need for feeding.

To be able to understand the effects of intervention in reindeer grazing, one must have good knowledge about reindeer husbandry in general and about the area in question. There are many who have both practical experience and theoretical knowledge about reindeer husbandry, but they are not desired by the developers for reindeer husbandry impact assessments. Developers want people without special reindeer husbandry knowledge, with an apparent professional authority that can be used to provide conclusions that can justify intervention.

The reindeer migrations and the annual cycles of the reindeer husbandry are carefully adapted to the climate of the area being used. Temperature, wind and rainfall can be decisive for when and to what extent a grazing area or other application can be utilized. When interventions reduce the choices, reindeer husbandry becomes more vulnerable to climate change. Inner Finnmark is particularly affected by climate change. This will have a major impact on winter pastures and interventions like wind power will make this situation even more difficult.

(B2) Some facts on Wind power

Burning wind turbine, Bösjövarden, Mora, Sverige, 23.02.2020.

(Photo: Dalarnas Tidningar)

Wind turbines have been producing electricity for more than a century, but at a larger scale only since the 1970s. In the late 1990s wind turbines started producing in Norway. Denmark, Germany, the US and China have been far ahead in this matter, and companies from these countries are facilitating the production of the majority of turbines. Denmark has about 4300 operating turbines and Germany an amount of 30,000, while there are about 50 turbines in operation in Finnmark and 800 in Norway in total.

In 2018, wind power produced 5 % of the world's total energy supply. The amount of energy derived from wind power more than doubled from 2013 to 2019.

Statkraft claims: "Wind power is one of the most environmentally friendly forms of large-scale power generation." Wind power produces relatively small amounts of greenhouse gas emissions, but the local damages caused by direct natural interventions are severe. On the basis of the desire to preserve natural habitats, landscapes and reindeer herds, wind power is not environmentally friendly, but rather a largely environmentally harmful form of power generation. Wind power must also be assessed on the basis of the environmental impacts concerning the production of wind turbines and their aftereffects. Wind power requires mines for copper, neodymium, dysprosium, lead, nickel, aluminum, iron, limestone and more, production plants for generators, turbine blades and foundations, as well as the blasting and driving connected to assembly of wind turbines. Wind power is far from "emission-free"! Power cables from wind turbines to consumers also use a lot of metals. So do electric cars.

Climate measures must consider the entire carbon balance. When forests and marshlands are being demolished for the sake of wind power, it contributes negatively to the carbon balance.

Wind power provides unstable power supply and must therefore be supplemented by other sources of power. Wind power can be stored in batteries or as hydrogen, but this is very expensive and requires large resources.

Wind turbines have high maintenance and are more short lived than every other type of energy plants. They also run a great risk of wing and tower breakage, fire in the generator and oil leakage. There is unclear responsibility for clean-up after decommissioned and broken wind turbines and the wings cannot be recycled. There

seems to be no plan for neat dismantling, so turbines are just overturned and crushed to the ground.

Wind turbines change the natural landscape into industrial landscapes, destroying the living environment, recreational areas and ruining the tourist industry. Wind power is extremely area-intensive. In Norway, 1760 km2 of land has been redistributed from agricultural and recreational areas to areas for wind plants. Wind turbines emit infra sound, which travels far and has many unclarified effects.

High wind turbines destroy the visual impression of a landscape, and the rotation of the wings ensures that you never get peace in nature. The movement of the wings scares the reindeer. During sunshine, rotating wind turbines creates power shadows. Many wind turbines have flashing lights for the sake of air traffic.

Under certain weather conditions, ice forms on the turbine wings. This can be thrown away in clumps and cause damage to people, reindeer, other animals and material. This can be thrown away in clumps and cause damage to people, reindeer, other animals and material. It is then dangerous to go closer to the wind plants than 400 m and entire wind industry areas are unavailable for other use in winter. Measures to prevent icing and icing are very costly and / or environmentally harmful. Wind turbines destroy living and nesting areas for birds, and the wings kill large birds. Bats and insects are also killed by wind turbines to a large extent.

As wear and tear makes the rotor blades deteriorate, microplastics and fiberglass are emitted and spread to surrounding terrain and waterways.

To install and maintain turbines, there must be established broad roads to the individual turbine and large installation sites. The power lines are also large nature interventions and can act as a barrier for reindeer. There are lines for exchange with foreign countries and several are under construction or planning.

There are many effects of wind power that are poorly researched: vibration, infra sound, impact on electromagnetic communication and radars, microclimate, aerosole.

In 2019, total wind power production in Norway reached 5.5 TWh, with granted licenses for 18 TWh. NVE estimates the useful wind potential in Norway to be between 400 and 1800 TWh. It is probably not realistic to build so much, but looking to Germany we can observe their 90 TWh derived from wind power, in an area equivalent to what we have in Norway. More than half of this potential can in principle be developed in reindeer grazing areas. The authorities have not established any limit for the amount of licences or TWh which may be produced.

All wind power in Norway is directly and/or indirectly subsidized through:

- Direct investment support and production support
- Electricity certificates or green certificates
- Reduction in depreciation time
- Free transport of electric energy
- Tax relief
- Guarantees of origin
- Export guarantees

Total energy consumption in Norway in 2018 was 215 TWh, of which 124 TWh as electricity. The goal is to replace 80 TWh of fossil energy with electricity. This can be more than achieved by upgrading of existing hydropower plants, energy saving and energy efficiency in buildings and industry, as well as power plants that are under construction or have been granted a license. For domestic use, new licenses for wind turbines in Norway are not required.

Some believe we should expand hydropower and wind power and supply Europe's growing electricity consumption, so that they can shut down coal and nuclear power plants. More than 15 times the Norwegian electricity production is produced in Europe from coal and oil alone. A development that will match this would require both development of the remaining watercourses and a multiplication of wind power production.

A more realistic approach is that Norway will export hydro and wind power when it does not blow on the continent and then import back when it blows there. This solution will make the electricity market vulnerable to very unstable electricity prices and to irregular production of hydroelectric power plants, to the detriment of life in water reservoirs and rivers.

Norwegian hydropower is mostly publicly owned, but in the case of 80% of wind turbines in operation, they are owned by foreign capital. Often Norwegian companies initiate the start up of the projects, and then sell the licenses to foreign owners.

Norway is tied to the EU's energy policy by the Renewable energy directive and the energy agency ACER, among others. Both wind power investments and the development of bilateral power cables are according to the wishes of the EU.

Who earns from the wind power?

- License Applicants
- Power Plant Owners
- Landowners
- Suppliers
- Transport companies
- Machine contractors
- Consultants

In relation to the investments, wind power provides very little jobs locally and elsewhere in Norway

(B3) How does wind power affect reindeer husbandry?

Assessment of the impacts done by encroachments in reindeer herding areas must cover both local, regional and cumulative effects.

If this is not the case, wind power will be detrimental to both birds flying in the air and reindeer on the ground.

(Illustration: Jean-Michel Thiriet)

Direct grazing loss

Pasture plants become covered by turbine foundations, roads, maintenance area, transformator stations and masts, road cuts and landfills, areas that are changed through excavation, blasting and filling. Loss of pastures can also occur as a result of the nature being changed by development, such as drying up swamps.

Avoidance of physical facilities

Grazing reindeer grazing will to a greater or lesser extent avoid areas near the turbines. This may occur in several kilometers diameter away from the plant, and varies with topography, weather conditions and what other options the reindeer has available. Causes of the avoidance may be the sight of the turbines, especially when in operation, flashing lights, shadow rolls, audible sound and infra sound. When reindeer shed their traditional pasture, it will more easily migrate to areas where it should not be, e.g. across the borders of neighboring or neighboring districts. This easily leads to confusion with neighboring flocks. Measures such as increased herding and/or fence building will then be necessary. When mixed, it becomes necessary to gather all the reindeer into the fence, which means a lot of extra work and leads to increased wear on nature.

Turbines as a barrier

Reindeer which see a row of wind turbines will turn away, and the results may be that pasture areas on the other side of the turbines will not be utilized.

Construction work
During the construction period there will be a lot of traffic with machines and people. It will give a lot of noise and flashing lights. Blasting work causes a lot of noise and dust. Also in the operational phase, the area will be more visited by people and machines than before.

Barring of migration routes
Blocking or narrowing of the migration route can lead to loss of reindeer, especially during spring migration just before calving.

Power Lines

High voltage lines trigger electrical discharges that emit UV light. This light is invisible for human beings, but is visible to the reindeer, and will make them try to avoid these lines.

Animal Welfare

Disturbances and obstacles to reindeer and reindeer herding can lead to difficulties in carrying out rut and calving. This will result in lower calving percentage, greater loss due to predators, lower slaughter weight and poorer condition in calves that will become livestock. Neither the authorities nor organizations responsible for animal welfare have engaged in this.

Impact on reindeer herders
Wind power interventions in reindeer grazing land mean that reindeer herders no longer can continue like they have done for generations. Nature is changed and the reindeer herders experience the country as invaded by new players with no understanding of reindeer herding, without knowledge of language or culture. Suddenly, these people are to decide how to operate reindeer herding. Reindeer husbandry must adapt to installations and unforeseen events. This results in loss of income due to fewer calves being born and growing up and the reindeer being slaughtered having lesser weight. It leads to extra work on herding, fencing, separating and other measures to keep the reindeer in the right pasture. The result is most often reduced income and increased stress, wear and tear. For reindeer husbandry, this creates great psychological, social, cultural and linguistic stress, reduced well-being and motivation. There are effects that are difficult to put into words and impossible to pay compensation for. Grief over ruined nature and loss of life are never the subject of impact assessments.

Uncertain effects

Risk of accidents and unforeseen incidents, such as oil leaks, turbine accidents, fires in vegetation, the effects of infrasound and from micro-plastic bits and fiberglass emitted from the wings and spread into nature.

Mitigating measures?

Builders and other advocates of wind power claim that reindeer husbandry can be safeguarded with mitigating measures:

- Reducing damage from interference with locating turbines, limiting construction work and operating time, restoring damaged areas, etc.
- Compensatory measures such as reindeer fencing, compensating areas, financial compensation.

Some measures may reduce the adverse effects than they otherwise would have, but no measures can prevent that wind power development reduces the area to be used for pastures and thus decreases the grazing basis. This will in turn lead to reduced number of reindeer and that fewer people can live from reindeer husbandry. Of the proposed mitigation measures, many are unrealistic, and can only be seen as arguments for wind power development.

(C1) Experiences from wind power in reindeer grazing areas

In 2014/15, a survey was conducted, asking what are the experiences of reindeer husbandry from previous wind power developments. The survey was based on interviews with reindeer herders in the districts where wind power was in operation. It was published in *Utbygging av vindkraft i Fovsen-Njaarke / Fosen reinbeitedistrikt: Konsekvenser for reindriften i Sørgruppen." (*Development of wind power in the Fovsen-Njaarke/Fosen reindeer grazing district: Consequences for reindeer husbandry in the Southern Group.)

We have made a excerpt of this survey and updated it with experiences until 2020. The wind power plant that was then established in reindeer grazing area was, with the name of the reindeer grazing district in brackets: Trøndelag: Bessakerfjellet (Fovsen-Njaarke), Vikna (Åarjel-Njaarke). Nordland: Nygårdsfjellet (Gielas). Troms: Fakken (Vannøya). Finnmark: Raggočearru (Rahkonjárga) and Kjøllefjord (Čorgaš).

All these districts experienced a reduction in utilized pasture because the reindeer avoided the wind power areas to a greater or lesser extent. The vast majority of the districts have also experienced that migration routes have been lost and greater pressure on other grazing areas or on cultivated land. This in turn could make it necessary to reduce the number of reindeer, which in turn inflicts on the number of people being able to live from reindeer husbandry. Several of the wind power plants have also had greater and different implications than could be predicted in advance. When these facilities were established, wind power in reindeer pastures was something new, and neither the investors nor the reindeer owners could fully predict the effects. Consequently, certain effects have not emerged in impact assessments or estimates of compensation payments.

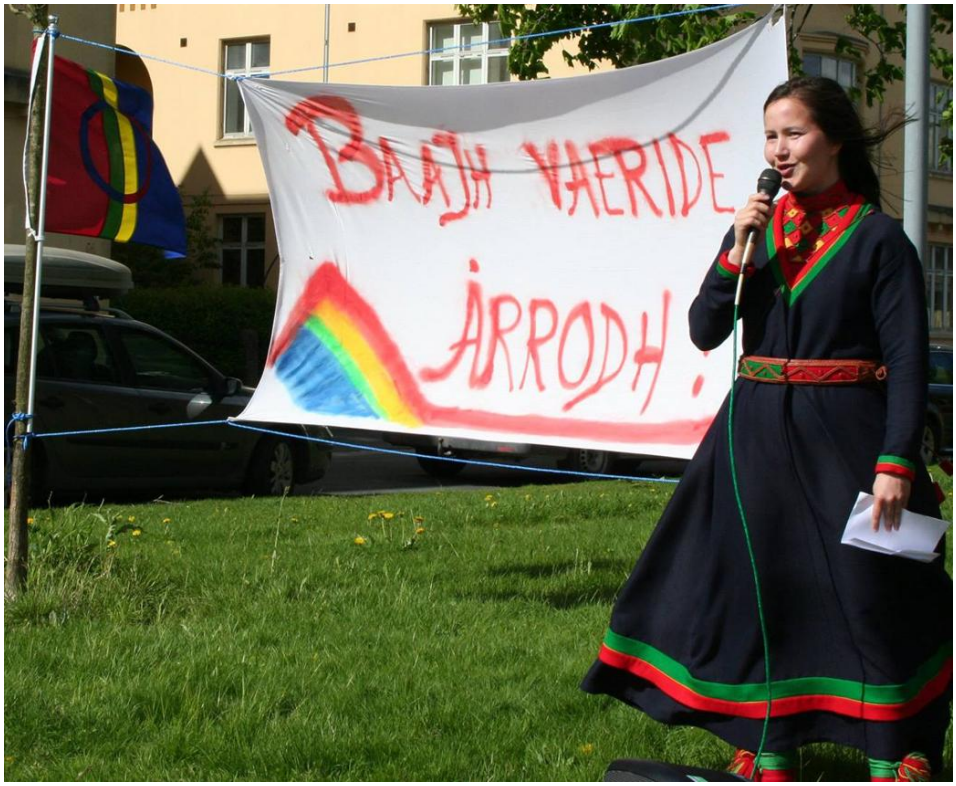
This is confirmed and partly reinforced by the updates in 2020. All the districts then still have problems due to wind power development and several have lost large grazing and operating areas. None of the districts say that the reindeer have been accustomed to the wind turbines.

All these studies have been concerning quite small wind power plants. With the larger plants and larger turbines now being built and planned, even greater effects must be expected. In most of these cases, the reindeer herding district has initially objected to the plans and complained NVE's concessions to the OED[11] without being heard. In a few cases reindeer husbandry have chosen to approve the development, believing that they will not be able to prevent it from happening and that they would lose more by expropriation than by agreement. They have different experiences from cooperating with the developer, several claims they are being overrun. A majority of the affected districts say that they have had little or no influence on the preparation of impact assessments. The investigators were uninterested in the herders knowledge of reindeer herding, and not willing or able to incorporate reindeer herding knowledge into the investigations.

[11] OED = Olje- og energidepartementet (Ministry of Petroleum and Energy) Licences given by NVE may be complained to OED, and they usually are.

(C2) Experiences from resistance to wind power in reindeer grazing land

A lot of plans for wind power development have met local resistance, both inside and outside of reindeer husbandry areas. We will look at some examples where reindeer grazing districts have protested against wind power development and to a greater or lesser extent have received support from others.



Maja Kristine Jåma from Fosen holds appeal in Trondheim before the District Court 08.06.2017. (Foto: Aud Marie Mollan)

Fosen

District 6 Fovsen-Njaarke has been exposed to close to 30 wind power projects, more than any other reindeer grazing district. The first development was at Bessakerfjellet. Reindeer herders at North Fosen decided to enter an agreement to accept the development in hopes of avoiding further developments. On the contrary they were subjected to many more, such as Harbakfjellet and Roan.

At South Fosen, the reindeer herders has always been against wind power development, especially concerning Storheia, an important winter pasture. In 2010, NVE granted license for four wind power plants at Fosen: Sørmarkfjellet, Roan, Kvenndalsfjellet and Storheia as well as two power line plants. All decisions were objected to the MPE, which upheld the licenses. The reindeer husbandry group at South Fosen has made a number of lawsuits. In June 2020 came a verdict by court, stating that the building was legal, but that the reindeer owners had rights to full economic compensation for Storheia, which was considered as lost for reindeer husbandry. The case is brought to attention of the UN Racial Discrimination Agency, CERD, who have asked for the building to stop until

they have closed the case. The authorities have not accepted this. The development has continued and the plant opened May 2020. Four of the power plants at Fosen and two further south constitute a combined project called Fosen Vind, which is Norway's largest wind power project, and the largest industrial development on land, at an estimated value of 11 billion NOK. Statkraft is now cooperating with Swiss shareholders.

Kvitfjell / Raudfjell

On Kvitfjellet and Raudfjellet, Kvaløya in Tromsø, are now beeing built one of Norway's largest wind power plants. The planning of Kvitfjell started in the 1990s. There was relatively little resistance, and the license was not appealed. In 2012, NVE also granted a license to Raudfjell, and then the resistance was far greater.

The initiative to built the power plant came from local interests, which later sold to German capital. A representative of the company is also chairman of the board of Norwea12. The energy is sold to aluminum producer Alcoa, with an export guarantee from GIEK13. Kvaløya (Sállir) is a year-round grazing for reindeer husbandry and the development area is a central winter grazing and calving area. In addition, there has also been work to get a smaller plant on Sandhaugen south of Raudfjellet. This was rejected by the OED in 2019.

Construction work is underway in the spring of 2020 and the developer will not respect the condition of stopping work during the calving period. There are also many others who have protested, and a Facebook group called "Stopp vindkraftraseringen på Kvaløya" (Stop the wind power chasing on Kvaløya) has great support.

Fálesrášša

Fálesrášša in Kvalsund (Fálesnuorri) is a summer pasture in the grazing district 21 Gearretnjárga. Wind power here will hit calving land, pasture, migration and airing areas. Behind the wind power plan stood Finnmark Kraft, with Finnmark Estate among the owners, in collaboration with Fred Olsen Renewables. The impact assessment was very poor and was based on claims that reindeer will adapt to the plant. After the NVE granted a license in 2013, the resistance increased. The reindeer herding youth in Gearretnjárga wrote debate papers and met directly with the Minister of Petroleum and Energy. Naturvernforbundet and the Sámi Parliament also became involved, and in 2015 the OED refused the license. Nevertheless, NVE in 2019 included Fálesrášša in the priority development area in the proposal for the National Framework for Wind Power.

Kalvvatnan

Fred Olsen Renewables planned a 40 km^2 wind farm on the border between Trøndelag and Nordland, in the calving and summer grazing area of the reindeer grazing districts Åarjel-Njaarke and Voengelh-Njaarke. The impact assessment was characterized by representatives of reindeer husbandry in the area as deficient and incorrect, and area management for reindeer husbandry objected, but NVE nevertheless granted a license. After that, opposition from Sámi organizations, environmental organizations and the South Sámi congregation increased. In particular, youth in the reindeer grazing district were active, and met with the UN Special Rapporteur on Indigenous issues.

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12 Norwea: Organisation of wind power companies in Norway.

13 GIEK = Garantiinstituttet for eksportkreditt (The Norwegian Export Credit Guarantee Agency)

Opponents of the wind power project placed great importance on Sámi language and culture. This put pressure on the OED to overturn the license decision, i.a. founded with the Convention on Political and Civil Rights.

Nevertheless, a new company later came and tried a new development plan, but was rejected by the grazing districts.

Davvi

Grenselandet AS14, with the Finnish oil company St1, has planned one of Europe's largest wind power plants in the middle of Norway's second largest non-intervention area, on the border between Lebesby and Tana. Finnmark Kraft took part in the beginning, but withdrew later.

The plan area is substantially in District 13 Lágesduottar, but will more or less also affect districts 9, 14 and 14A. Grenselandet AS submitted a message on Davvi Wind Park in 2017. There were 50 hearing statements, most negative, and there is a lot of resistance, especially in Deatnu/Tana and Kárášjohka/Karasjok municipalities. In Davvesiida/Lebesby, there is a more positive attitude towards wind power development. The Sámi Parliament has protested and Naturvernforbundet has prioritized the case. Despite protests from reindeer husbandry, the impact assessments were prepared by Multiconsult, with reindeer husbandry investigations by Naturrestaurering AS15 in collaboration with Samisk næringsforbund16. District 13 engaged Protect Sápmi17 to make its own investigation, and the two investigations stand in sharp contrast to each other in the depiction of today's reindeer herding and in the analysis of the expected effects of wind power.

Grenselandet AS has offered the grazing districts a large amount of money to enter into an agreement. They have managed to get an agreement with district 9, which will only be indirectly affected, but the other districts have rejected all offers.

In the proposal for the National Framework for the Wind Industry, this area was excluded, but after the framework was rejected, building in this area is more relevant again, especially with the construction of a new main power line through Northern Norway to Varangerbotn in the East. License application was submitted in 2019.

Øyfjellet

Øyfjell wind turbines with 400 MW and 70 turbines are planned in non-intervention nature in the Vesterfjellan at Mosjøen, Nordland county. Vesterfjellan was the pasture land of the Sámi pioneer Elsa Laula Renberg. The wind power plant will affect the Lomsdal-Visten National Park. The power plant will close the only possible relocation road for the district after the second possible road is destroyed by hydropower development. Within the

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14 Grenselandet AS is the name of at privatly owned company started just to exploit the wind power resources in this area. They have no other activity.

15 Naturrestaurering AS is the name of a company in Oslo, doing environmental assessments for builders. Their main message is that wind power does not hurt reindeers or reindeer husbandry.

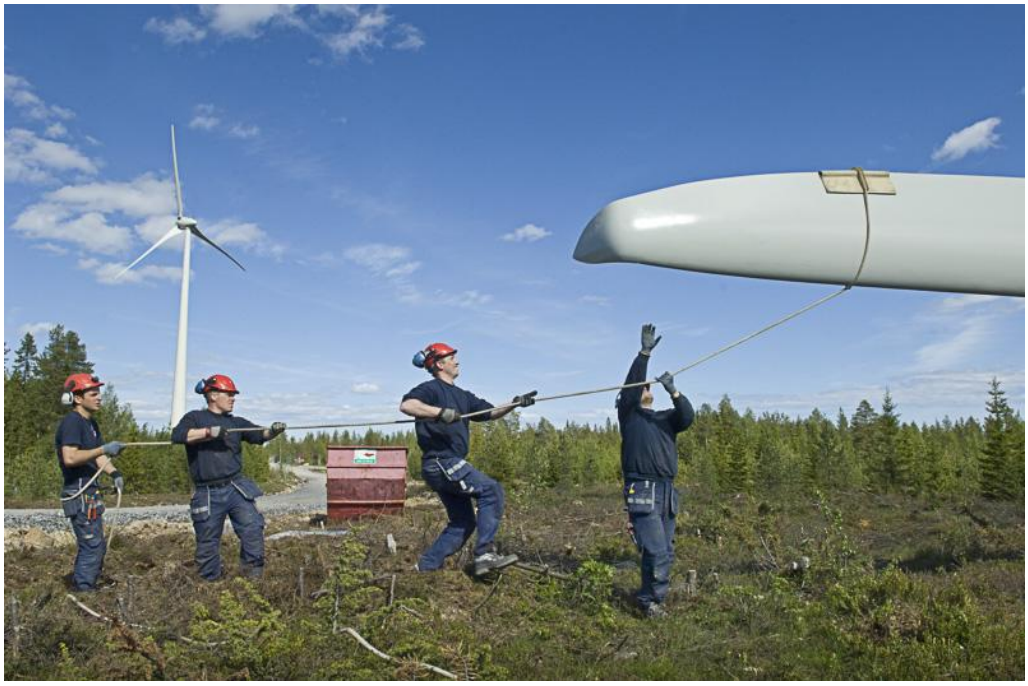
16 Samisk næringsforbund / Sámi ealáhussearvi (Sámi industries union) is not as the name looks like an association of all sámi industries, but a small association of a few smaller companies, and also the name of a personally owned consulting company.

17 Protect Sápmi is a foundation founded by the reindeer herders organisations in Norway and Sweden. It among others makes assessment concerning encroachment in reindeer herding areas.

reindeer grazing district of Jillen-Njaarke, a wind power plant was first planned east of Mosjøen, but this was rejected by the OED in 2014. The same year, a license was granted to Øyfjellet wind power plant, with changes in 2018. The MTA18 was approved in 2019 with certain conditions, but construction work started in the spring of 2020 even if the terms of agreement with reindeer husbandry are not fulfilled. Reindeer husbandry demanded a halt in construction work during relocations and calving, but OED gave permission. This has lead to big problems and probably loss of calves.

18 MTA: Miljø-, transport og anleggsplan (Plan for environment, transport and construction)

(C3) Wind power and reindeer husbandry in Sweden



German installers building wind power plant in Granberget, Robertsfors, Sweden.

(Photo: Erland Segerstedt)

The development of wind power in Norway and Sweden has taken place in close collaboration, among others on green certificates. Sweden has built and is building a lot of wind power on reindeer grazing land.

There are major contradictions between wind power companies and reindeer herding and disagreement about how wind power affects reindeer and reindeer herding.

Wind power has been developed on a large scale in Sweden over a decade. In 2019 production was almost 20 TWh or 3-4 times as much as in Norway, and doubling is expected by 2023. Most of the development is now in the north, mostly in reindeer grazing areas.

What will be Europe's largest wind power plant is under development in the Markbygden near Piteå, with 1100 turbines covering 450 km^2, in the area of the forest Sámi village[19] Östra Kikkejaur.

In Sweden, large wind power plants are regarded as environmentally hazardous activities, and therefore require permission from the county administrative board's environmental unit. This can be appealed to the Mark- och miljödomstolen (Land and Environmental Court). Permission from affected municipalities is also required. Almost a third of the applications are rejected, sometimes because of reindeer husbandry.'

Sweden has more research than Norway into the effects of wind power and reindeer. The results show that wind turbines in operation scare the reindeer and that roads are obstacles, but the effects of power lines are more uncertain. Since Swedish wind power developers cannot show to Swedish research that the reindeer get accustomed to wind power, they try to use Norwegian research.

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[19] Sámi village (In Swedish sameby, in Sámi čearru) is a unit in an economical and administrative unit in reindeer herding in Sweden. It partly equals reindeer herding district in Norway.

Malå Sámi village has five wind farms in its winter pasture and another three farms have been licensed. They say the result is much worse than they thought in advance. The Sámi town of Östra Kikkejaur has got half its winter pasture covered by wind turbines, and must therefore feed the reindeer far more than before. For the Sámi villages, the many wind power plans mean a lot of extra work. In 2020, the Swedish government will propose a consultation scheme with the Sámi Parliament on wind power development. The Sámi National Assembly says that the Sámi villages are an inferior party in dialogue with the builders.

(D1) Legislation and case processing

Case processing for wind power cases.
(Illustration: vindportalen.no)

1.Message

2.Hearing of message

3.Determination of impact assessment program

4.Application for construction license, with impact assessment

5.Hearing of application and impact assessment

6.Decision of construction licence (NVE)

7.Eventually complain to OED

Legislation and case processing for power cases under the Energy Act differs from development cases under the Planning and Building Act, e.g. mines:
- The municipality has no role in the planning process and has no authority to adopt either a planning program or a zoning plan.
- The environmental authorities have no role in the process.
- Construction license replaces both zoning plan, discharge permit and operating license.
While e.g. a mining plan can be rejected at six stages in the case processing, a wind power plan can not be rejected until the final licensing process.
- The energy administration has control from beginning to end. Licensing can only be appealed to MPE (OED).

Procedural process
Wind turbines of more than 10 MW must have a license from NVE.

Main steps in the process:

Initiative
Every registered company can take the initiative and prepare plans. Reindeer husbandry,

other users and nature conservation interests have at this stage no right to get or give information. Many of the premises for the development are laid here. The initiator can contact the rights holders and enter into agreements before the effects of the intervention are clarified.

Message
The developer sends a message to NVE, which sends this for consultation. The Sámi Parliament may require consultations. After the hearing, NVE determines the assessment program. NVE can not refuse a message, but must send for further processing.

Impact assessment
Impact assessment is carried out by those the developer wishes. They must have "relevant professional competence", but there are no criteria for this. There is no requirement for reindeer husbandry competence to study the consequences for reindeer husbandry. The developer wants a report that does not find problems that could hinder permission. Cumulative effects must be studied, but this is often not done.

The license application
Once the impact assessments have been completed, the developer can apply for a license. NVE arranges information meetings and sends applications for consultation. The Sámi Parliament may raise an objection or demand consultation with NVE. The license can be appealed to the MPE.

Detailed planning
After getting the license, the developer must make a detailed plan with an environmental, transport and construction plan. This must be approved by NVE, which will also supervise building and operation.

Closing
When wind power plants are exhausted, they should in principle be closed down, the plant removed and the landscape returned, but it is not certain that money will be set aside for this, and there is no guarantee that this will be done.

Developers and promoters want an even simpler and faster system for processing applications. Attempts of making a National Framework for wind power were abandoned in 2019. A change in the licensing process is now planned and a report to the Parliament (Stortinget) on wind power development is published in June 2020.

Laws that affect wind power development
- The Energy Act (main law).
- The Planning and Building Act (to a limited extent).
- The Biodiversity Act. Requires sustainable use and consideration for Sámi culture, but is little used in practice.
- The Reindeer Husbandry Act. No prohibition against encroachment, with the exception of tracking routes.
- Cultural Heritage Act. Ensures mapping, but does not prevent intervention.

Sami and indigenous peoples' law:
- ILO Convention 169 on Indigenous Peoples.
- UN Convention on Civil and Political Rights.

- UN Convention on the Elimination of All Forms of Racial Discrimination.
- UN Convention on Biological Diversity (CBD).
- § 108 of the Constitution.
- The Sámi Act.
- The Finnmark Act.
- Consultation scheme. (Proposal for legislation under consideration).

If the licensees do not voluntarily enter into an agreement with the developer, the State by NVE can expropriate for wind power development. The Expropriation Act states that it can be expropriated to wind turbines, but only on terms that "the intervention undoubtedly give more benefit than damage". But how to measure the benefit to investors against damage to reindeer husbandry and nature?

Who are actually a party or legal entity in reindeer husbandry? The only ones who can represent reindeer husbandry in intervention cases are those who themselves use the areas for reindeer husbandry. Reindeer husbandry can therefore not be represented by state bodies for reindeer husbandry management, nor by the Sámi Parliament. However, it is often unclear who is a party to a development case of reindeer grazing district, siida, siida part and individual reindeer owner.

Many laws apparently ensure consideration for nature and reindeer husbandry, but these are most often given little weight in administration and court proceedings.

(D2) Kunnskapsgrunnlaget

What interests does the research serve? NINA is an institute of Nature Research, while Cicero is an Institute for Climate Research. As the poster shows, Cicero is affiliated with WinWind, an EU project that will research how the wind power industry can overcome opposition to wind power development.

Decisions on wind power development have major consequences and therefore require a solid knowledge base.

Several laws and conventions, such as the Biodiversity Act and the Convention on Biological Diversity, state that in nature management, emphasis must be placed on both scientific and traditional and local knowledge. To what extent do developers, landowners, municipalities, NVE, OED and other affected parties have such a versatile knowledge base? Who presents the knowledge base for decisions and what interests do they serve?

When wind power development started in Norway, there was virtually no research on how this could affect reindeer husbandry. Research that was not relevant was used to defend development.

Both research and impact assessment on reindeer and wind power in Norway are now dominated by a small environment that conducts both research and assessment. Their conclusions that wind power is not harmful to reindeer husbandry are contrary both to the reindeer herders' experiences and to the rest of the Norwegian, Swedish and international research environment. Also within the administration, many are critical of the studies that are used as a basis for licenses.

NVE and wind power developers nevertheless rely on this contract research, which always concludes that reindeer do not avoid turbines and that interventions can be carried out safely.

Impact assessments are usually carried out without looking at the overall burden of intervention.

Methods used are
- Measurement of thickness and distribution of the cover of lichens or other vegetation
Measurement of the amount of faeces from reindeer
Observation of the reindeer's behavior during migration and driving
- Aerial photography
- GPS marking of reindeer
– Interviews with reindeer herders

Many of these methods give very uncertain results, but are still used and interpreted in the desired direction. Researchers and impact assessors often do not know Sámi language, have no experience with practical reindeer husbandry, and often have a bad relationship with reindeer herders.

The most widely used researcher on wind power and reindeer husbandry is Naturrestaurering AS, which is closely linked to Multiconsult and Norwea. They have been harshly criticized by reindeer herders and from other professional circles for a number of studies, including Kalvvatnan, Nygårdsfjellet, Kjøllefjord, Maurneset, Buheii. Also in other development cases, developers refer to the surveys of Nature Restoration as documentation that reindeer become accustomed to intervention and that reindeer husbandry does not suffer damage during development.

Several large consulting companies are members of the wind power industry organization Norwea. The same consultants are also used as premise providers for municipalities and counties.

In the research environment, there have been clear disagreements for several decades and researchers have testified against each other in lawsuits about the development of wind power in reindeer grazing areas.

The vast majority of research projects have been done by people without a reindeer husbandry background or other Sámi background. However, there are a few exceptions. Among them is Protect Sápmi, which is formed by Norwegian and Swedish reindeer husbandry organizations. They use qualified Sámi researchers and have made several studies on the order of reindeer grazing districts, but many are however critical to their strategy of resolving the conflicts with dialogue between the developer and reindeer husbandry.

In some cases, reindeer grazing districts have ordered their own studies, but these are rejected by developers and NVE.

(D3) The influencers

Influencers demonstrated against wind power plans outside Trønderenergi 13.05.2019. Behind the demonstration were a number of environmental organizations and Sámi organizations.
(Photo: Naturvernforbundet)

Both overall decisions on wind power development and licenses for certain wind power plants are influenced by a number of press groups. Who has been in favour of and against wind power development has largely changed over the last couple of decades.

In the 1980s, solar and wind power were the environmental movement's alternative to nuclear power and coal power. Gradually, there was more interest in wind power from both the state and commercial companies, and since the establishment of Enova in 2001, wind power development has been helped by state support schemes. From the beginning, the support schemes had the support of all political parties. The environmental foundation Zero was established in 2002 to promote wind power.

Sami organizations were also open to wind power, but demanded a comprehensive plan. Until after 2010, almost only some reindeer grazing districts said no to wind power development.

Around 2000, there were no environmental organizations that said no to wind power, gradually more of them became more skeptical, first out was Miljøvernforbundet (Green Warriors of Norway). Naturvernforbundet (The Norwegian Society for Nature Conservation / Friends of the Earth Norway) adopted a more critical attitude in 2013, but Natur og Ungdom (Nature and Youth) and WWF were still positive about wind power development.

Opposition has also increased in many parties, and there are divided views in all parties. Only Rødt (Red) is against further development of wind power on land. SV (Socialist Left Party) and MDG (Green Enviroment Party) have decisions against wind power in Sámi reindeer grazing areas, but these are not entirely clear. All other parties are supporters of wind power development, without reservations in relation to reindeer husbandry areas.

The resistance has also been expressed through local resistance groups and nationwide organizations such as La Naturen Leve and Motvind.

We have written to a number of organizations and institutions and asked them the following questions:
1. To what extent should wind power be developed in Norway? Where should it be and where should it not be built?
2. Should wind power be developed in reindeer grazing areas?
3. What has your organization / institution done to investigate the effects of wind power on reindeer husbandry? On what knowledge base is your position based?
4. In your opinion, is it legal to develop wind power in reindeer grazing areas even when reindeer husbandry opposes this? What legal assessments have you made of this?
5. Are mitigation measures for reindeer husbandry possible and if so how?
6. What role should reindeer husbandry's own organizations and bodies play in wind power development? Do you have any experience with or knowledge of direct dialogue between wind power and reindeer husbandry interests? If so, how are these experiences?
This is a short summary of their views, based on the answers we have received and other sources:

NORWEA - Advantages and disadvantages must be weighed and the authorities decide if to give license.
Zero - Wants development with the least possible consequences for reindeer husbandry. Up to the licensing authorities.
Naturvernforbundet - Consistent no to wind power in reindeer grazing areas
Nature and Youth - No wind power in reindeer grazing areas, otherwise in favour of wind power.
Miljøvernforbundet - No to all wind power development.
World Wilderness Fund - In favour of wind power, but requires consent for construction in indigenous areas.
Bellona - For wind power, no expertise in reindeer husbandry.
DNT[20] - Not against wind power, but must be on nature's terms. Common interest with reindeer husbandry in taking care of nature.
NSR[21] - Wind power development in reindeer husbandry areas is contrary to international law.
NRL - Reindeer husbandry must have the right to say no.
NVE - Wind power is a symbol of sustainable development.
NHO - Must accept encroachment on nature.
LO - Reindeer husbandry stands in the way of jobs.

[20] DNT = Den Norske Turistforening (The Norwegian Trekking Assotiation) is the biggest tourist organisazion in Norway.

[21] NSR = Norgga Sámiid Riikkasearvi / Norske Samers Riksforbund (Norwegian Saami Association) is the biggest Sámi organisation and has the biggest group in the Sámi Parliament.

A4. Conclutions and some questions

The development of wind power constitutes the largest interventions and alteration of nature in Norwegian history. The area which wind power transforms from natural areas to industrial areas is larger than the area of cities and villages in the country altogether.

For the 4/10 of the country where uncultivated nature are used for reindeer husbandry, this is also a hard blow for this industry, Sámi culture and language.

Following the overall laws and conventions for nature management, Sámi rights and indigenous rights this should not be possible. Thus, we have tried to find out how and why these projects are continued.

Grand words in the legislation

Norway's constitution says in §108: *"It is the state authority's responsibility to facilitate that the Sámi people can secure and develop its language, its culture and community."* Norway has ratified the UN conventions about civil and political rights, about biological diversity and against racial discrimination, as well as the ILO-convention about indigenous peoples, and joined UN's declaration about indigenous people's rights. These documents tells that indigenous peoples have a right to protection of their culture and the nature which is the base of the culture. These are commitments to which Norwegian authorities are both morally and legally bound.

Sámi demonstration against the building of the dam in Alta, 13.01.1981. Almost 40 years have passed, but the state still won't recognize Sámi people's rights to stop interventions in nature. (Photo: Lars M. Hjorthol)

The Nature Diversity Act says in §1: *"The purpose of the law is that nature with its many landscapes and biological and geological diversity and ecological processes will be taken care of by sustainable use and protection, also so that it provides a basis for peoples activities, culture, health and wellbeing, now and in the future, also as a basis for Sámi culture."* And onwards in §8: *"The authorities shall emphasize the knowledge based on generations of experience through use of and interaction with nature, including this Sámi use, and that can contribute to sustainable use and protection of the diversity of nature."*

Our review of wind power cases, both in and outside reindeer herding districts, show that these decisions in most cases won't be taken seriously in the administrative procedures. 40 years after the fight against the damming of the Alta-Guovdageaidnu waterways the Sámi people's rights to land and water has only been strengthened on paper, but not in practice. Following these rules even the planning of wind power would be illegal in reindeer herding areas. Never the less at least a hundred of plans for wind power have been made, and just under a third of these are already built or given concessions.

Black and green profit

Energy in today's society is a profitable commodity in many ways. You can produce, transport and install means of production like oil platforms, water and wind turbines. You can also sell gasoline, diesel, gas, coal or electricity to the consumers. One can speculate on the oil exchange or energy exchange, buy and sell energy companies and sell consulting to energy producers. From an economic point of view there is no difference if you invest in oil, coal power plant or wind power. Many companies and investors also invest both in oil and wind power, like the oil company St1, who are now planning the largest wind power project in Finnmark.

While large parts of the environmental movement will stop consumption growth, Zero's alternative is "green growth»

However there is still a big difference between the terms and regulations for «fossil» and «renewable» energy-production. Climate change as a consequence of fossil energy have

branded fossil production as «black», while the alternatives are labelled «renewable» and «green». Because there have been an international investment in the transition from fossil to «renewable» energy it has been politically possible to give those who want to invest in wind power, water power and sun power economic, political and administrative benefits. Wind power and other «renewable» energy sources get subsidies payed by the state or the consumers through government orders. This production get a great political benevolence, borne from the idea that the more we build, the more we contribute to save the world from global warming. This becomes such an important task that one has to facilitate a quick and effective proceedings and set aside nature and other industries. «We all have to sacrifice for the climate», as it was said by a director in the previously mentioned oil company, that now also invest in wind power.

For those investing in wind power it is obvious that, as it is with all other capitalistic investment, own profits are the most important. But it is the myth about «the green shift» that makes it possible that makes it possible for them to have their investments politically prioritized.

The myth about the green shift

The use of fossil fuels have since the industrial revolution led to an increased level of CO_2 in the atmosphere. From the end of the 18th century some researchers have showed that this leads to global warming, but it took some time before this was widely recognized and taken seriously by national authorities and international bodies. In 1988 UN's climate panel (IPCC) was established and gradually a number of international conferences were arranged to lower greenhouse gas emissions. It became clear that we no longer could continue to release more CO_2 and other gases contributing to global warming, and that alternatives exist. This is when wind power came in to the picture, an energy source possible for almost any country to take into use. In the beginning it was especially the environmental movement driving forth the investment in wind power. The climate was seen at the most prominent problem in the world , and everything else was given lower priority. Due to this there was less attention given to other pollution and to interventions reducing area for wild animal and plant species along with nature based industries.

The main focus of the climate saving work became to produce more renewable electricity for vehicles, heating and industries as a replacement for fossil fuel, while parts of the fossil fuels were replaced with biomass and biodiesel. All new production of hydropower, wind power, sun power and biofuel was given the status of climate action, without paying much attention to the effects these new industries affected the climate or natural areas, or asking questions about how all this new energy was used. A numerous organizations and institutions both in Norway and other countries were established, working for wind power, often in collaboration with companies investing in this industries. Because both wind turbines, power cables and electrical vehicles require minerals in large quantities, the extraction of these minerals were no longer seen as environmental problems, but environmental measures, and the minerals were seen as «green». The climate foundation Zero, were preaching for «the importance of minerals for the green shift» at the mineral industry conference accompanied by enthusiastic applause from representatives from the attending mining companies. «The green shift» became a one sided focus dealing only with one environmental issue, leading not only to the disregard of other environmental issues, but bat also applauding their increase. That made it politically possible to grant major intervention in areas previously untouched by these kind of

projects - and in reindeer herding districts. Because they reportedly did it for the climate and the future of the world.

Solutions through «dialogue»?

The cases we have reviewed in this report show that all construction of wind power in reindeer herding areas clearly have been damaging for an industry and a culture already under heavy pressure. An industry that cannot sustain itself in the case of further disturbances on their grazing lands. The so called mitigating actions offered can, at its best, reduce damage in short terms, on the long run however, the basis for reindeer herding will be strongly reduced or disappear. When a certain area has been targeted by an engineering company for wind power industries they often contact the affected reindeer herders to attain «dialogue» aiming for an agreement. These dialogues are never on equal terms, they take place between one side aiming to take over the other part's livelihood, with enough money and the support of the state, against a side that feel pressured and who barely has the means to defend itself. The side that is sacrificed will have to pay large sums and will only get these covered if they give in and accept the physical development. There are cases where the reindeer industries have won the case and applications for the building of wind power have been denied, but the district have been left with over a million Norwegian kroner in expenses to cover the defense against the planned intervention. The result can be that if the physical development doesn't break the reindeer industry, the legal costs will.

This is a relationship between abuser and victim, and it is absurd to demand that the victim should take part in a dialogue it is destined to loose. The wind power companies have bought the expertise they need: lawyers, economists, engineers and scientists. Knowledge about reindeer herding is not needed, because they only have to convince the bureaucrats and politicians who neither have that knowledge. Administration will always happen on the premises of the Norwegian power apparatus. For the reindeer herders and others affected by the plans of wind power development, private building companies and state authorities are perceived as the same counterpart. It is a meeting between those with capital and power and those without it.

Most of the around 80 reindeer herding districts have been subject to interventions in the form of power development, mining, military facilities, cabin fields or equivalent projects. When more plans about new interventions show up, the reindeer herders never know if this is a realistic plan that will destroy the reindeer pastures, or parts of it, or if it is an empty threat that eventually will pass. Many have been burned by what they perceived as empty threats, that later turned out to be realized. Therefore all plans have to be taken seriously. That means familiarizing themselves with a range of complicated documents, meeting with builders and case processing authorities, write hearings and protests, make and present maps illustrating how they use their areas, and often hiring legal expertise. This is how plans about physical interventions becomes a huge burden to reindeer herding industries. Builders and management take it for granted that proceedings and communication will happen in their own language, Norwegian. For reindeer herding Sámi who think and express themselves best in Sámi language, especially when it comes to questions about reindeer herding, this means that they have to lead the fight within a «foreign» culture» in another language than their mother tongue, where their opponents have all the advantages. Often the builders, their consultancies and representatives of the administration have minimal knowledge about Sámi culture, language and reindeer

herding industries, it is assumed that the reindeer herders will be able to operate on an equal footing in the linguistic and cultural premises of the Norwegian bureaucracy. Several of the reindeer herders we communicated with during the work of this report say that they certainly advise against entering into private agreements with builders. And from different areas we have heard about builders who have made deals or tried to make deals with a reindeer herding district where several districts have been affected, or with certain siidas or siida-shares. This is how they have managed to split the districts, setting the herders up against each other, feeding old conflicts or creating new ones.

A common argument used by the builders is that reindeer herders have to make a deal directly with the builder, or they will be expropriated and will therefore receive far less compensation or none at all. There are several examples showing that in the case of power developmental projects some of the affected have been willing to accept a deal while others have not. Nevertheless the case have often been that those willing to accept a deal have ended up receiving less than those unwilling to accept a deal.

The reason for these attempts at «dialogue» are not for the sake of reindeer husbandry, but to try and split and neutralize the resistance. There has been several cases where deals have been made in secret and/or where they have clauses which commits the reindeer owners not to counteract the power development in any way. This seems to be a collective strategy used by the builders. We question whether this is legal. As long as these deals are made under pressure and on false terms, it has to be possible to have the agreements rejected.

Example of Environmental Impact Accessment:
"Concequences for Natural Diversity by building
Davvi Wind Power Plant in Finnmark"

Consultants – the developers' extended arm

To be able to defend the establishment of wind power and other interventions the builders and authorities need legal, political and professional credentials. On one side they need to show how important the project is and on the other how small the effects on nature and local communities will be, so that NVE/OED can use their usual argument promoting the societal advantages overshadowing the disadvantages. This requires an impact assessment. The government's official webpage says that *«the purpose of the impact assessment is to clarify he consequences of plans and measures that may significantly impact environment and society. The treatment under cases under the provision shall help elucidate effects on society and environment and take into account when planning an action and when one should assess if a project should be put into action.»* That's the theory. However, the cancellation of a project in process is never an acceptable option for a builder, who already have invested big money in the planning. It is therefore also not relevant for the consulting companies that are hired to carry out the statutory investigation. Because the findings of great natural areas worth protecting and the damaging effects on other industries can lead to cancellation, the consultants job is to find **as little as possible**, or to find just enough to provide a survey, but not enough to hinder the concession.

There are many stories told from several reindeer herding districts about impact assessments that are very insufficient or incorrect. This has been pointed out time and time again in consultation statements, also from public bodies. NVE have on multiple occasions admitted that the reports are poor, but have still given concessions without demanding any further reports.

In connection with reindeer herding industries the task is first and foremost to «prove» that planned interventions won't create serious issues for the reindeer herding industry, and that the issues that can't be denied, will be solved with mitigating measures and a good dialogue. Often it is the same people who first «researched» these issues who later will take on these consulting assignments referring back to their own research reports.

Learning from past mistakes?

Wind power investment have been driven forward by the governments of the pasts decades, without any visible objections from any of the seven parties taking part in these governments. During the establishment of the wind power industry this initiative enjoyed the full support from all parties and environmental organizations. The responsibility lies on the environmental movement and the «environmental parties» who largely have cheered the wind power forward as green options alternatives to fossil fuels. Jens Stoltenberg was prime minister in the era when wind power was pushed forward, and among the few who were critical of it. In his autobiography he wrote about the wind power investment: *«A community of interest between industry, industry organizations and parts of the environmental movement (..) pushes forward (these) decisions, and it is almost impossible to stand up against the entirety and the societies collective interest».*

Without support from the environmental movement the wind power investment would almost be impossible, and it would not be such a pressure against reindeer herding to give way for «green» energy. A chronicle published 27.09.2012, signed by Zero, *Natur og ungdom* (Nature and youth), Norwea and *Småkraftforeninga* (small hydro union) show

how far this collaboration went. Here it says in the end: *«Norwegian renewable energy has to reach its full potential, at present that is the most important»*. The chronicle did not contain any reservations about keeping valuable natural areas from water and wind power development.

Only in the recent years, when destruction of nature caused by wind power has gone so far and become impossible to overlook, the environmental organizations have started demanding that wind power is not to be built in «untouched» natural areas. Some have chosen to stop some of the worst projects and concentrate on them. But while fighting a few of these constructions, about a dozen new ones are built and planned. Sámi organizations have, unlike environmental organizations, not been working actively for wind power, but they have formerly been quite pliable and opened for «dialogue» with developmental interests. Many have requested a more clear cut stance both from the Sámi organizations NRL, NSR and from the Sámi parliament.

As our survey shows, these attitudes have become more prominent with time, but also the Sámi organizations came quite late into the discussion, especially regarding the irrevocable interventions already made. And the concessions already given, seemingly impossible to avert. Some say we shouldn't dig into the past, but keep our eyes on the horizon. We still think that «before we can go forward we need to go backwards» and that many organizations will need a critical assessment, evaluating former stances and practices regarding wind power issues.

Death blow for a viable industry

Why do we care so much about the question about reindeer herding and wind power? Isn't the reindeer herding a dying industry that in will disappear nevertheless and that can be sacrificed ? The idea about reindeer herding as a dying industry and way of life has been argued by the Norwegian government amongst others at least since the end of the 19th century up to the 1970s. This period has for the reindeer herding industry been referred to as «the liquidation period». During this period the official politics was that the in any conflicts with farming and other industries, reindeer herding industry had to give way. This came up in a number of court decisions, all the way up to the Supreme Court. Barely any industries in the country have been subjected to this degree of negative treatment from the government. This period coincided largely with the general norwegianization politics towards Sámi and Kven.

Despite this reindeer herding industry in most of the original reindeer herding area survived, and where it disappeared locally, it was taken back up by relocated reindeer herders from other areas. From the 1960ies the reindeer herding industry has been through large scale modernization and managed to adapt new modes of operation and the need for new knowledge and skills. Both reindeer meat and other products from reindeer herding industries is sought after in the market. There have also been an increased interests in Sámi culture, both among the Norwegian population and foreign tourists. This means that there are many besides the people working in the reindeer herding industries who are interested and engaged when it comes to the continuation of reindeer herding industry and culture.

Even if the reindeer herding industry has been through and still goes through a range of problems both with state control and demands, predators, climate change and different encroachment on nature, the reindeer husbandry has survived, and is a viable industry without recruitment problems. There is a lot of interest among the younger

generations for reindeer herding as industry, culture and knowledge carrier, and there are often more people ready to take over than is needed. The reindeer herding industry has also managed to avoid the high threshold that often hinders entrepreneurs from entering primary sectors, like fishing and milk quotas. It has been possible for youth to take over without being rich or taking up expensive loans.

The biggest challenge for reindeer herding today is the many small and big area interventions, that both reduces grazing lands and hinders necessary relocations throughout the year. There are many types of area interventions, but wind power development is the biggest threat to reindeer herding ever. The conclusion is that what the wind power champions now is trying to attain is the destruction of a viable industry and a viable culture.

A part of something bigger

This report focuses on the wind power development that is taking place and is planned in areas used for reindeer husbandry. This is not an isolated case, but is connected to energy policy, climate policy, reindeer herding policy and Sámi politics in Norway with similar questions internationally. The areas that are now being destroyed for reindeer herding, are also being destroyed for outdoor activities, harvesting and tourism in the area. The basis for animal and plant life in the area is also getting destroyed. In the same way wind power development is destroying nature and landscape outside reindeer herding areas.

New actors are coming in and, with the blessing of the state, taking over the rights to use of the land, rights that thus are taken from those who have used the areas from time immemorial.

Naturvernforbundet stated on the national meeting in 2011 that mining with ocean dumping of tailings is environmental crime. This report show that the same can be said about wind power development, both in reindeer herding areas and Norwegian nature.

Wind power development in reindeer herding areas is a part is a part of the Norwegian reindeer herding politics. The reindeer herding administration has since the beginning been taking part in the facilitation for development, and we have not registered any messages of concern from this management saying that the natural foundation for reindeer herding industries are threatened. A consistent feature of the reindeer herding politics is that the authorities doesn't trust those living in and of reindeer herding. Their knowledge is rejected and overruled by representatives from the majority community, without further knowledge about practical reindeer herding.

The pervasive mistrust to reindeer herding Sámi is seen in case after case, from the determination of numbers of reindeer to compensation in the case of attacks by predators. From 18th century to the 1970s the official Norwegian politics was that reindeer industries had to give way in any conflict of interest with other industries. The case of wind power shows that this is still happening.

If we look outside of Norway, we can see that indigenous people, environmentalists and others are fighting to conserve that last pockets of authentic nature. Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services showed us how serious the worlds condition has become both for the diminishing and burning forests, for birds and other species, and especially for the livelihood and cultures of people living in nature. We hope this report will be a contribution to the common fight to save the nature that still is left on earth.

Sources

The sources for this report are mainly written in Norwegian and partly in Sámi or Swedish language. They can be found in the Norwegian language version of the report, part A.