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Green transformation or green colonialism – contrasting perspectives on how to address the climate and nature crisis

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Sammendrag

Formålet med denne artikkelen er å identifisere hvordan ulike perspektiver som kommer til uttrykk i debatten om det grønne skiftet kan forstås og begrunnes i Norge og Sverige, med særlig fokus på arealbruk, basert på offisielle uttalelser i offentlige dokumenter og uttalelser og meninger i media. Det antas at disse perspektivene kan knyttes til grunnleggende verdier som for eksempel antroposentrisme eller økosentrisme. Gitt at ulike perspektiver på arealbruk kan identifiseres, identifiserer artikkelen også hvilke typer politiske virkemidler som ifølge litteraturen har potensial til å bygge bro mellom de ulike perspektivene. Litteraturen anerkjenner både tradisjonelle politiske virkemidler (regulatoriske, økonomiske og informative), inkludert fysisk planlegging, men foreslår også at man bør teste ut mer innovative virkemidler innen både økonomiske insentiver og informasjonsbaserte og frivillige virkemidler for å dempe arealbrukskonflikter i forbindelse med det grønne skiftet.

Nøkkelord: transformasjon, urfolk, miljøverdier, miljøpolitiske virkemidler

Abstract

The aim of this paper is to, based on official statements in public documents as well as statements and opinions in media, identify how different perspectives that appear in the debate about the green transformation can be understood and justified in Norway and Sweden with a specific focus on land use. It is assumed that these perspectives can be linked to fundamental values such as for example anthropocentrism or ecocentrism. Given that different perspectives on land use can be identified, the paper also identify what type of policy instruments the literature suggests has a potential to bridge the different perspectives. The literature acknowledges traditional policy instruments (regulatory, economic and informative) including spatial planning, but also suggest testing more innovative policy instruments within the realm of economic incentives, information, and voluntary instruments, to mitigate land use conflicts in the context of green transformation.

Key words: transformation, Indigenous peoples, environmental values, policy instruments

"White man came across the sea
He brought us pain and misery
He killed our tribes, he killed our creed
He took our game for his own need
We fought him hard, we fought him well
Out on the plains we gave him hell
But many came, too much for Cree
Oh, will we ever be set free?"
Run to the hills, Iron Maiden

Introduction

The famous song «Run to the Hills» by the metal band Iron Maiden caused some discussion when it was released. How could the content be interpreted? The song which is about the Europeans arriving to North America include three different perspectives on the colonialisation process. The first verse, cited above, is from the point of view of the First nations. The second verse ("Chasing the redskins back to their holes, fighting them at their own game") tells a story from the colonisers, or more specifically the soldier's perspective, while the last verse ("Selling them whiskey and taking their gold, enslaving the young and destroying the old") is told from what can be understood as a neutral third-person perspective.

The song's lyrics departs from what is traditionally defined as external – or blue water - colonialisation. This form of colonialisation which involves the territorial domination exerted by for example European powers over non-European peoples is, however, considered to be a rather narrow definition of colonisation. Internal colonialism, which pertains to the relationships of exploitation and domination between ethnically or culturally diverse groups within a single sovereign territory closely mirrors external colonisation, essentially representing the same process, differing only in terms of location (for an overview of the concepts see Reimerson 2013). Regardless of the specific definitions, Iron Maiden's lyrics offers an interesting relief to the contemporary challenges of the identified need for societal transformation, i.e., fundamental, systemic, non-linear changes in the society (Linnér & Wibeck 2020; 2021) to handle the twin crisis of climate change and biodiversity loss.

On the one hand these challenges, which often include novel forms of land use, are increasingly referred to by indigenous peoples and local communities as a form of green colonialisation (cf. Monet 2023), and as in the song lyrics, considered to bring pain and misery to the communities. On the other hand, the urgent need for transformation and what it entails in terms of energy and mobility transitions, based on large-scale "green" projects like windmill farms, solar parks, and gigafactories developing green steel, is considered by their proponents as imperative in the fight against global climate change (Kronvall 2023). Therefore, and in a similar vein as in verse two of Iron Maidens song, nothing can be allowed to stand in the way of these projects.

Despite the dominant transformation discourse, protests, which challenge the implementation or maybe rather the justification of the implementation of the UN Sustainable Development Goals, but also the Paris Agreement and the recently adopted Kunming-Montreal Global Biodiversity Framework, seem to be increasing in scale and scope. We can see them play out on the streets of Paris (yellow west movement) and on the streets of Oslo (protests on the international law offence by the Norwegian government), but also in the Norwegian and Swedish outfields (protest linked to individual projects such as windmill establishment at Kalvvatn or a mine in Gallok).

Although the reasons can vary, the dichotomization of the debate on how land should or could be used – but also to whom the land belongs – is not new. However, the term "green colonialisation" used to define how the rights and well-being of indigenous or local communities was impacted in the pursuit of conservation goals (cf. Kumar 2010). In the contemporary debate, it is increasingly used to also include critical perspectives regarding policies that, under the guise of development, involves promoting and expanding practices like resource extraction and infrastructural development that implicitly rely on increased energy consumption.

Hence, these practices which are often justified using normative terms such as 'transformation', 'transition,' 'clean,' and 'renewable' are often questioned or challenged by for example indigenous peoples or rural communities perceiving themselves to be controlled by ruling (urban) elites (Normann 2021). It is reasonable to assume that these different perspectives are based on fundamental values related to land use, but also, by extension, to the role of land as public, private, or common and how the climate and nature crisis can (best?) be met.

However, just as in the lyrics in Run to the Hills, it is possible to identify yet a third, and what is assumed to be a neutral perspective, in the debate. If we are a bit creative, we can pretend that there are actors e.g., researcher, who are trying to look at the problem of this dichotomisation from a critical perspective to examine potential alternative solutions addressing the concerns about the future existing on both sides of the divide, trying to bridge the identified gap. Even if researchers also tend to or risk being associated with one side or the other of the debate just by discussing the challenges, there is reason to at least try to identify possible solutions that could potentially remedy the gap.

Hence the aim of this paper is, based on official statements in public documents as well as positions in media, to identify how different perspectives that appear in the debate about the green transformation can be understood and justified. It is assumed that these perspectives can be linked to fundamental values such as for example anthropocentrism or ecocentrism. Although the discussion about the green transformation and its implications is global, the geographical focus in this text is Sápmi, the settlement area of the only recognized indigenous people in Europe. This land area has for a long time been used by different local communities who still largely use the land for grazing (in Norway) in the so-called outfields, but also for hunting and fishing. Simultaneously, this land has been acknowledged for reindeer husbandry in both countries, in national legislation but also under international conventions such as for example the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP).
The remainder of the text will therefore first describe the values that we can assume underlie different positions. The rest of the text is based on each of the three perspectives identified in Iron Maiden's lyrics.

Fundamental values and land use

In the face of pressing environmental challenges, two philosophical frameworks; ecocentrism and anthropocentrism, have come to dominate the debate about the environment, and hence, they have played an important role in shaping our perspectives on natural resources and land use (Taylor 2005). While ecocentrism is a worldview that places the environment at the center of ethical and moral considerations and recognizes humans to be but one part of the intricate web of life, anthropocentrism, a perspective rooted in human-centered values, prioritizes human interests over those of the environment and other species (Thompson & Barton 1994). Hence, the former focuses on the natural world with humans as an integrated part, recognizing intrinsic values of ecosystems and the biological and physical elements that they comprise. The latter focuses on humans, where values associated with nature primarily are considered to be instrumental, meaning that it is justifiable to exploit nature for the benefit of humankind.

Although these two concepts should be seen as ideal types, they mark the debates about the environment and supposedly also the debate about the green transformation. The instrumental-intrinsic value divide is for example expressed in the discussion on how, or rather to what extent, the land should or could be used for different purposes, such as energy development, food production or recreation and biodiversity protection. One example is to what extent the land can be considered a production landscape that could or should be used for human purposes, or if it has intrinsic values where the landscape should be protected from people and, at most, provide areas that people can visit to improve their well-being. Hence, we can assume that the perspectives on transformation can be rather different depending on what perspective the debate or argument is based on.

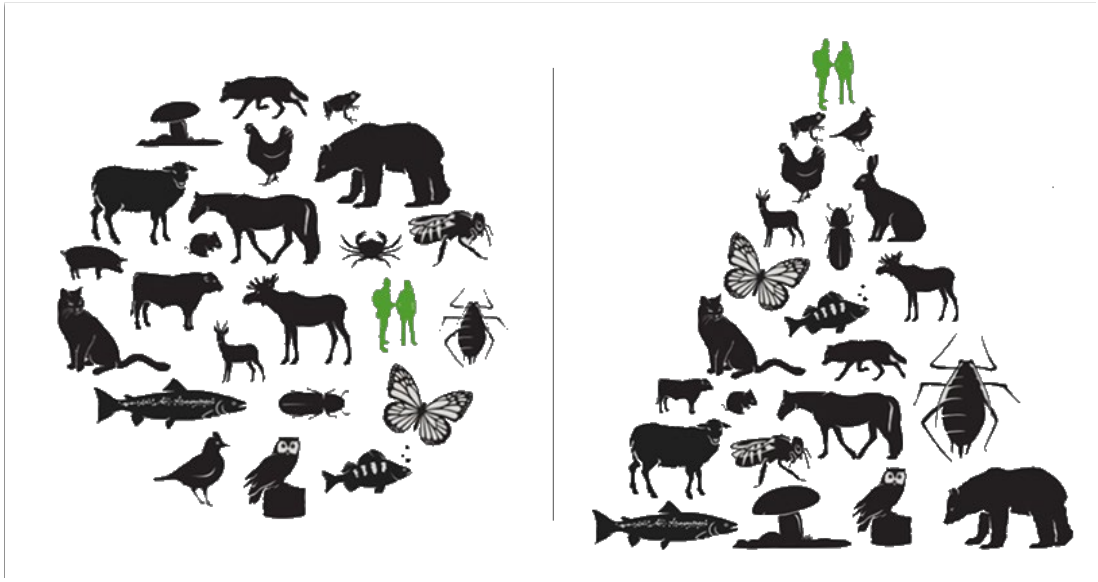

Figure 1: A schematic illustration of Ecocentrism (to the left) and Antropocentrism (to the right) that appears in a variety of forms in the literature. It is unclear where or when the illustration first appeared, but this is developed for the purpose of communication within the research program Future Forests, financed by Mistra (https://www.slu.se/centrumbildningar-och-projekt/future-forests/).

Ecocentrism is, however, also assumed to include what sometimes is defined as Mother Earth values, i.e., world views rooted in indigenous worldviews and traditions (Washington et al. 2017). However, the wide variety of indigenous cultures also reflect a variety of different worldviews, although many of the documented worldviews such as the concept of "Pachamama" in Andean cultures, for instance, embodies this reverence for the Earth as a mother figure (Mamani-Bernabé 2015). Mother Earth values underscore the need for a transformation that respects nature's inherent wisdom and power. They call for sustainable practices that mirror the harmonious relationship indigenous peoples have maintained with the Earth for generations (IPBES 2018; 2019). In a similar way Máttaráhkká is the mother goddess in Sami religion. The name is formed from the two Sami words "ahka"/"akka" – meaning old woman, wife, or grandmother; and "Mattar" meaning earth, roots or origin (Bäckman 1984).

With the variety of world views as point of departure, the rather complex and dynamic system of reindeer husbandry does not really allow itself to be captured within the intrinsic-instrumental dichotomy (e.g. Johnsen 2022). An alternative way of illustrating a worldview is depicted in the "Model for sustainable reindeer husbandry rooted in the practical knowledge of Sami reindeer herders", developed by a research group at the Sami University, the International Center for Reindeer Husbandry and Norway's Environment and life sciences University in the project Dávggas (see Sara 2015; Eira et al. 2016; Johnsen et al. 2022).

The model, consists of nine different, connected foundations - vuođđu - on which reindeer husbandry bases its future. In my translation these are 1) The people/vuođđoolbmot; 2) The Siida foundation/siidavuođđu, 3) The foundation of understanding/vuođđoipmardus; 4) The knowledge foundation/máhttovuođđu, 5) The reindeer herd foundation/eallovuođđu 6) The resource foundation/birgenvuođđu, 7) Household foundation/báikevuođđu, 8) The legal foundation/riektevuođđu, 9) The reindeer mark foundation/mearkavuođđu.

The model forming a circle illustrates that if one of the foundations is affected, it will affect the other foundations. In a report on the impact of a windmill park towards a reindeer herding district in Norway, the authors (Valio et al. 2019) describe the interrelated aspects of the model and how they impact each other like a domino or a chain reaction, where one event sets off a series of similar, related, or connected events. The loss of grazing areas due to land encroachment will have both direct and indirect consequences, with both short-term and long-term effects on the seasonal pastures, which in turn impact upon the reindeer herd, further affecting the finances of the individual reindeer owners and the district's workforce, and so forth.

While ecocentrism asserts its inclusivity towards humans, it frequently manifests as the safeguarding of nature from human interference. This is in stark contrast to the perspective represented in the model for sustainable reindeer husbandry, where there is no distinction between nature and culture, but rather a strong interdependence between humans, including knowledge and traditional practices, animals, and the nature. Hence, a common argument put forward by reindeer herders in discussions and negotiations about land use is that the most important is for the reindeer to have “betesro”, that is, to be able to graze peacefully and without disturbances (Fohringer et al. 2021). From the perspective of sustainable reindeer husbandry, this can be understood in terms of the chain reaction of encroachments leading to the degradation of pastures affecting animals as well as humans. Similar perspectives can certainly be found among farmers who depend on pastures in the outfields to provide food for their animals. However, more research would be needed to understand how the relationship between humans, animals and nature has developed and if there are similarities or differences between different actors, such as reindeer herders and sheep farmers, in local communities.

In sum, there appears to be a qualitative difference, not only between anthropocentrism and ecocentrism, but also between ecocentrism and, in this case, the idea of sustainable reindeer husbandry. In general, it is reasonable to assume that these differences impact upon the discussion about the societal transformation, and more specifically on what role land and the outfields should or could play in relation to the ongoing transformation. This in turn affects how we view these areas and the resources available there, but also how they should be governed. The following sections identify different official positions regarding the green transition and as mentioned in the introduction, Iron Maiden's song – Run to the Hills – is used as an inspiration for sorting and categorising the different perspectives on the transformation.

Green colonialism and the renewable dystopia

During the 22nd United Nations Permanent Forum on Indigenous Issues in April 2023, global Indigenous leaders raised concerns about the climate strategies pursued by Western countries. The leaders raised concerns of the potential but also ongoing exploitation of Indigenous territories, resources, and communities. The Forum stated that threats to Indigenous Peoples’ rights have increased during the latest years, the main areas of concern including the development of mega-projects in Indigenous territories and “conservation projects and green economy projects, without the consent of the Indigenous People, leading to displacement, dispossession and violence; and systematic discrimination against Indigenous Peoples” (UN 2023).

A study by Owen et al. (2023) confirms these concerns, indicating that the increasing demand for energy transition minerals (ETMs) to facilitate the transition to clean energy is placing exceptional pressure on land recognized as indigenous people's territory under the UNDRIP, but also on farmland under the United Nations Declaration on the Rights of Peasants and Other People Working in Rural Areas (UNDROP). The study reveals that 54 % of ETM projects are situated on or near Indigenous peoples' lands, and for farmland, the number is 33 %. This example underscores the challenging trade-offs between resource extraction and environmental and social values, with detrimental effects on indigenous land.

Apart from mineral mining, other extractive industries, like windmill parks, infrastructure development, urban sprawl, and recreational projects, also present significant challenges adding to the cumulative impact on traditional land (Fohringer et al. 2021; Horstkotte et al. 2022; Stoessel et al. 2022). As democratic processes tend to exclude indigenous perspectives, expensive legal battles become the last recourse for the Sami. One of the most recent examples in Norway is the case involving the Fosen peninsula, and Europe’s largest onshore wind power complex that was built, despite an ongoing court case. The court case concerned the validity of the Ministry of Petroleum and Energy’s decision from 2013 on expropriation and granting a licence for establishing the wind power complex in a reindeer herding community. Despite the fact that the Supreme Court unanimously found a violation of the reindeer herders’ right to partake in their own culture and consequently that the licence and expropriation decisions were invalid the windmill power complex is still there (for more details see Hauge 2024, this issue). The project, which repeatedly has been labelled as a form of "green colonialism," due to its harmful impact on Sami and Indigenous lands, also underscore the failure of human rights conventions in national law to safeguard the Sami rights to land (Normann 2021).

Similar conclusions have been drawn by studies of the process of establishing a mine in Gállok, in the municipality of Jokkmokk, Sweden. The debate has been identified as one of the most nationally debated environmental movements in Swedish history due to the struggle over profound causes of inclusion and representation in parallel to the destruction of nature (Persson et al. 2017).

Furthermore, decision by the Court in the case of Fosen addressing the need for satisfactory remedy measures rather than calling for a halt in the wind farm operations tend to reinforce the trend of courts and governments as well as industries to prioritize development and resource extraction over indigenous rights. Also, in relation to Gállok there has been discussions on compensating loss of land. Hence, the evidence from previous research, court cases and governmental policies show that the two countries are largely excluding human and indigenous rights from the transformation agenda. For example, despite having recognised the rights of the Sami, both as a people and as an indigenous people, Norway's as well as Sweden's commitment to for example the Paris Climate Agreement from February 2020 tend to omit the importance of consulting Indigenous communities or to take their rights into consideration when developing climate related policies.

In an opinion piece by Fjellheim and Carl (2020), Silje Karine Muotka, at that time a member of the governing council at Sámediggi, the Saami Parliament of Norway, now the Sámediggi president, is referred to while she explains how reindeer herding is not just an economic endeavor, but a way of life, representing cultural heritage, family, identity, and a profound connection to the land. The opinion piece acknowledges the vital interconnectedness between humans, the land, waters, and "non-human relatives" as pivotal to Saami worldviews and ancestral traditions. This is well in line with the philosophy of sustainable reindeer husbandry described above (Eira et al. 2016; Sara 2015). According to Fjellheim and Carl (2020), this interconnectedness should serve as a guiding principle for the quest for novel and more impactful solutions to present global challenges such as for example sustainable food production and community resilience. Hence, the key to a green future shouldn't, in the view of the authors, rest exclusively in the hands of renewable energy companies motivated by profit. Instead, decision-making should involve collaboration with Indigenous communities, who have been safeguarding and nurturing the environments for centuries.

Considering the portrayal of a renewable dystopia by representatives of indigenous communities worldwide, as well as in Norway and Sweden, a pertinent inquiry arises: do conditions in Norway and Sweden truly reflect the severity depicted in the imagery? The two countries usually have a high profile in terms of protection of human rights, but also in environmental and climate politics. The question is therefore whether these are isolated events or rather a pattern that can be defined under the heading of green colonialism?

The promise of a Green transformation that leaves no one behind

In an open letter signed by the world leaders on the Paris Summit for a new global financial pact, the transition to a net zero world was presented as an opportunity based on the belief that "just ecological transitions that leave no one behind can be a powerful force for alleviating poverty and supporting inclusive and sustainable development." (EC 2023). To seize this opportunity there is a need for countries to adopt strategies to ensure long-term investments in for example renewable energy. The open letter echoes the view underpinning the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) (UN n.d).

The Nordic countries are considered to be at the forefront of the green transformation since they all have made significant commitments to achieving a sustainable and green economy, by setting ambitious targets to reduce carbon emissions and increase the use of renewable energy sources. For example, in February 2020, Norway elevated its emission reduction target from 40 % to a minimum of 50 %, aiming for 55 % by 2030 relative to 1990 levels. Despite being Europe's primary hydropower producer, generating over 90 % of its electricity from hydropower and exporting electricity to Europe, Norway's oil and gas industry remains a notable CO_2 emitter. To meet the increasing energy needs due to the green transformation, a modest increase in hydropower is expected, while a significant growth in both onshore and offshore wind power development is expected to compensate for the reduced production of fossil fuel (Miljøstatus n.d).

In parallel, Sweden's 2021 Climate Act established a net-zero emissions goal by 2045, demanding an 85 % reduction in emissions from 1990 levels within the country. The remaining 15 % reduction is slated to occur through supplementary measures such as enhanced carbon sequestration, the advancement of carbon capture and storage technologies (CCS), and emission reduction initiatives beyond national borders. Additionally, Sweden aims to gradually transition from biomass and nuclear energy to wind energy, since the vast and sparsely populated areas in the northern part of the country is considered suitable for wind energy farms (SFS 2017, p. 720).

In line with the Paris Summit open letter mentioned above, and the established climate policies, the two countries have adopted strategies, including green transition funding, to ensure long term investments to promote the development of a green industry. The Norwegian Government (2022) launched a road map in 2022 to presents ambitions, instruments, and measures for a Green industrial initiative. In the road map it is expressed that "The goal is to make Norway a green industrial and energy giant based on our natural resources, knowledge environments, industrial expertise and historical advantages." (p. 7). Although it is considered to be the responsibility of industry sectors to take advantage of the market opportunities and deal with the challenges that arise from the transition to a low-carbon society, the transition that is needed is considered to be of such a "scope that the state must become more involved through an active and ambitious industrial policy, which works in concert with the companies." (Norwegian Government 2022, p. 7). It is acknowledged that the changes in land use that will follow the investments may have considerable negative impact on nature, and that "climate and nature must be seen in context, so that important nature and ecosystems are not lost in the pursuit of climate goals" (Norwegian Government 2022, p. 21). Hence decisions on changes in land use must consider such consequences for the environment and local communities. Neither the Sami nor reindeer husbandry is mentioned in the strategy. However, in an interview in Financial Times, the prime minister of Norway, Jonas Gahr Støre, claimed that Norway will not "shy away" from the tension between combating climate change and protecting nature. On the question of how the government will act on the Fosen-case, the government interprets the outcome to mean that the windmills do not have to be dismantled, but that there is a need to find other solutions to the conflict (Financial Times 2023).

Significant industrial investments are also underway across Sweden to transition towards a fossil-free society, particularly in Norrbotten and Västerbotten. Anticipated investments totaling SEK 1,100 billion over the next two decades will focus on new and expanded facilities for fossil-free mining, steel production, battery manufacturing, and related projects. These endeavors are poised to create approximately 50,000 new jobs in the region. The investments will substantially increase electricity demand in the coming decades, presenting a major challenge for the Swedish electricity system. Projections by the Energy authority (Energimyndigheten 2023) indicate a rise in total electricity use to between 210 and 370 TWh per year by 2045. The higher estimate is contingent on extensive industrial electrification and the realization of all known industrial investments, predominantly in northern Norrland. To meet the heightened electricity demand only in Norrbotten, the northernmost county, through wind power, nearly 2,700 new turbines are required over the next 20 years, assuming each turbine has a 6 MW output and a 50 % capacity factor. Alternatively, covering the increased demand with new nuclear power necessitates eight reactors in the next two decades, based on a 1.1 GW normal-sized reactor with a 90 % capacity factor. Although Sweden do not have a similar green industrial strategy as Norway, the Mining strategy (Swedish Government 2013) and Fossil Free Sweden (n.d), the latter an initiative by the Swedish Government to increase the pace of the climate transition, include similar ambitions as in Norway. This includes to build a strong industrial sector to create more jobs and export opportunities through the green transition. Hence, several decisions have been made by the previous and also the current Swedish government, including the EU, to increase the opportunities for resource extraction such as mining, to meet the increased demand for rare earth minerals. There is also an ongoing discussion on how to speed up the process of building new windmill farms by for example abolishing the local municipal veto to this type of largescale energy projects.

As an example of a long series of decisions moving in this direction was the Swedish government's overturn of a decision by Bergsstaten (the Mining Authority), where Bergstaten wanted to stop a mine in the municipality of Storuman to safeguard reindeer husbandry. In an interview in public service radio, the deputy prime minister and minister of Economic Affairs in Sweden, christian democrate Ebba Bush, stated that by changing the course of mining policy as the government is now doing, Sweden can compete with Norway's oil by the use of Swedish metal. She also stated that the fact that the government is now reversing the Bergsstaten's decision will be a guide for future mining permits (Sameradion 2023).

When analysing the Norwegian and Swedish approaches to the green transformation, the two countries apply a rather similar anthropocentric view, aligning with extraction or resources as an ingrained trajectory towards an envisioned green future. It is acknowledged that the strategies places considerable stress on various critical dimensions, including energy resources, land usage, biodiversity preservation, and the well-being of communities. However, the human dimension of these strategies seems to be somewhat overlooked. Consequently, indigenous, and local communities residing in these resource frontiers, often find themselves at the crossroads of the green transformation, confronting potential disruptions to their livelihoods, social structures, and overall well-being.
Hence, the promise to leave no one behind is conspicuous by its absence. Even if the reindeer herders are not – as in the song lyrics by Iron Maiden – directly chased back to the burrows, reindeer husbandry is made invisible in official documents and when protests emerge reindeer herding is often perceived as a hindrance. There are of course exceptions as in the recent report of the Swedish Climate Policy Council (Hermansson et al. 2023), which mentions reindeer husbandry when discussing challenges related to the green transformation. The Council states that due to the green transformation goal conflicts and interests arise, mainly around land use. Mining and forestry, as well as industrial and energy facilities that are part of the transition, compete for land with other interests or activities. The most obvious goal conflict arises in relation to reindeer husbandry and the rights of the Sami as an indigenous people (ibid, p.118). Furthermore, even if the courts (Norway) or independent authorities (Sweden) rule or make decisions in favor of reindeer husbandry based on the law, the governments are prepared to either ignore the verdicts of the courts (Norway) or to overturn decisions and give new directives to the authorities for competing interests to be prioritized (Sweden). The pattern is thus not entirely clearcut, but the official policy direction seems distinct enough to suggest that the green transformation is not as inclusive and equitable as it potentially could be.

Green Transformation or Green Colonialism; navigating conflicts of sustainability

Even though this study is limited in its character and primarily focuses on green transformation in Norway and Sweden, it is obvious that the view of the green transformation as a threat or an opportunity stem from fundamentally different approaches to nature. The governments of Norway and Sweden clearly see the green transformation as an opportunity to, for example, turn Norway into a green industrial and energy giant, or as in the Swedish case, become world leading in the decarbonization of steel. These positions are justified from an anthropocentric view, where the natural resources in the respective country may be exploited for the benefit of the national inhabitants as well as for inhabitants in other countries.

The Sami on the other hand, see the green transformation as a form of land grabbing and hence a threat to sustainable reindeer husbandry as a fundamental core of these indigenous people's way of life. The definition of green transformation as a form of green colonialism is justified based on the domino effect that land encroachments have on the reindeer and as such on the society, including the traditional ecological knowledge system.

In addition to this value divide, conflicts over natural resources in Norway and Sweden, in particular in reindeer herding areas but also in what is defined as the outfields, can be viewed through the lens of property rights and diverse entitlements to these resources. Distinctions exist in how land and various natural resources are classified as public, private, or subject to common access. While a thorough legal analysis is needed to fully understand this (c.f. Rønne 2010), it is intriguing to reflect upon how the imperative for transformation challenges established property rights and conventional legal perspectives including the recognition of indigenous rights.

Rønne, in 2010, posited that individual land use or rights to use or exploit natural resources would no longer outweigh societal values such as environmental protection. However, she didn't anticipate the current urgency for societal transformation to address the climate and nature crises in terms of establishing large-scale energy or mining projects to meet escalating 'green' energy demands and how that would impact on individual or collective land use. As highlighted by Owen et al., (2023) when large-scale mining projects intersect with areas of ecological and cultural significance and traditional land tenure, there arises a fundamental conflict between environmental instruments' preservation and protection functions and the extraction of ore bodies. This underscore conflicting interests in scarce natural resources crucial to society, challenging traditional legal paradigms and emphasizing the importance of ethical and social justice considerations.

Furthermore, the conflicts over natural resources can also be analysed from the perspectives of whose land and natural resources we are dealing with. Given that both Norway and Sweden have recognised the Sami not only as indigenous peoples but also as a people per se – there are thus, in each country, two peoples, the Norwegian and the Sami people and the Swedes and the Sami people respectively. When it is stated in the roadmap for a green industrial initiative in Norway that “our natural resources” should be used for green industrial development, it is reasonable to ask what is meant by “our”. This can also be seen in a Swedish context where in particular reindeer husbandry with a constitutional right to use approximately 50 % the land for grazing is considered to infringe on “our land” – but with an unclear notion of who “we” are in this debate (see e.g. Kjöller 2023).

Given the identified deep divide, the question is to what extent it is possible to bridge the different fundamental values and how they are expressed, for example in relation to land use or entitlements to land in the ongoing transformation. Currently, many scholars are involved in research on the green transformation and how it can be achieved from a justice perspective. Relating back to the third verse of the lyrics in Run to the Hills, and the supposedly objective point of view, many researchers do not simply stand on the sidelines of the conflict but try to identify possible ways of dealing with the conflict by suggesting solutions. One such strand of research is to identify relevant policy instruments that can guide the behavior of actors in land-use systems, and address issues related to climate, biodiversity, and livelihood, since achieving a just transformation require policies that are ambitious and coherent, as well as cost-effective and equitable (de Boon 2023).

In the literature about the role of policy instruments to govern transformations there are at least two fundamental aspects that need to be considered. To begin with, the establishment of a coherent national vision for land use, coupled with pertinent quantitative cross-sectoral targets, is imperative to ensure the adequacy of policy instruments in addressing potential challenges related to land use (IPBES 2018; 2019). Secondly, a well-defined and unambiguous land tenure system stands as a crucial overarching prerequisite for effective policy implementation (IPBES 2018; Robinson et al 2014). Land tenure, as defined by Robinson et al. (2014), encompasses the array of property rights linked to land and the institutions responsible for upholding these rights. The security of land tenure, in turn, refers to the assurance that society will uphold and safeguard land-based property rights.
Both Norway and Sweden have recognised the Sami as a people, Norway have ratified the ILO 169, and a corresponding legal development has occurred trough court cases in Sweden. Still, both countries lack a coherent national vision of land use. This is not only causing problems for the Sami but also for other sectors since land and water resources are already encumbered beyond what is available due to the lack of coordination between different sectors and levels of society.

When these two basic requirements are settled, policy instruments covering the span from regulatory (command and control) to economic and information-based instruments relevant to land-use can be implemented, as emphasised in the literature on a just green transformation (de Boon 2023; IPBES 2018; Sandström et al. 2023). Besides traditional regulatory approaches such as sectoral land use laws, land-use planning includes issues relating to spatial planning, the zoning of land for specific purposes, and rights to manage land in both urban and rural areas (Albert et al 2020). As such, spatial planning may be used as a pivotal tool for evaluating the spatial implications of integrated policies, addressing conflicts between economic and policy sectors. Both Norway and Sweden have ratified UNDRIP which requires a revitalized approach to land-use planning, applying the consent standard and furthering implementation of Sami land use rights.

This remains to be done. Spatial planning is also considered crucial for efficiently allocating resources to safeguard, restore, and enhance natural resources and can thus play an important role in participatory planning, encouraging collaboration among planners, administrative bodies, the public, businesses, and civil actors – including indigenous people – to integrate the objectives of the green transformation into all pertinent policy and decision processes, fostering more sustainable spatial development for both people and nature (Albert et al. 2022).

Moving on to economic instruments there are several suggested instruments that may incentivize individuals but also businesses to contribute to the green transformation in a sustainable way. These include taxes and subsidies, payment for ecosystem services, biodiversity offsets or compensations and tradeable permits (see table 1). Taxes and subsidies are already established in various sectors, while the other suggested economic instruments are under development in for example the forest or agricultural sectors. The ways these instruments can help handle land use conflicts in relation to the green transformation is however understudied (de Boon 2023). A general critique towards the instruments focusing on mechanism of payments is the risk of commodifying nature. This critique stems from three overarching problems; practical concerns regarding the feasibility of transforming nature into a commodity, moral considerations regarding the ethical implications of commodification, and consequential issues pertaining to the impact of commodification of nature itself (IPBES 2018).

The next group of policy instruments focusing on information and voluntary instruments includes traditional and well-developed instruments such as ecolabeling, public procurement processes, negotiated agreements, but also co-management of natural resources. Eco-labeling has become a powerful tool to guide consumers towards sustainable products. While labeling is occasionally accused of constituting a form of green washing, the pressure from consumers to make sure that products are produced in a fair and environmentally friendly way is putting pressure on business to adopt standards to meet these requirements (de Freitas Netto et al. 2020). Negotiated agreements between for example windmill farms and reindeer herding communities has become more common at least in Sweden. The agreements may include compensation for costs associated with herding due to the establishment or windmill parks. The co-planning of forest land under the Forest Certification Scheme in Sweden has recently been introduced to better handle land use conflicts. However, the final outcome of this co-planning is still unclear.

Finally, rights-based approaches have recently been introduced as a policy instrument to meet the need of including human rights into the governance and management of climate and environmental policies. These are still in their infancy and have not yet been developed in a Scandinavian context.

Table 1: Examples of policy instruments to address land use conflicts under the green transformation (for an overview of more instruments see Bouwma et al 2015; IPBES 2018; Sandström et al. 2023).

- **Regulatory (command-and-control) approaches**	- **Economic instruments**	- **Information and other voluntary instruments**	- **Right based approaches**
- Land use / spatial planning tools and requirements (e.g. environmental impact assessments [EIAs] and strategic environmental assessments [SEA])	- Price-based instruments such as taxes or subsidies to promote for example biodiversity, water and other ecosystem services	- Ecolabeling	- Property rights to secure tenure rights/ new conservation approach to include human rights perspectives
-	- Payment for ecosystem services	- Green public procurement	-
-	- Biodiversity offsets (biobanking) etc,	- Negotiated agreements	-
-	- Tradable permits	- Co-management/planning	-
-	- Compensation	-	-

In addition to these policy instruments, several management approaches such as nature-based solutions, climate smart forestry and regenerative agriculture have been developed to meet the need for alternatives to traditional management practices in various sectors.

However, looking into the literature it is apparent that there is a need to further assess established and suggested policy instruments and how they potentially contribute to green transformation or to green colonialism. At the moment, the research is rather scattered and also limited to specific instrument groups. A just and equitable transformation will require a more comprehensive understanding of the multifaceted challenges of land use in a Scandinavian context and a need to address them through the analysis of various instruments to achieve sustainability. In this perspective it would also be relevant to consider the current green growth paradigm in relation to aspects of de-growth or a-growth.

Concluding remarks

While it is possible to identify different perspectives on colonisation, in a similar way as in the lyrics of Iron Maiden song “Run to the Hills”, it becomes rather clear that there are strong elements of green colonialism in how the green transformation is embraced from a Norwegian and Swedish official perspective. This perspective entails implementing policies that use 'green' terminology while concurrently reinforcing colonial relationships through for example the establishment of large-scale projects for energy development and reindustrialisation of various sectors, without the consent of indigenous people and local communities. This implies that the future management of natural resources is not solely a matter of implementing a sustainable development strategy; it is also about a broader institutional concern that delves into the fundamental organization of the relationship between the state and its citizens including the indigenous people. And here it becomes particularly relevant to ask, from an indigenous perspective - and again with reference to the lyrics of the Iron Maiden song - the question “Will we ever be set free”? Will the Sami as a people and indigenous people ever be able to obtain any degree of self-determination over traditional lands? And in this context, it is also relevant to ask to what extent local communities will be included in the governance and use of natural resources? Effectively navigating the sustainable use of resources necessitates an examination of the institutional frameworks governing the interaction between different actors at different levels, encompassing issues of governance, indigenous rights as well as citizen participation. As such, crafting a robust and equitable system for managing natural resources in the context of the green transition extends beyond environmental considerations, demanding a holistic approach that integrates socio-political dynamics and institutional structures of Norway’s and Sweden’s acknowledged peoples respectively.

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