

A Yes to Life, No to Mining Dispatch

A GREEN SHIFT?

**Mining and resistance in Fennoscandia
Finland, Sweden, Norway, Sápmi**

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A green shift? mining and resistance in Fennoscandia
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This report is dedicated to the communities and ecosystems on the frontlines of extractive expansion in Sapmi, Sweden, Finland, Norway and around the circumpolar north.

Disclaimer: All information used in this report and included in the maps produced is drawn from publicly available sources.

Note about place names: Wherever there are two names cited, the first one is in the majority language of the country and the second is in one of the Sámi languages.

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Figure 1



Executive Summary

1. Report overview

This report consists of four 'dispatches' that contain a critical analysis of mining industry and policy, related problems and critical voices in Fennoscandia: Finland, Norway, Sweden and Sápmi, the traditional lands of Sámi Indigenous People.

The dispatches were written by persons actively engaged in these issues in their respective locales. The historical background, current policies and political-economic tendencies in each country, the sheer number of mining projects and the richness of social movements engaged with the issue, generate such complex picture that this is by no means a comprehensive overview. The main intent is to provide an insight into the workings of the mining industry in the mineral sector in northern Europe, as well as into the viewpoints of those watching over the industry, challenging its strategies and working for alternatives.

The report provides historical background to the current development of the mining industry in the region. Special attention is given to the recent cycle of 'mining booms' from around 2005 – with different pace in each country - to the present, and how these have shaped the dynamics, causes and impacts of extractivism in each of these geographies.

In **Chapter 1**, Noora Huusari (Snowchange Cooperative) charts the course of the Finnish mining boom over the past 15 years, the environmental problems it brought and organised citizen responses to these developments.

In **Chapter 2**, Arne Müller analyses the changes in the Swedish mining policy and the industry landscape after the introduction of Sweden's Mining Law of 1991, as well as subsequent reforms, the growing protest movements that emerged in the 2010s, and the alternatives to extractivism these movements propose.

In **Chapter 3**, Svein Lund analyses Norwegian mining policy and how the 'green shift' towards renewable energy and green technologies has been used as an argument for expanding mining in the country.

Chapter 4 features two texts on the impact of the mining industry on Indigenous Sámi land, their culture and nature-based livelihoods. Through a historical analysis of mining in Sápmi, Lund calls for a human rights and justice perspective on contemporary and future mining projects in Sámi land. Tero Mustonen (Snowchange) recounts the ongoing mining and infrastructural projects threatening Sámi land and rights in Finland. These analyses focus on the parts of Sápmi that lie in Finland/Norway/Sweden and do not include the Russian part.

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'Green mining' Booms

Finland, Norway and Sweden have for many become synonymous with engineering and technology, high social and environmental standards and regulation. They are also long-time industrial producers and, to some extent, exporters of a variety of minerals and materials, from stone to metal. Finland hosts the largest nickel and gold mines in the EU, it is the largest gold producing country in EU28; Sweden the largest iron mine accounting for 93% of EU28 production, and is the leader in lead and zinc, second in silver, third in gold.¹

Figure 2



Figure 3



Figure 4



Since the 2010s, these countries proclaim themselves to be leaders in the new 'green economy' and 'energy transition.' In particular, they have emphasised leadership in 'sustainable mining.'² In Norway, gas and oil producers claim to be the world's 'cleanest' and 'most carbon-efficient,' and leading the transition to a low-carbon future, a narrative also used by Finnish oil company St1. The Geological Survey of Finland in 2012 introduced the concept of 'green mining,'³ and in Norway in the same year was promoted the idea of the 'green shift' (grøne skiftet). In these industry and policy narrative, the mining industry – operating at world-leading standards - is positioned and promoted as a key player in accomplishing the transition to a post-fossil fuel society.

As in many Western European nations, the number of mines in Fennoscandia decreased towards the end of the previous century⁴. However, from around 2005, this trend began to be reversed. Finland and Sweden recorded high rates of investment in exploration and project development (see Chap. 1. and 2), a trend observed in Norway slightly later (Chap. 3). Production started to increase as well. Mine production in Finland rose from 4,8 million tons of ore in 2005 to more than 95 Mt in 2018 (including waste rock)⁵. In Sweden it rose from 44,22 Mt in 2009 to 87,94 Mt in 2020⁶. It should be noted that production in Sweden never decreased substantially over the last half century, it was relatively in the range of 40-50 Mt between 1970 and 2010.

Norway has followed a different path since 2005. No 'greenfield' mines have been opened, however, Sydvaranger Gruve AS iron ore mine was re-opened from 2009 until bankruptcy in 2015, during which time the nation's metal production doubled. Norway produced 1,47 Mt of metal ore in 2006 (12 Mt of industrial minerals and stone)⁷, while in 2019, the production of metal ore was 2,2 Mt (10,1 Mt of industrial minerals and stone)⁸. One must also account for specifics in production. In Sweden, mine production is concentrated on metal ores. Norway predominantly produces industrial minerals and stone. Finland can be said to lie in-between these two poles.⁹

Another changing trend concerns the changing ownership and governance of mines in the region. Until the 1990s, the largest mines in all three countries had been state-owned. Since that time, through the signing of the EEA agreement¹⁰ and legislative changes, Fennoscandian governments have one by one decided to open to investment in mining not only to companies from the EEA/EU zone, but to the entire world.

International companies - large, mid-tier and 'juniors' - have by now entered national markets en masse. Meanwhile, already established mining companies have continued to explore and expand their operations.¹¹ Each country has different prospecting and exploration permitting regimes, and legislation (see footnotes) but permitting for mining has expanded across the board.¹²

As of May 2021, Sweden had exploration permits covering 2,3% of land area (9386 km²)¹³. In Norway 6698 km² is currently under exploration, 1,73% of the total area.¹⁴ At the end of 2019, compounded reservations, exploration applications and exploration permits in Finland amounted for up to 11% of the country's area (2122 km² under active exploration and 25,361 km² under reservation, and more under exploration and reservation applications).¹⁵

In each country, there has been a specific combination of policies and legislation to support mining expansion, however, the common trait is the role of the state predominantly as a 'facilitator' rather than investor and developer as it was the case historically. In Finland, mineral deposits have to a large been managed by Outokumpu's mining directors when the company sold out most of its mines and holdings in the 1990s and 2000s.¹⁶ Since 2010, all three countries have introduced new Mineral Strategies that are principally geared towards the expansion of mining and making these nations attractive to foreign investors.

In Finland and Sweden mining royalties are almost non-existent and corporate tax is lower than the EU average. The investors' perception of pro-mining politics, permitting processes, highly skilled labour force and infrastructure, advanced digital and freely available geological data, as well as welcoming taxation, royalty and licensing fees have made Finland and Sweden into some of the most attractive mining investment jurisdictions in the world.¹⁷ Taxation depends on a range of factors, however comparative research shows that "Norwegian tax levels seem to be somewhat higher than in Finland and Sweden, which in turn rank among having the lowest taxes on mining companies in the world in other studies."¹⁸

If the revenues to the landowners and to the state are very low, the question is what is motivating these states to support a massive expansion of extraction? One of the dominant narratives has been the promise of job creation and local economy boost. But new mine create a far more complicated picture than the rather simplified promises of direct and indirect increase in jobs and corresponding regional development.¹⁹ While acknowledging that it is hard to estimate potential long-term developments of new mining operations, it can be asserted that they tie the locales into boom and bust cycles, as well as other volatilities caused by the operations, such as environmental accidents.

Another narrative for mining that arguably has become more dominant over the years has been that of the need of mining for the 'green transition.' We will analyse this in greater detail below and in specific dispatches, however we should note that the general expansion of mining has not really followed this agenda. In this period, we observe a significant number of high-value material projects: particularly gold, but also diamond and even uranium projects, materials not classified as 'critical raw materials' for the 'green transition.'

Failures and violations

This expansion of mining operations has led to a concurrent and related rise in social, environmental and economic issues and injustices. Many 'junior' companies with little capital and track record, and sometimes non-transparent (transnational) ownership structures, have been exploring and operating largely free of meaningful checks-and-balances.

Figure 5



Many small and large mines have ended in bankruptcy (Lapland Goldminers, Sydvaranger, Northland Resources, Talvivaara). Company executives have been charged with corruption and speculation (Amarant Mining), and criminal negligence (Taltivaara). A Finnish public agency expert has been investigated in relation to Dragon Mining's illegal dumpsite (Orivesi).²⁰

Despite the existence of, in theory, strong environmental protections and permitting regulations on national level, including the EU directives such as EU Water Framework and the EU Habitats Directive, companies have committed environmental violations across the region. Some have even breached their permits over a longer period of time (Northland's Kaunisvaara, Talvivaara/Terrafame). Further environmental violations have been documented at: Agnico Eagle's Kittilä mine, Boliden's Kevitsa mine, Dragon Mining's Kaape-linkulma and Orivesi mines, Nordic Mining's Laiva, Pahtavaara, Sotkamo Silver mine, Woxna Graphite's Kringelgruvan mine. The largest mining-related environmental disaster in Sweden took place in 2000 at Boliden's Aitik mine, where a tailings dam was breached.²¹ The environmental consequences of these accidents and violations have added to an existing legacy of mining waste pollution, such as the Finnish state-owned Outokumpu mine's toxic legacy in North Karelia and lake ecosystem damage in SW Finland. These examples demonstrate the cumulative effects of mining destruction.²²

Figure 6



The noted existence of ‘revolving doors’ between state authorities and the mining industry, with the potential for conflict of interest this engenders, came to the fore most dramatically in the case of Talvivaara, a massive zinc-nickel-cobalt (uranium) mine in eastern Finland, extracting a low-grade deposit with a new bioheap leaching technology. After a series of smaller failures, the mine caused two severe leaks into the surrounding lakes and rivers in 2012/3.²³ The company was eventually bankrupted and later amalgamated, rising from the flames as a new state enterprise even as high-powered executives were charged with environmental crimes.²⁴ The mine is today promoted as part of the responsible battery supply chain, notwithstanding scientific and activist reports of continued environmental impact, appeals concerning the waste rock dump and the uranium exploitation permit, and a money laundering probe into the business dealings of the mine’s second-largest owner.²⁵

In Sweden, a 2015 report by the Swedish National Audit Office discovered financial liabilities regarding environmental monitoring and post-closure supervision and management of the mines. A 2021 database shows that two tailing storage facilities in Finland and two in Sweden face ‘instability issues.’²⁷

Based on this evidence, we can conclude that authorities have struggled to monitor and enforce existing regulations to hold the mining industry to account. In the case of Norway, the country remains one of the few countries which still allows for tailings disposal in the sea, with two planned and highly contested mines, as well as one mine reopening, all planning to use this archaic and widely outlawed method of waste disposal (see 3.2).

Citizen organizing

The obvious ecological damages caused by mining and related conflicts over the use of land and water has led to an increase in citizen activism across the region. Often starting from local movements, or local chapters of nature organisations, nation-wide coalitions and networks have taken shape. In all three countries, environmental and nature conservation groups have played an important role. Their combined activities and public counter-argumentation have in recent years seriously challenged the picture of the neo-liberalised mining sector as a desirable economic model for these countries. In Finland, several projects were stopped in exploration phase (Selkie in North Karelia, Utsjoki/Ohcejohka in Sápmi). A citizen initiative in 2020 with 58,000 signatures brought a proposed reform of Finland's Mining Law to the Finnish Parliament. Another gathered 37,000 signatures to stop an exploration permit in Käsivarsi/Giehtaruohtas in the Finnish portion of the Sámi home area. A new petition and campaign asks for legal protection in the form of 'no-go zones' for all nature areas from any mining ventures, as well as mining-free zone for the entire Sámi home area.

Figure 7



In Sweden, after a direct-action occupation and an extended legal struggle, a broad coalition of movements managed to save the Ojnare forest from quarrying in the southern island of Gotland. Several high-profile lawsuits and conflicts, such as Norra Kärr and Gallok/Kállak, have contributed to slowing down new mining developments in Sweden, with contested decisions pending for years.²⁸

Figure 8



In Norway, a gold and copper project at Biedjovággi in Kautokeino/Guovdageaidnu, Finnmark, was stopped in 2013. Currently, there are two highly contested mining projects, both planning to dump tailings into fjords: Nordic Mining's rutile project in Engebø by Førdefjord and Nussir ASA's copper project in Kvalsund/Fálesnuorri by Repparfjorden/Riehppovuotna. Both face strong local and national opposition.

These anti-extractivist initiatives and movements vary in their demands and reasons for protesting. Some demand that companies should respect and governments enforce existing laws and environmental regulations to minimise the environmental impacts of projects. Others reject mining plans outright.

Activists saying 'No' to mines in Fennoscandia are not engaged in negative campaigning as the industry and states often suggest. They are actively proposing alternatives to mining that provide more sustainable modes of living with nature in the region. Indigenous Sámi People protect and assert their rights to nature-based livelihoods. In both Finland and Sweden, alternatives include active citizen initiatives to reform mining laws.



Despite increasing contestation, however, in all three countries strong support for mining still exists amongst government parties from across the political spectrum, with some exceptions. On the other hand, authorities at local and regional levels have at times taken more critical stances and voted against the mining projects, thereby challenging the state policies and the central government's agenda.²⁹ Mining is likely to stir up politics at all levels of governance for time to come. Unreserved political support for extractivism might not be carved in stone. The dispatches combined in this report attest to a need for more just, equitable and democratic spaces for consultation and decision-making around extractive projects.

Impacts on Sámi land and communities



Figure 10

Many of the biggest and most impactful mines in the region have historically been and continue to be located in the traditional lands of the Indigenous People Sámi. Their land – Sápmi - today comprises the northern-most parts of Norway, Sweden and Finland, and of the Kola Peninsula in Russia. Historically the Sámi maintained nature-based life ways further south in Fennoscandia, too, but they have been pushed north by expansionist and settlement policies of Fennoscandian states and their predecessors. The days of displacement and assimilation may be over, but unjust state policies that reiterate colonial patterns continue to adversely impact and marginalise the Sámi today. These policies are deeply connected to extractive industries.

Sámi traditional lands have borne the brunt of mining in the European north since the beginning of the modern colonial expansion, the origins of which can be traced to the opening of the Swedish Crown's mines in Nasafjäll/Nássavárri in the first half of the 16th century.³⁰ Subsequently, some of the largest mines in the region and in Europe have operated in Sápmi: Swedish state-owned Luossavaara-Kiirunavaara Aktiebolag (LKAB) mines in Malmberget and Kirunavaara; Boliden's mines in Skelleftefältet and Aitik; Elkem's Tana, Sydvaranger and Kaunisvaara mines, and many others.

Historical projects have been implemented without Free, Prior and Informed Consent of Sámi villages (siida) and communities. As we will see below, the situation has not changed sufficiently in this century. In Sweden, the great majority of mining waste is situated in Sápmi, in Boliden and LKAB's mining districts.³¹ Many existing mines are ongoing and expanding. At the same time, Sápmi is exposed to of a large number of new developments and exploration projects.

In addition to mining, Sámi people and their livelihoods are impacted by other extractive industries, such as industrial forestry, hydro-power, wind power and infrastructure development (roads, railways). The combination of these have severely fragmented and limited vital livelihood activities and nature economies: hunting, fishing, reindeer herding and others. Further to the fragmented landscape, enormous pressure is posed on Sámi villages through fragmented planning processes: different legislations, involved entities, and brings taxing consultation and litigation processes upon the communities.³³ This intersection of different industrial impacts can be observed most keenly in the cases of Beowulf Mining's planned Gallok/Kállak mine and the Finnish government's planned Arctic Railway. Both projects are firmly opposed by Sámi affected communities.³⁴



Figure 12

Each Fennoscandian state recognises, or fails to recognise, the consultation rights of Sámi communities to a different degree. There are Sámi parliaments in each of the three countries, but they enjoy varying degrees of political power. In February 2019, the UN Human Rights Committee had decided that Finland breached the Sámi rights by interfering in the Sámi parliament electoral roll.³⁵ Only Norway has so far signed the ILO 169 Indigenous and Tribal Peoples Convention, but despite this there have been several lawsuits against the Norwegian state related to reindeer herding rights and wind industry developments on grazing land.³⁶ The actual water and land rights, including the Right to Say No to unwanted projects, are not firmly guaranteed in any of the three nation-states. In Sweden, the state should by law give priority to more sustainable land uses, however, in key decisions, it furthers the idea that reindeer herding and mining can 'coexist,' claims now being evidenced to be incorrect.³⁷

Figure 11



In Rönnbäcken/Raavrhjohke, the nickel mine project would affect hundreds of local Sámi people but the majority have been excluded in the decision-making process. There is no consent. Local Sámi organisations filed a complaint to the UN Committee on Racial Discrimination, which, in November 2020, published an opinion that Sweden violated the Convention on the Elimination of All Forms of Racial Discrimination through the lack of consultation of the Sámi in the permitting process and recommended for it to be undertaken again, and for the state to revise its mining laws to assure Free, Prior and Informed Consent of the indigenous people.³⁸

Mining projects in Sápmi are generally met with strong opposition and resistance, often in coalition with other locals and with environmental organisations. In the period we cover in this report, there has been strong Sámi-led opposition to mining projects in Biedjovággi, Gállok/Kallak, Käsivarsi/Giehtaruohtas, Reparfjorden/Riehppovuotna, Rönnbäcken/Raavrhjohke, Utsjoki/Ohcejohka.³⁹ Sámi communities continue to tirelessly struggle for their rights to self-determination and nature-based livelihoods across the whole region. The land and the people have been disproportionately impacted, and the pressures remain great. However, recent legal victories give hope that long-lasting change may become reality.

North European mining for 'just transition'



Figure 13

The dispatches in this report paint a sobering picture of the of state-promoted mining expansion in northern Europe over the past 15 years.

Actors in the northern mining industry are investing heavily in presenting mining companies as the deliverers of a low-carbon future. Ministers, other government representatives and sometimes academics are invited to regular industry conferences where this greenwashing exercise takes place, but civil society and affected communities rarely enjoy meaningful access and participation.

This exclusion, amongst many other factors, casts serious doubt on the industry's claims that mining companies will be "climate neutral suppliers of crucial raw materials for a successful European Green Deal."⁴⁰

On current evidence from mining-affected areas in the North, the EU and North European countries much vaunted 'world class legislative frameworks' and so-called 'responsible mining practices' do not guarantee that the mining industry can and will be well regulated.

'Insourcing' raw materials from Europe is framed in moralistic terms by the mining industry. They promote the repatriation of mining operations to Europe and the North as a way for European citizens to take on their fair share of the sacrifice the industry and politicians deem necessary for a clean energy transition to take place. This argument is deliberately misleading on two counts. First, mining never left North Europe. In fact, in the 21st century it has reached unprecedented scales, especially on the lands and important areas for marginalised communities like the Sámi. Second, without drastic changes to the world's growth-based economic system, increasing mining in Europe will not necessarily lead to a decrease in mining elsewhere in the world. Further, the claims of 'bringing development' to the often de-developed and peripheralised areas are not that easy to substantiate, as demonstrated by recent experiences. Long-term effects on communities and nature are even harder to determine, especially in view of the ongoing biodiversity and climate crises. As we know now, many of the most important aspects cannot even be accounted in costs-and-benefits frameworks.

Beneath a veneer of green, the mining industry's 'business-as-usual' intent to profit sees northern extractive companies from the region expand their impacts on ecosystems, local and indigenous communities around the world. Mining companies based in these countries have been and are active in other EU countries and in the so-called 'third countries' including the Global South. Many of these operations have caused grave environmental impacts and some have been accused of serious human rights violations (Boliden, Lundin Group).⁴¹ The Government Pension Fund of Norway invests in a large number of mining companies worldwide, including the ones with criticised track records.⁴² Swedish and Finnish public and pension funds are also invested in many mining companies. Finnish majority state-owned Outokumpu, previously a mining giant, now holds only one mine in Finland, but has since 1990s transformed into a steel-making colossus operating in 30 countries over 6 continents. Norwegian state-owned gas and oil giant Equinor (previously Statoil) extracts and explores in more than 30 countries across all the continents.



As well as these well-established ventures, Fennoscandian companies and states are looking to new extractive frontiers. The Norwegian Government, for example, continues with its plans to expand extraction into highly controversial practice of deep sea mining. A Seabed Mineral Act has been introduced, and the Norwegian Petroleum Directorate is running mineral exploration of the seabed.⁴³

Beyond mineral extraction, Finnish and Swedish companies are also exporters of mining equipment, expertise and consulting services (e.g. Metso Outotec, spin-off of Outokumpu). The three countries are also important arms producers and exporters, with ties to the mining sector that are in dire need of transparency and public debate.

Finnish, Norwegian and Swedish mining industries and interests today do not stop at the national borders nor within the European continent, neither did they for a long time. This fact both undermines virtuous industry narratives about 'green mining' and highlights the need for due diligence and public scrutiny on mining in these nations, and a necessary reckoning with the far-reaching (neo)colonial legacies.

The industry is indeed being watched over closely. Civil society organising critical of the mining industry in the region, while being rooted locally, operate nationally and internationally through alliances, networks and coalitions. From direct action on the ground to juridical and institutional processes, the work of these organisations keeps pushing mining policy and legislative change onto and up the public agenda. At the same time, many movements assert and put to practice non- and post-extractivist alternatives and life-sustaining livelihoods in tune with the land.



Figure 15

At the European level, critiques of EU's pro-mining policies are increasingly being articulated. Two recent examples include the 'Joint civic statement on the European Horizon 2020 project MIREU,' signed by NGOs from Bosnia and Herzegovina, Finland, Ireland, Portugal, Slovakia and Spain, and the Statement denouncing EU raw materials plans in European Green Deal signed by a global coalition of more than 180 civil society organisations, communities and academics.

Anti-extractivist work in Europe is taking place under the banner of climate justice and internationalist solidarity that originates and is reciprocated well beyond Europe's borders. Human rights and rights of indigenous peoples are given paramount importance in these activist responses, and particular focus is given to co-operation and continuing good relations with Sámi-led organisations.

Far from being localised, 'not-in-my-back-yard' struggles, as mining companies and politicians like to present them, community resistance to new mining in the European North is deep rooted, principled and cares about the planet.

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- ¹ Sveriges geologiska undersökning (Geological Survey of Sweden) (2021). *Bergverksstatistik 2020: Statistics of the Swedish Mining Industry 2020*. <https://resource.sgu.se/dokument/publikation/pp/pp202102rapport/pp2021-2-rapport.pdf>
- ² See, for example, the industry initiative Den Svenska Gruvan (The Swedish Mine): <https://www.densvenskagruvan.se/en/front-page/>, Sustainable Underground Mining industry initiative supported by the Swedish Energy Agency: <https://sustainableundergroundmining.com/index-en/>. In Finland, The Finnish Innovation Fund's project Network for Sustainable Mining: <https://www.sitra.fi/en/topics/responsible-mining/>
- ³ Pekka A. Nurmi, "Green Mining - A Holistic Concept for Sustainable and Acceptable Mineral Production" <https://www.annalsofgeophysics.eu/index.php/annals/article/download/7420/6800>. Tekes (Finnish Funding Agency for Technology and Innovation) ran a Green Mining programme (2011-16), <https://spinverse.com/references/tekes-green-mining/>
- ⁴ Particularly notable is the case of the then Finnish state-owned miner Outokumpu which in the 1990s sold out most of its mines and deposits.
- ⁵ TEM & GTK (2020). Metallimalmien louhinta Suomessa. <https://kaiva.fi/kaivannaisala/tilastointi/#Metallimalmit>
- ⁶ For different statistics, see: <https://www.sgu.se/mineralnaring/mineralstatistik/>
- ⁷ Bergvesenet med bergmesteren for Svalbard & Norges geologiske undersøkelse. (2007) Mineralressurser i Norge. Mineralstatistikk og bergverksberetning 2006. https://www.dirmin.no/sites/default/files/mineralressurser_i_norge_2006_0.pdf
- ⁸ Direktoratet for mineralforvaltning med Bergmesteren for Svalbard (2020) *Harde fakta om mineralnæringen*. Mineralstatistik 2019. <https://www.dirmin.no/harde-fakta-2019>
- ⁹ Take note that materials such as titanium-dioxide, ilmenite and rutile (all important in Norway) are classified as industrial minerals but could effectively be used in metal production. Similar can be told even of dolomite and limestone which contain metal. Therefore, these classifications are to some extent arbitrary.
- ¹⁰ All three countries have been part of the EEA since it entered into force on 1 Jan 1994.
- ¹¹ In Sweden, in 2019, 87% of exploration investments came from the established local companies LKAB, Boliden och Zinkgruvan Mining AB (Bergverksstatistik, 2019, p. 54). The continued expansion can also be seen in the case of the relocation of the whole townships of Kiruna and Malmberget for the expansion of LKAB's iron mines in Norrbotten, Sweden.
- ¹² In-depth comparative overview: Hojem, P. (2015) Mining in the Nordic Countries: A comparative review of legislation and taxation. Copenhagen: Nordic Council of Ministers. <https://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A842595&dswid=1913>
- ¹³ Swedish Geological Survey. (2021) Bergverksstatistik 2020, p. 66. The responsible authority Bergstaten (decision organ of the Swedish Geological Survey) distinguishes between prospecting and exploration. The exploration permit (undersökningstillstånd) in itself does not allow for test drilling. To proceed to exploration work (undersökningsarbete), the company needs to produce a workplan (arbetsplan), and other permissions may need to be produced and approved by Bergstaten, the County Administrative Board (länsstyrelsen) or municipality. For more details, see Bergstaten (2020). Prospektering i Sverige. <https://www.sgu.se/bergsstaten/prospektering/prospektering-i-sverige/>
- ¹⁴ Each individual exploration permit (undersökelsesrett) may be up to a maximum 10 km², and it is common to see numerous rights bordering each other to cover a larger area. Private parties are obliged to report the exploration activity to the Directorate of Mining with the Commissioner of Mines at Svalbard (Bergvesenet med Bergmesteren for Svalbard). They are however not obliged to report the expenditure. The exploration permits apply only to the State's minerals (metals with a density above 5 g/cm³; titanium and arsenic with ores; and pyrrhotite and pyrite). Others are deemed landowner's minerals, and the Directorate does not limit landowners as to their use (there might be other legal limitations).
- ¹⁵ Liikamaa, T. (2020) Review of mining authority on exploration and mining industry in Finland in 2019. Tukes (Finnish Safety and Chemicals Agency). <https://tukes.fi/documents/5470659/21595777/Tukes%20mining%20in%20Finland/>
- ¹⁶ This is particularly notable in the case of Talvivaara, which was an Outokumpu deposit, in 2004 bought by Pekka Perä, a former employee of Outokumpu, at a price of one euro coin! Kröger, M. (2015) Spatial Causalities in Resource Rushes: Notes from the Finnish Mining Boom. *Journal of Agrarian Change*, 16(4), 554. <http://onlinelibrary.wiley.com/doi/10.1111/joac.12113/full>
- ¹⁷ Over the last 10 years, Finland and Sweden have been consistently ranked among Top 10 jurisdictions according to the Investment Attractiveness Index by the Fraser Institute, Finland topping the list three times, and second in 2019. See: Fraser Institute's Annual Survey of Mining Companies 2019: <https://www.fraserinstitute.org/studies/annual-survey-of-mining-companies-2019>
- ¹⁸ Hojem, P. (2015) Mining in the Nordic countries: A comparative review of legislation and taxation. Nordic Councils of Ministers, TemaNord 2015:542. <https://norden.diva-portal.org/smash/record.jsf?pid=diva2%3A842595&dswid=7101>
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- ²⁴ YLE. (2019, Nov 21) Talvivaara bosses' conviction upheld on appeal. https://yle.fi/uutiset/osasto/news/talvivaara_bosses_conviction_upheld_on_appeal/11079822
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- ²⁸ After multiple applications, Boliden's copper mine project for Laver was refused by the Government on 23 Dec 2020. Beowulf Mining's iron project in Gällöf/Kallak is still pending the decision by the Government. Leading Edge Materials Rare Earth Element (REE) project Norra Kärr is currently pending a decision by the Land and Environment Court.
- ²⁹ In Sweden, County Administrative Boards have voted against Norra Kärr, Kallak/Gällöf, and Laver (projects, thus contrasting the decisions of Bergstaten (Mining Inspectorate of Sweden). In these cases, the decision is taken to the Government. In Norway, Norwegian municipalities can block mines based on the Planning and Building Act. Municipality in Kautokeino/Guovdageaidnu stopped the Biedjovággi project in 2012-3. Municipality of Larvik (Vestfold) voted against being a shipping port for Kodal project, and, eventually the project was put on ice by the company. Both Biedjovággi and Kodal remain reserved areas.

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- ³² Notably, parts of Kiruna/Giron and Malmberget townships had to be relocated recently for LKAB's mine expansion in a criticised process. Owen, A., Takedomi Karlsson, M., Rivin, D. (2019) Relocation of Kiruna town due to iron ore mine, Sweden. *EJ Atlas*. <https://ejatlas.org/conflict/relocation-of-kiruna-due-to-iron-ore-mine>
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- ³⁵ Saijets, M. (13 Feb 2019). UN Human Rights Committee: Finland has violated Sámi rights. *Yle Sápmi/The Barents Observer*. <https://thebarentsobserver.com/en/2019/02/un-human-rights-committee-finland-has-violated-sami-rights>
- ³⁶ Jovsset Ante Sara's case against the Norwegian state, which has also been appealed to the United Nations Human Rights Committee (see: Pile o 'Sápmi: <https://www.pileosapmi.com/>). On wind power industry impacts: Motvind Norge and Naturvernforbundet i Árvjovárri (2020) Thematic Report 3: Wind power or reindeer husbandry (Short version). <https://motvind.org/wp-content/uploads/2020/10/vindrein-eng-ny-versjon.pdf>
- ³⁷ Stockholm Environment Institute published two papers investigating the impacts of mines on reindeer herding in the case of closed Boliden's mine and road in Stihke area, and currently operating Kaunisvaara mine: <https://www.sei.org/publications/reindeer-peace-impacts-bolidens-mine-stihke-voernese-reindeer-herding-district/>
- ³⁸ UN Committee on the Elimination of Racial Discrimination. (2020, Nov 18) Opinion approved by the Committee under article 14 of the Convention concerning communication No. 54/2013. https://tbinternet.ohchr.org/Treaties/CERD/Shared%20Documents/SWE/CERD_C_102_D_54_2013_32181_E.pdf; The Swedish State has recently also lost a lawsuit against Girjas sameby/Sámi village on fishing and hunting rights of Sámi. Högsta Domstolen. (2020, Jan 23). The "Girjas" case - press release. <https://www.domstol.se/nyheter/2020/01/the-girjas-case--press-release/>
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- ⁴⁰ This was the headline of a seminar about mining in the Arctic organised in March 2021 by Swedish and Finnish mine industry groups with North Sweden European Office and Region Västerbotten: <https://www.svemin.se/aktuellt/kalender/eu-industry-days-2021/>
- ⁴¹ Swedish-based Boliden has been involved in a long-standing controversy around the export of toxic smelting waste to Arica, Chile in 1984 and 1985, which led to children poisoning. The company has not assumed responsibility to date. (Navas, G. & Smith, E. (2019) Conflicto del Plomo Boliden, Cerro Chuño en Arica, Chile. *EJ Atlas*. <https://ejatlas.org/conflict/contaminacion-plomo-arica>) Since 1977, Boliden is operating Tara mine in the Republic of Ireland, the largest zinc mine in Europe, whose recent expansion faced local opposition (see YLNM report on the Island of Ireland.) The company's Los Frailes tailings dam experienced massive failure at Aznalcóllar, Spain in 1998, an environmental disaster still remembered. The costs have not yet been paid by the company, and it has not assumed full responsibility (Planeles, A. et al. (2018) Aznalcóllar. 20 años de un desastre medioambiental. *El país*. https://elpais.com/politica/2018/04/20/actualidad/1524223258_103979.html; Oller, J. (2020, Aug 13) Aznalcóllar, la catástrofe medioambiental que pudo haberse evitado. *InfoLibre*. https://www.infolibre.es/noticias/veranolibre/2020/08/11/aznalcollar-catastrofe-medioambiental-que-pudo-haberse-evitado_109869_1621.html)
- Canadian-Swedish Lundin Group, founded by the Swedish entrepreneur Adolf H. Lundin and now led by his sons - active in oil, gas and metal mining - has been involved in a long list of controversies and serious allegations for their projects in, among others, DR Congo, Ethiopia, and apartheid S. Africa (e.g. Lorinser, A. (2016, Oct 29) Chasing Elephants - Lundin Mining Corporation & Conflict Minerals. *Abc 10 News*. <https://abc10up.com/2016/10/29/chasing-elephants-lundin-mining/>). Between 2005 and 2012, the company has been co-running Galmoy zinc mine in the Republic of Ireland (see YLNM Island of Ireland report). Since 2010, there is a ten-year long legal criminal pre-investigation in Sweden against the chairman and the CEO of Lundin Energy for assistance in serious human rights abuse in South Sudan (Björnsson, O. & König, J. (2018) Fuel for conflict: Investors and the case of Lundin Petroleum in Sudan. *Swedwatch & Fair Finance Guide*. https://swedwatch.org/wp-content/uploads/2017/05/Fuel-for-conflict_full-report.pdf). Large copper and cobalt mine Tenke Fungurume in DR Congo, in which Lundin had 24% 2007-2017, has been scrutinised for bribery allegations and impacts on local communities. (Custers, R. & Nordbrand, S. (2008) Risky Business: The Lundin Group's involvement in the Tenke Fungurume Mining project in the Democratic Republic of Congo. *Diakonia, SwedWatch, IPIIS vzw*. https://swedwatch.org/wp-content/uploads/2016/12/risky_business.pdf; Southern Africa Resource Watch (2012) Freeport McMoran versus the People of Fungurume: How the largest mining investment in DRC has brought poverty not prosperity. <https://sverigesradio.se/diverse/appdata/isidor/files/83/12210.pdf>)
- ²⁰¹⁹ book documents serious impacts of Lundin Mining's gold mine development on the local communities in Ecuador, living next to the wildlife refuge El Zarza and Cordillera del Condor protected forest (Mining Watch Canada. (2019, Jan 17) Investigators' Study of Canadian/Swedish Mining Project in Ecuador Yields Disturbing Results. <https://miningwatch.ca/blog/2019/1/17/investigators-study-canadianswedish-mining-project-ecuador-yields-disturbing-results>)
- ⁴² E.g., the Fund has blacklisted Rio Tinto Group 2008-2019 for "severe environmental damage" in Grasberg mine in Indonesia. Since the restriction has been lifted, the Fund has become a major investor in the group, notwithstanding numerous human rights and environmental allegations that the company faces. For the full list of the Fund's investments, see: <https://www.nbim.no/en/the-fund/investments/#/>
- ⁴³ Read more in Norway's country profile in the report: Seas at Risk (2021). *At a crossroads: Europe's role in deep-sea mining*. Brussels: Seas at Risk, 62-63. <https://seas-at-risk.org/publications/at-a-crossroads-europes-role-in-deep-sea-mining/>
- ⁴⁴ <https://www.gaiafoundation.org/organisations-academics-reject-extractive-eu-green-deal/>

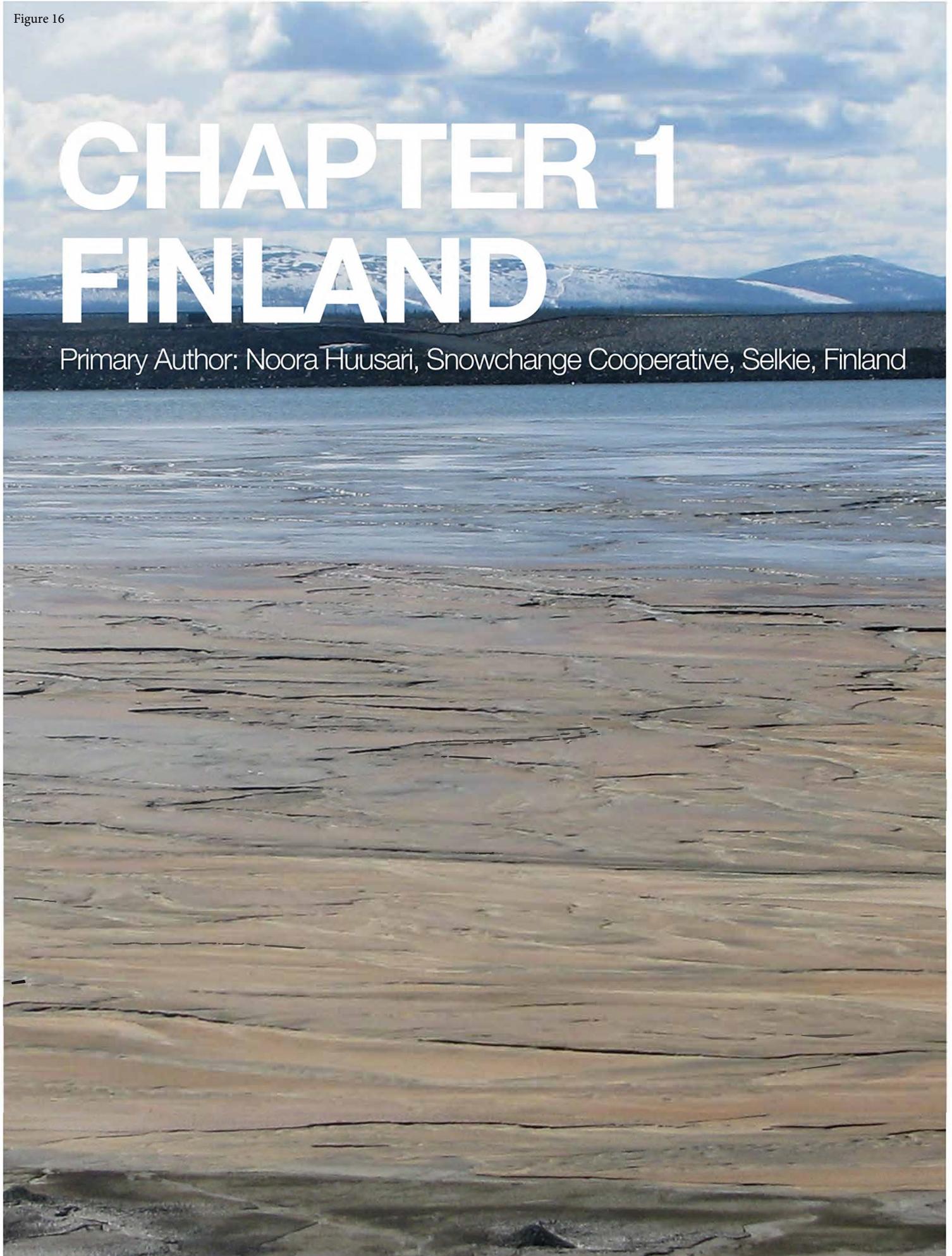
Images:

1. Kallak/Gállok, Sápmi/Sweden. Photo: Ignacio Acosta.
2. Kallak/Gállok clear cut forest for exploration by Beowulf Mining, Sápmi/Sweden. Summer 2017. Photo: Mose Agestam.
3. Kaunisvaara iron mine in Pajala, Sápmi/Sweden, in March 2018, closed after the bankruptcy of Northland. The mine heavily breached environmental permits. The mine has been reopened by Kaunis Iron in the summer of 2018. Photo: Ignacio Acosta.
4. Industrial facility, Malmberget/Málmavárre, Norrbotten County, Sápmi/Sweden. December 2017. Photo: Ignacio Acosta.
5. Talvivaara/Terrafame nickel-zinc-cobalt (uranium) mine, Kainuu, East Finland. May 2017. Photo: mirko nikolić.

6. Kalevala Gold exploration in Kiannanniemi, Kainuu, Finland. In summer 2017, the company made a trench extracting 200t without proper documentation. Subsequently, the tailings were stored longer than allowed in a nearby town. Photo: mirko nikolić.
7. “Mining industry for the future - No to dumping of mining waste into Norwegian fjords!” (banner). Youth summer camp in Førdefjorden, Norway. August 2015. Photo: Mina Røed / Natur og Ungdom.
8. “No mines here - thanks!” Skåne, Sweden. 2019. Photo: VetoNu.
9. Protest against Dragon Mining’s gold mine in Kaapelinkulma, Finland. January 2019. Photo: Susanna Myllylä.
10. Hydropower dam on Luleälven/Julevädno (Lule River), Ligga/Liggá, Norrbotten Country, Sápmi /Sweden. March 2017. Photo: Ignacio Acosta.
11. Camp in Kallak/Gállok against Beowulf Mining iron mine project, in the municipality of Jokkmokk/Jåhkåmåhkke/Dálvvadis, Sápmi/Sweden. Summer 2017. Photo: Kolonierna.
12. Campaign material from the Kallak/Gállok campaign. Summer 2013. Source: Kolonierna.
13. “Do not pollute our future” (banner). March against sea dumping in Repparfjorden/Riehppovuotna the Sámi National Day. The Parliament at Oslo, Norway. February 6, 2016. Photo: Mina Røed / Natur og Ungdom.
14. Manifestation for “Fast mark, rent vatten och levande kulturarv” (‘Firm ground, clean water and living cultural heritage’). Sergelstorg, Stockholm. April 27, 2019. Photo: mirko nikolić.
15. “Give us a mining industry for the future! No to mining waste in Norwegian fjords!” (Banner). Civil disobedience training camp in Repparfjorden/Riehppovuotna, Sápmi/Norway. June 2014. Photo: Mina Røed / Natur og Ungdom.

CHAPTER 1 FINLAND

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Finland and Sápmi in Finland

Active mines and exploration

July 2021

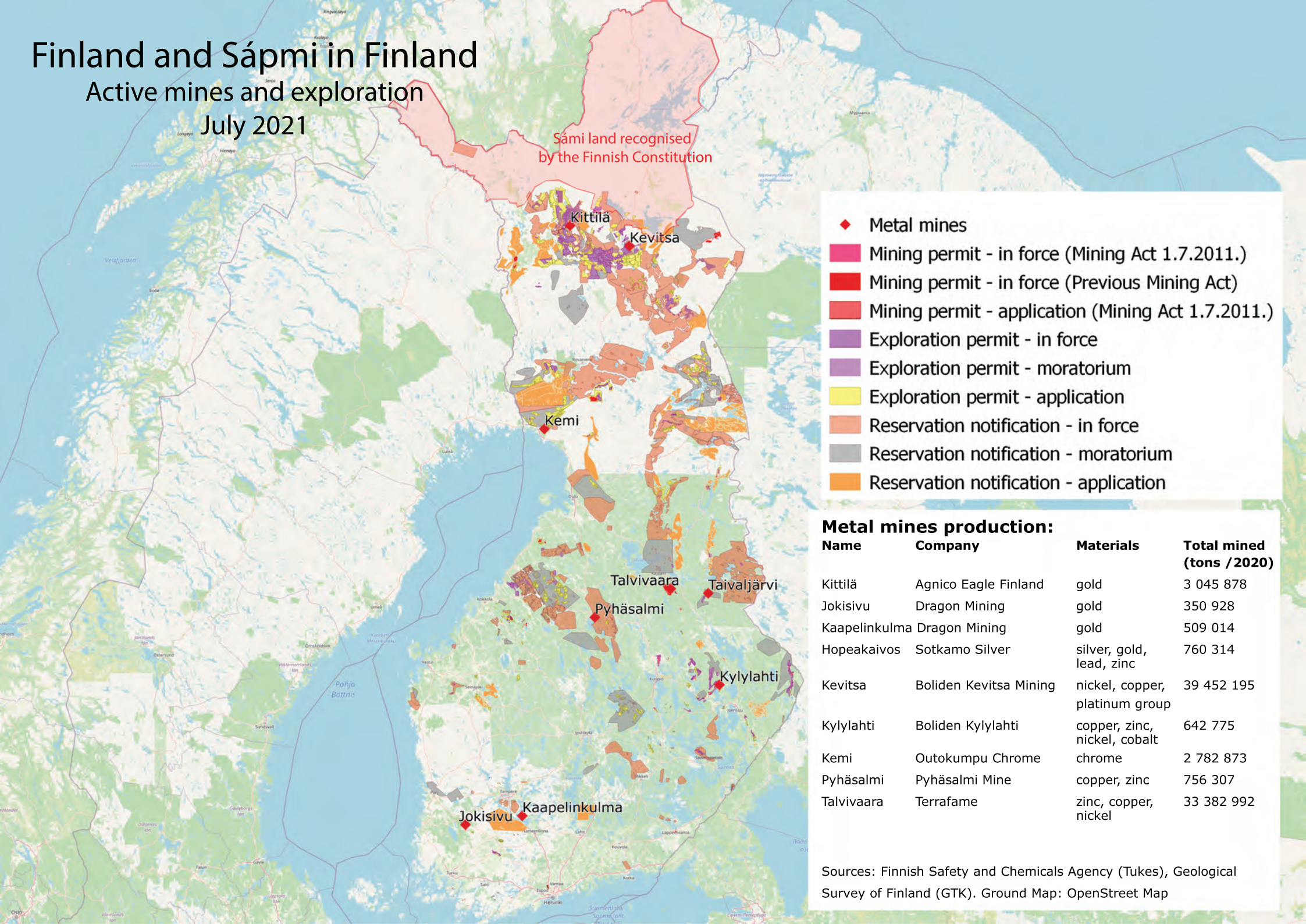


Figure 16



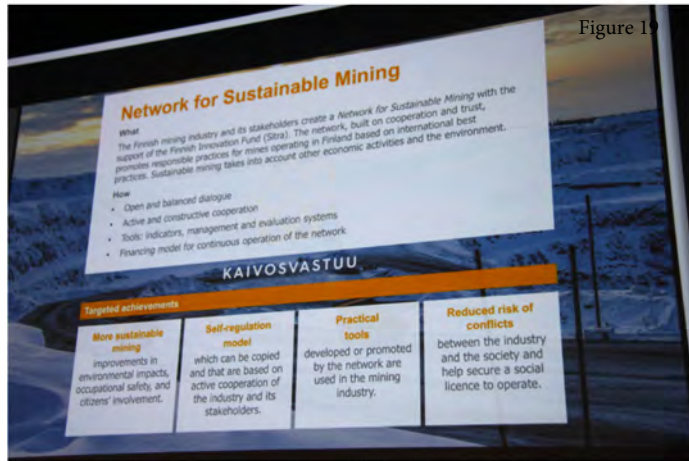
Mining scope, operations and policy

Since the mid-2000s, Finland has experienced a 'mining boom.' Metal mining, measured in volume extracted, increased from less than 5 million tons in 2006 to more than 95 Mt in 2018 (inclusive of metallic ore and waste rock from primary production).⁴⁵ In 2019, there were 11 metallic ore mines and 33 industrial mineral mines in operation.⁴⁶

Current mineral exploration, applications for exploration permits as well as reservation areas are strongly focused on Northern Finland, reaching into the Indigenous People's Sámi Homeland.⁴⁷ The Mining Act (621/2011) allows any company to reserve an area – even inside conservation areas – for preliminary investigations simply by notifying the mining authority Tukes (Finnish Safety and Chemicals Agency). If ore is found, ownership of the ore belongs to the finder.⁴⁸

As of end of 2019, approximately 11 % of Finland's total land area has been reserved for mining exploration.⁴⁹ Even though the zoning of these areas as mining concessions does not guarantee mining will take place, it provides mining corporations with an advantage in dictating future land use in an area, especially when the Finnish state's pro-mining stance is taken into account.⁵⁰

In 2019, more than 80 % of total mine production took place in the country's three largest mines: Kevitsa nickel, copper and platinum group minerals mine in Sodankylä, owned by the Swedish Boliden; Talvivaara zinc, copper and nickel mine in Sotkamo, owned by the Finnish Terrafame (a mainly state-owned company), and Siilinjärvi phosphate mine, owned by Norwegian company Yara.⁵¹



Since the new Strategy was adopted, Finland's mining sector has benefited from financial support from various government funding programmes, such as the 'Green Mining' Programme backed with more than €100 million of public money between 2011 and 2016.⁵⁷ In 2020, the Government decided to fund Finnish Minerals Group (a state-owned company that itself owns 3 mining companies) with €150M, as well as providing €300m to the Finnish battery industry.⁵⁸

There is strong political will behind the battery industry, which is presented as providing new jobs, economic growth as well as low-carbon solutions, in particular electric vehicles.⁵⁹ Finland is the only EU country whose bedrock contains all the major minerals required for battery production.

Finland is the only EU country whose bedrock contains all the major minerals required for battery production. Three mines in Finland are already extracting some of these metals, and several projects are being developed to further exploit these reserves, such as a large planned lithium mine in Kaustinen, Western Finland.⁶⁰

Finland's national mining policies are in keeping with the EU's own raw materials strategies, which promote extracting 'critical minerals' from European sources in order to increase security of supply.⁶¹ The twelve among the so-called 'critical minerals,' listed and prioritised by the EU Commission, have been found in Finnish bedrock. Of these, cobalt, platinum group metals and phosphate rock are already extracted in Finland.⁶²



Resistance to mining



Figure 22

In Finland there are instances where a mine has successfully been integrated into local life and enjoys wide local support.⁶³ More often than not, however, this is not the case. The mining industry typically operates with low levels of community participation and the views from local people often go unacknowledged.⁶⁴

Resistance to mining in Finland dates back to 1918, when local people started expressing their concerns about environmental degradation at the Outokumpu multi-metal mine in North Karelia, eastern Finland.

Outokumpu, which operated from 1910 to 1989, became the dominant player in the Finnish mining industry during the 20th century, both in size and political influence. It was also the cause of major environmental degradation. Waste water and emissions from the mine have completely contaminated the nearby soils and waters. As a result of the mine's operations, local people's drinking water became undrinkable and the air toxic to breathe. Over the decades, community concerns grew, but the state-owned company refused to communicate with local people. Neither did the authorities seem to consider the operations of the company problematic.

Figure 23



When cyanide was discovered in groundwater near Outokumpu in the 1960s, the company resorted to underhand tactics to protect its reputation. It presented the people who had exposed and spoken out against the contamination as disturbed and instigated a campaign of intimidation against them by publicly announcing their names as people opposing progress.

Local resistance to Outokumpu developed into a social movement and in the early 1960s citizens took the company to court. After a long legal process, in 1966, the company was ordered to pay compensation to local landowners. As a result of local resistance and negative publicity from the court cases, Outokumpu started investing in developing more environmentally cautious mining technologies.⁶⁵

The impacts of the company's operations across Finland have persisted long after this legal victory, however. In South-West Finland, tailings from the closed copper mine that Outokumpu ran from 1945-1956 continued to severely impact the local lake ecosystem until the 2000s. Acid mine drainage pollution caused by Outokumpu mining operations near Lake Orijärvi remain unresolved.⁶⁶

Outokumpu's court defeat affected the whole Finnish mining sector. Companies started paying more attention to the environmental impacts of mining. The case also caused a generalised suspicion towards mining in North Karelia.⁶⁷ However, it was another, much later mining disaster that highlighted the destructive pitfalls of mining at a national level.

Figure 24



Talvivaara is the second largest mine in operation in Finland. Located in Kainuu region, excavations at the mine account for nearly 30 % of the total excavations of the whole Finnish mining industry.⁶⁸ Shortly after operations began at the mine in 2008, local people began reporting foul smells emanating from the mine site.

In 2010, the first wastewater leakage from the mine was detected. From this point onwards, one disaster followed another, with multiple leaks from tailings ponds contaminating the ecosystem. In one of these leaks, some 1.2 million cubic metres of water and sediment containing heavy metals leaked, with about 240,000 cubic metres pouring outside of the mine area.⁶⁹

A mine that had promoted itself as utilising innovative technology, became responsible for one of the most severe environmental disasters in Finnish history.

The case of Talvivaara catalysed nationwide mining resistance in Finland, coalescing a movement: *Stop Talvivaara Vesistöjen puolesta/Stop Talvivaara: For the lakes and rivers*. In 2012, demonstrations took place across Finland. Hundreds of statements and requests for action were sent to different authorities. After bankruptcy in 2014, the company was restructured into a majority state-owned enterprise, now called Terra-fame. Many issues still remain unsolved, including long-term profitability, uranium licensing and the mine's lasting impacts on water quality and aquatic ecosystems.⁷⁰

Across Finland there are 25-30 groups opposing mining operations.⁷¹ The growth of this resistance is primarily a response to the rapid expansion of mining, the entry of foreign mining companies, and failures in the management of environmental impacts.⁷²

One recent and particularly intense example of an anti-mining struggle took place in Valkeakoski, Southern Finland. There, a group of local people, supported by activists from other parts of Finland, stood opposed to Australian company Dragon Mining's plans to open its third gold mine in Finland in close proximity to a Natura 2000 conservation area.

Figure 25



The movement against the mine demanded that mining processes be halted until the impacts on local water systems were properly assessed. Finnish authorities had not required an environmental impact assessment (EIA) for the project due to the fact that the company declared overall production amounts would come in below the level (550 tonnes) that triggers the need for an EIA.⁷³

Local newspaper media reports alleged that Dragon Mining had declared, via the Hong Kong stock exchange, that it would utilise all gold from the mine before the authorities could attend to the complaints made by local residents.⁷⁴ These reports also revealed that the same company had secretly operated an illegal underground landfill at Orivesi, one of its other Finnish underground gold mines. In 2020, a leading expert working for Finnish mining authority Tukes was arrested for serious abuse of office in relation to this offence.⁷⁵

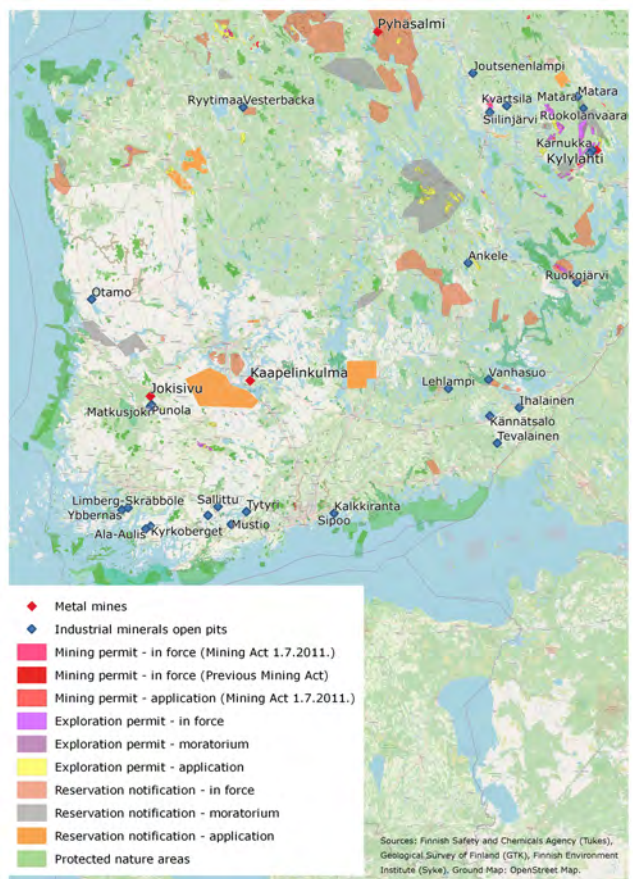
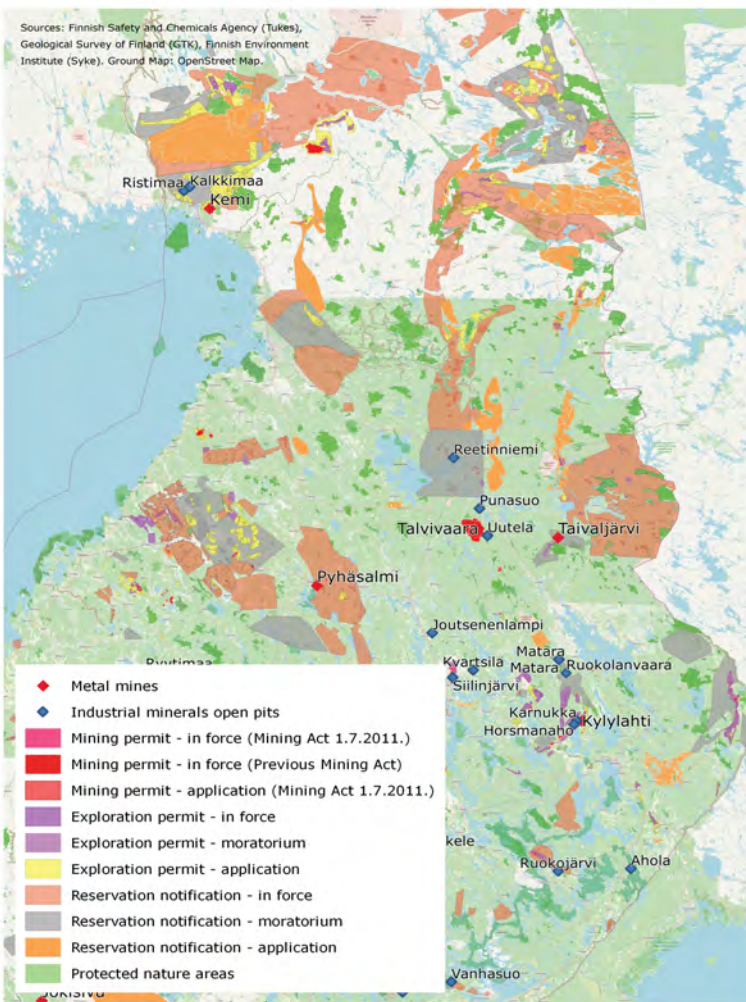
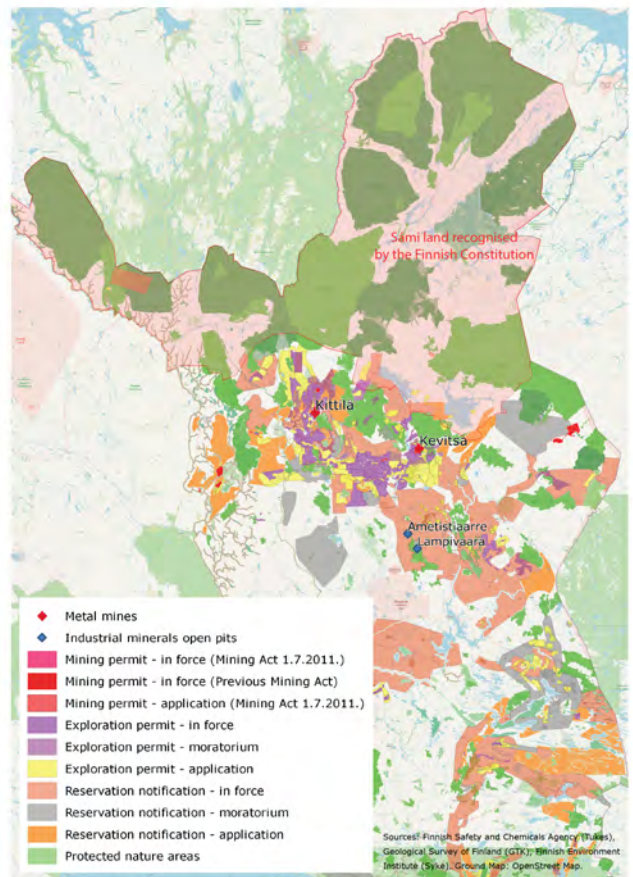
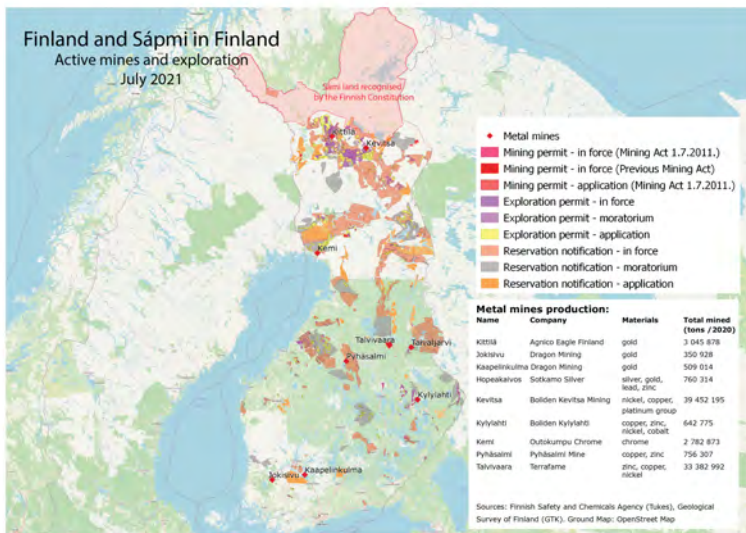
The movement in Valkeakoski utilised numerous resistance strategies, combining official complaints, petitions and civil disobedience, which has been rarely seen in the context of mining resistance in Finland. A protest camp was even set up nearby the mining area in bitterly cold and snowy winter conditions in 2019. Despite this resistance, the mine was opened in 2019.

The expansion of the mining industry across Finland and into some of Finland and Europe's most critical ecosystems has translated into a generalised national and local concern that pristine natural ecosystems will be lost to the industry. The Lake Saimaa Region - one of the most iconic lake ecosystems in Finland and Europe - is threatened by multiple mining plans.⁷⁶ Meanwhile, in Sodankylä, Europe's richest copper and nickel discovery has been made beneath the Viiankaapa peatland, which is a Natura 2000 site and also enjoys protection under national conservation programmes.⁷⁷

Due to the potential destruction of ecosystems by mining, the industry is increasingly seen as putting nature-based tourism at risk. This is most obvious in cases of mining resistance in locations like Kuusamo⁷⁸ and Ylläs,⁷⁹ where nature-based tourism represents a major source of income for local people.

Finland's mining movements are increasingly interrelated, learning from one other through wide informational networks.⁸⁰ In 2017 a national collective platform, Kansalaisten kaivosvaltuuskunta - MiningWatch Finland, was formed to bring together and support mining affected communities and action groups by sharing technical, scientific and legal knowledge related to mining issues.⁸¹

An citizens' initiative - Kaivoslaki NYT (Mining Act NOW) - is seeking urgent reforms to Finland's current Mining Act. More than 58 000 signatures were initially collected in support of the initiative. This was enough to secure consideration of the reforms in the Finnish Parliament. The initiative was rejected, but as of 2021 amendments to the current Mining Act are being drafted, reflecting the campaign's partial success.⁸²



Active Mines and exploration

Top Left: Full Finland Map

Top Right: Northern Finland

Bottom Left: Central Finland

Bottom Right: Southern Finland

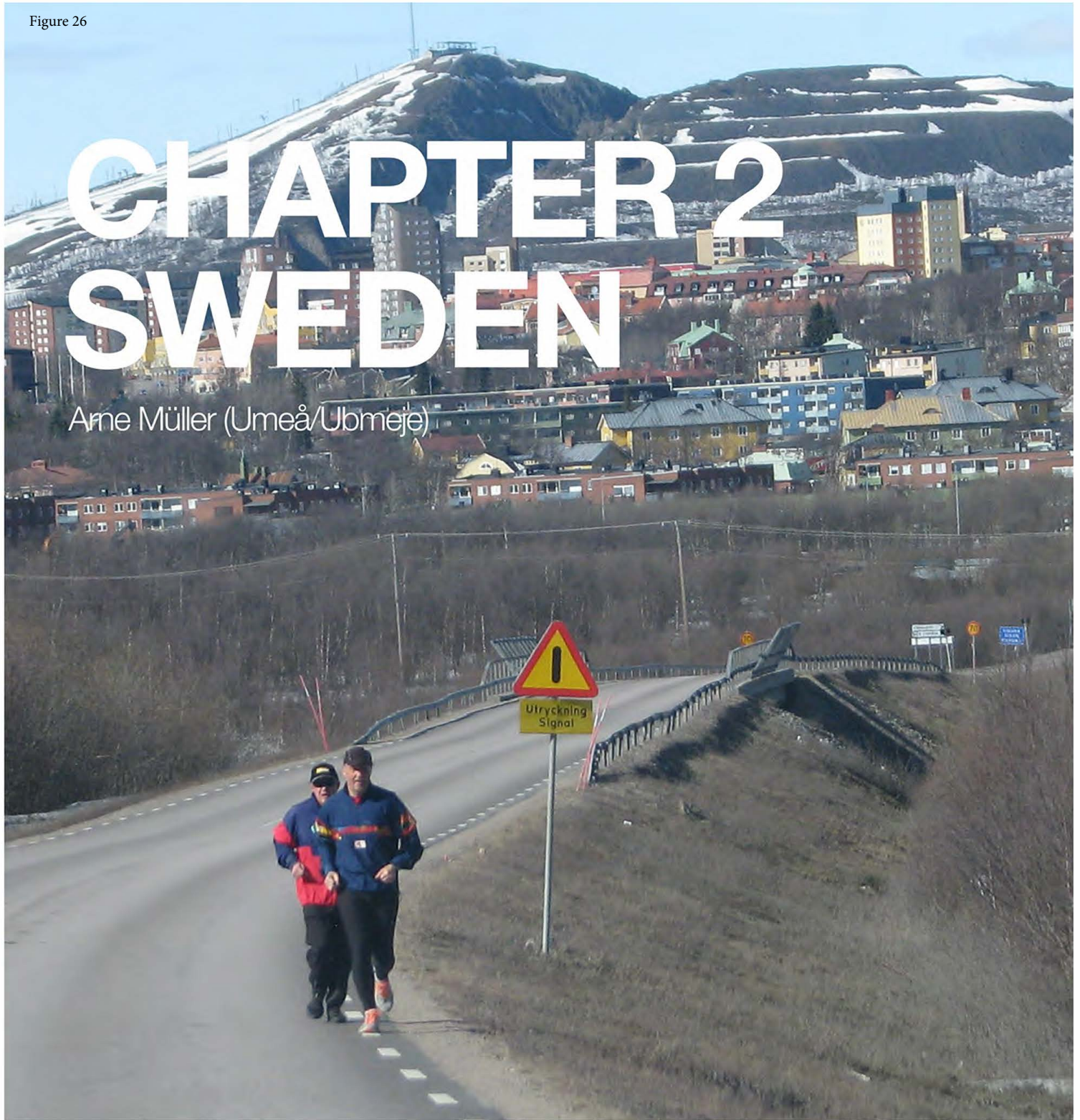
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Images:

16. Presentation of Outokumpu, one of the largest steel producers in the world, with a long mining history. The largest shareholder is the Finnish state. Photo: Svein Lund.
17. Diamond project in the forest near Kuusamo, North Ostrobothnia, by Arctic Star Exploration (TSX Venture Exchange-listed). August 2019. Photo: mirko nikolić.
18. View of the tailings of Agnico Eagle gold mine in Kittilä. In the background, Levi winter sports center. Photo: Svein Lund.
19. Kaivosvastuu or Network for sustainable mining, a collaboration between Finnish mining companies and a number of organizations, including the Finnish Society for Nature Conservation. From the presentation at the mining conference Finnoscandian Exploration and Mining in Levi, Finland 2015. Photo: Svein Lund.
20. From the operation site of Dragon Mining's gold mine in Kaapelinkulma. April 2019. Photo: Pelastetaan Kaapelinkulma.
21. Talvivaara mine processing pool. Photo by Tommi Taipale, still from the documentary *Nälkämaan sampo* ('The Land of Mine'), 2016, dir. Mika Koskinen.
22. STOP Talvivaara protest at Helsinki. Still from the documentary *Nälkämaan sampo* ('The Land of Mine'), 2016, dir. Mika Koskinen.
23. STOP Talvivaara activist being thrown out from Tampere Euro Trade Fair, . Still from the documentary *Nälkämaan sampo* ('The Land of Mine'), 2016, dir. Mika Koskinen.
24. Action against Dragon Mining's gold mine project in Kaapelinkulma. Valkeakoski, March 2019. Photo: Pelastetaan Kaapelinkulma
25. Protest against Dragon Mining's Kaapelinkulma gold mine project. Valkeakoski, January 2019. Photo: Pelastetaan Kaapelinkulma.

Figure 26



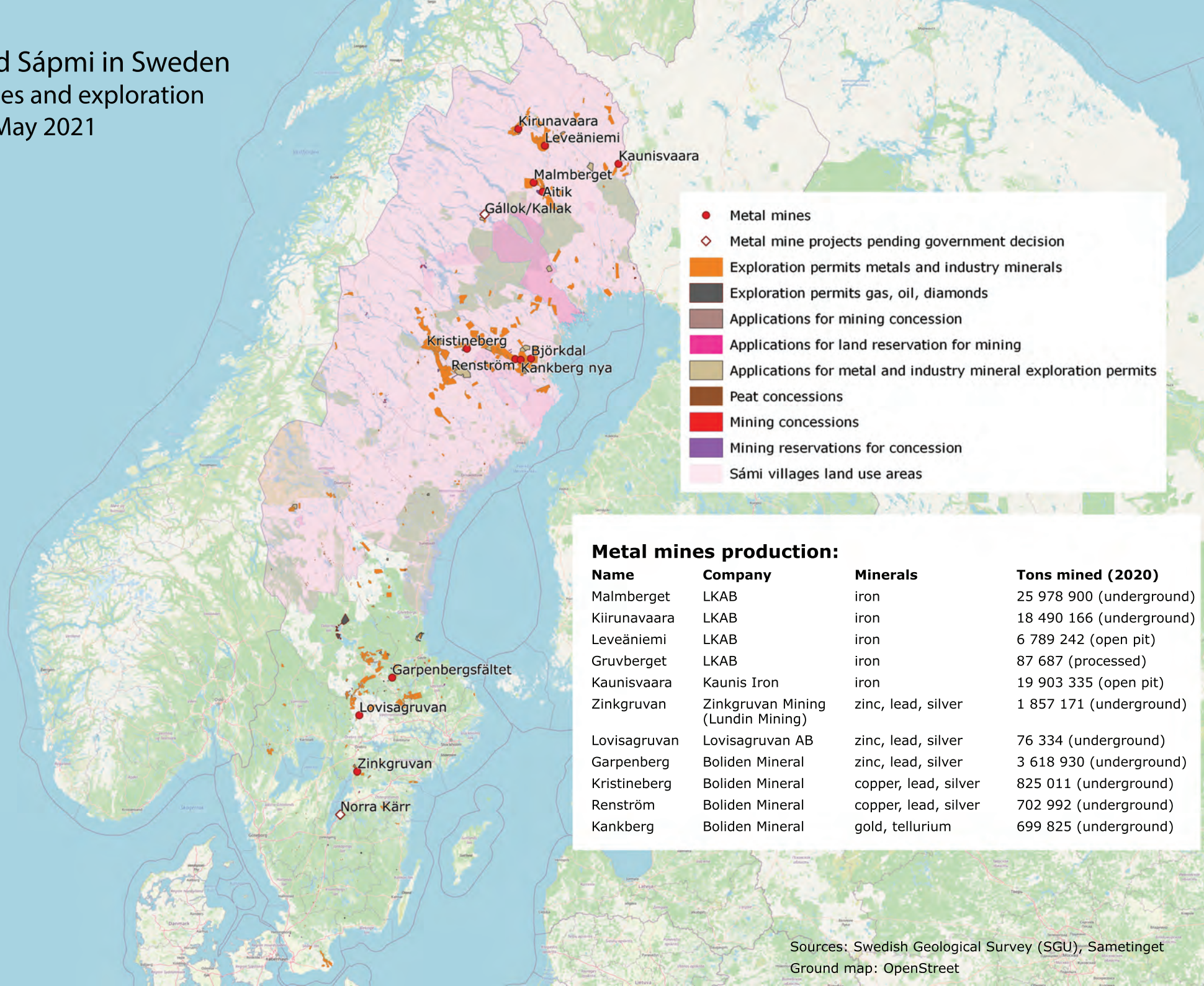
"Compared to other attractive mining regions in the world there is clearly lower popular acceptance of mining in Sweden."

This was one conclusion in a report from The Swedish Agency for Growth Analysis which raised concerns that public resistance could diminish Sweden's attractiveness as a site for mining investment. But how did Sweden become a country where there is such resistance against new mining projects?

Sweden and Sápmi in Sweden

Active mines and exploration

May 2021



Metal mines production:

Name	Company	Minerals	Tons mined (2020)
Malmberget	LKAB	iron	25 978 900 (underground)
Kiirunavaara	LKAB	iron	18 490 166 (underground)
Leveäniemi	LKAB	iron	6 789 242 (open pit)
Gruvberget	LKAB	iron	87 687 (processed)
Kaunisvaara	Kaunis Iron	iron	19 903 335 (open pit)
Zinkgruvan	Zinkgruvan Mining (Lundin Mining)	zinc, lead, silver	1 857 171 (underground)
Lovisagruvan	Lovisagruvan AB	zinc, lead, silver	76 334 (underground)
Garpenberg	Boliden Mineral	zinc, lead, silver	3 618 930 (underground)
Kristineberg	Boliden Mineral	copper, lead, silver	825 011 (underground)
Renström	Boliden Mineral	copper, lead, silver	702 992 (underground)
Kankberg	Boliden Mineral	gold, tellurium	699 825 (underground)

Sources: Swedish Geological Survey (SGU), Sametinget

Ground map: OpenStreet



Figure 2

History of mining in Sweden

Mining has a long history in Sweden. The first mines were started almost 1000 years ago, when Bergslagen, a mining district in Central Sweden, became of great importance for the Swedish economy.

In 1635 a silver mine was started at Nasa-fjäll/Nássavárri. The Swedish State had high hopes that this and other mines in the North would produce big profits. These hopes to some extent explain why Swedish State strengthened its grip over a region inhabited by Sámi people during this historical period. Mining in Sweden continued to expand and, by 1750, 70 percent of the value of Sweden's exports came from iron ore.⁸⁴ The copper mine in Falun and a silver and lead mine in Sala were also of economic importance at that time.

While large iron ore resources in northern Sweden were known already in the seventeenth century, it was only at the end of the 19th century with the construction of the railroad to Gällivare/Jiellvárri and Kiruna/Giron that it was possible to start Sweden's largest mines, which remain active today. For example, in the 1920s Boliden began mining in Skelleftefalten, a region in which 30 mines have been subsequently been opened, with several still active.

After World War II, the number of mines in Sweden decreased sharply, from around 100 to 12 at the time of writing. But despite this decrease in the number of mine sites, this period has also seen a dramatic increase in ore production.

From 1950 to 1970 the total production of ore increased from 17 M tons to more than 40 M tons. This growth was checked for a time by periods of severe crisis for the mining industry. But since 2008, when 50 M tons of ore were produced in Swedish mines, ore production has increased again. In 2019, 86 M tons of ore were extracted.⁸⁶ This means that the average mine in Sweden today is more than 30 times larger than in 1950.

In 1991 The Swedish Government adopted a new Minerals Act, marking a decisive change in mining policy. The new legislation abolished the Swedish State's right to own 50 percent of new mining projects. In its place, a mineral fee (mineralersättning) has since been introduced. This grants 0.15 percent of the production value of a mine to the landowner and 0.05 percent to the state. In 2019, the income from the mining royalties to the state was 4 million SEK (Swedish crowns), approximately equivalent to just \$475,000 USD (US dollars).⁸⁷ The new law also made it possible for foreign companies to be active in exploration of mineral resources in Sweden.



Figure 28

After the passage of the new Mineral Act, several decisions were taken to make investment in Swedish mining more attractive. For example, geological data gathered by the Swedish geological survey (SGU) was made available to mining exploration companies.⁸⁸ The fees charged to get exploration permits in Sweden are rather low, as is the bar for application. In 2019, total state revenue from permits was around 10 million SEK in 2019. Applicants are not required to meet any rigorous requirements or have any specific qualifications.

The combination of these changes in legislation and increasing metal prices after the year 2000 led to a sharp increase in the number of applications for new exploration permits in Sweden. By the end of 2019, Sweden had 586 exploration permits covering 9250 km² ⁸⁹, equivalent to 2 percent of Sweden's surface area. The amount of money invested in mining exploration in Sweden has increased, with Swedish mining giants LKAB and Boliden holding the largest share of exploration concessions. In recent years, exploration has shifted to focus on so-called 'green transition' metals, including lithium, cobalt and vanadium.

Today the Swedish mining industry consists of two very different parts. On the one hand there are the big traditional mining companies like Boliden, Lundin Mining and state-owned LKAB. On the other, there is the large number of small exploration companies (close to 100 in 2019) prospecting in the country. Most of these small companies are not actively engaged in mining production. They are entirely dependent on the capital they can raise from investors and shareholders.

Environmental problems and land use conflicts



Mining – a sustainable business

Continued focus on attracting more women

Effective and reliable permitting so that new, necessary and climate-smart investments are possible

Access to fossil free electricity

Figure 29

Most of the environmental problems and offences in recent Swedish mining industry are connected with newer, smaller companies. Some examples include:

■ In 2006, Swedish company ScanMining started zinc mines at Blaiken and Svärträsk. The company operated for less than two years before it went bankrupt. Enormous environmental problems were discovered. Much larger volumes of metals than those declared by the company were found to be leaking into the river Juktån. The Swedish state is now paying for the cleaning up, which is expected to cost 400 million SEK (equivalent to 100 years of mining royalties at 2019 levels). One member of the ScanMining board was sentenced to prison for an insider trading violation.

■ In 2012, Swedish Northland Resources started an iron ore mine in Kaunisvaara close to the border with Finland. The company went bankrupt after two years, registering 14 billion SEK of debt, one of the biggest bankruptcies in Swedish industry.⁹⁰ Several serious violations of the environmental permit in the construction and operation of Northland's mine have since been discovered. These include the collapse of the mine's tailings pond and the discharge of polluted water into the Torne River due to the company's water-clarification impoundment being ten times smaller than applied for. Groundwater levels around the mine site also dropped by up to 16 m (not under one meter, as the company had stated).⁹¹

- Canadian company Blackstone Ventures was ordered to pay 800,000 SEK to Sámi reindeer herders for damages in connection with exploration work the company conducted in the Vindelfjällen nature reserve. The company closed their Swedish office without paying their debts.⁹²
- Mining company IGE/Nickel Mountain was acquired by new owners – Amarant Mining – with a head office in Abu Dhabi. After a police investigation it became evident that the new owners had illegally transferred 50 million SEK to another company. Two board members were sentenced to prison for this offence.⁹³

In addition to these major cases, mining companies have been responsible for many other offences. For example, mining exploration sites that have not been cleaned up properly.

The involvement of smaller mining companies in these cases does not mean that larger, traditional mining companies have not caused environmental problems.

Sweden's largest ever mining disaster occurred at Boliden's Aitik Mine. On September 8, 2000, the tailings dam of Boliden's Aitik copper mine near Gällivare/Jiellevárri in northern Sweden failed over a length of 120 meters. This resulted in the spill of 2,5 million cubic meters of liquid into an adjacent settling pond. Boliden subsequently released 1,5 million cubic meters of water from the settling pond into the environment, including the Vasara River, to secure the stability of the settling pond.⁹⁴

State mining company LKAB has also face significant scrutiny for delays in the evacuation of Malmberget, whose inhabitants have for decades been severely affected by the expansion of the mine beneath the town.⁹⁵

A growing protest movement



Figure 30

New mining projects are causing a growing number of land use conflicts in Sweden. This can be explained by the increased size of the new projects and the fact that many are located in the north of Sweden where the Sámi people, on paper at least, have strong rights to the land.

Sámi organisations' sharp resistance to mining projects must be seen and understood in the context of the many, accumulative pressures on Sámi lands and livelihoods caused by different kinds of natural resource projects over a long time period.

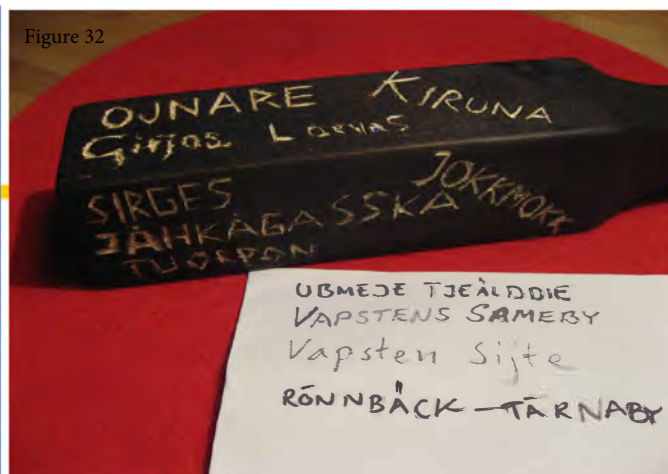
Expanding industrial forestry, hydropower use, roads and, in recent years, construction of wind farms have all already limited the space available for the Sámi to practice their life-ways, including reindeer herding. Meanwhile, in southern Sweden, mining projects have caused conflicts because they clash with the local farming and tourism economies, as well as with community water use and access.

One relatively early conflict developed around 2010 in Bunge, in the northern part of Gotland, where a company called Nordkalk planned to start a limestone quarry.

Figure 31



Figure 32



There were already several quarries on the island, but Nordkalk's project generated greater environmental concerns as it would affect the Ojnareskogen forest and could affect water balance in Lake Bästeträsk. Having secured a permit, in the summer of 2012 the company started felling the forest. In response, a coalition of people living in the area, supported by environmental organisations, organised a blockade, protecting the forest until a ruling from the Swedish Supreme Court temporarily stopped Nordkalk's operations. Around that time, the Swedish Government decided to grant Bästeträsk greater protection, designating it an EU Natura 2000 site. After a long legal process in which the company tried to challenge this decision, and the environmental authorities and environment NGOs tried to stop the quarry, the plans for the quarry were finally stopped in 2019. Ojnareskogen forest was a vital symbol for the campaign, helping a protest movement develop and building connections between Sweden's north and south.

Also in 2010 but further north in Sweden, IG-E/Nickel Mountain was advancing plans for a 600Mt nickel ore mine in Rönnebäcken/Raavrhjohke, in the mountains south of the village of Tärnaby. In response to these plans, a network called 'Stoppa gruvan i Rönnebäck' was formed and gained support in the wider region of Västerbotten. Anti-mining protests in different forms were held and appeals were made against the mining permits. As a result, the companies plans were delayed until 2012, by which time the price of nickel had fallen to a level that made it impossible for the company to secure financing for the project. After being alerted to this case by the Sámi village Vapsten, the UN Committee on Racial Discrimination criticised the Swedish state for its failure to implement an adequate consultation of the Sámi living in Vapsten as part of the permitting process. This failure will have implications for other mining projects in Sámi traditional territories.

Figure 33



Further north, in 2013 UK-registered company Beowulf Mining received a permit for test mining iron ore in Kallak/Gällöck. In response, from May to the beginning of September, a blockade was organised by Sámi organisations, local people and environmental organisations. Finally, it was removed through a large-scale police operation. But by then the protest had received a lot of attention in national media, becoming a symbol of the conflict between mining companies on one hand, and environmental and Sámi interests on the other. After a long process it is now up to the Government to decide whether to uphold the mining permit. The two parties in the Swedish Government, the Social Democrats and the Green party, disagree on this issue, and the Government has asked UNESCO for an opinion about the effects the mine would have on the World heritage of Lapponia.⁹⁸

To proceed, the mine will also require a permit from the Land and Environment Court, in accordance with Sweden's Environmental Code.

The fourth of the early protest movements evolved in the years around 2010, in Norra Kärr, southern Sweden. Not far from the lake Vättern, one of Europe's largest deposits of rare earth elements (REE) in was found. The Canadian company Tasman Metals (name since changed to Leading Edge Materials) applied for a mining permit for an open pit REE mine in 2012. The company's plans have met strong resistance in the whole region. A number of meetings with hundreds of participants have been held and pressure has been building on local politicians and authorities. The main concern raised at these meetings is the planned mine's potential effects on water systems, as Lake Vättern is the second largest lake in Sweden, and one of North Europe's largest drinking water sources.⁹⁹

Legal actions brought by a local coalition between the Swedish Society for Nature Conservation, Aktion Rädda Vättern and Urb-ergsgruppen Grenna - Norra Kärr led to a legal precedent of great importance to the whole industry. Sweden's Supreme Administrative Court decided that the Government had made an error, according to the Minerals Act, when they granted the exploitation concession. In the initial decision to grant the concession, only the effects for the land use of the actual open pit were considered by the mine's Environmental Impact Assessment.



Figure 34

Whereas the court's ruled that the decision about whether to grant a concession to the company should have been based on a consideration of the total land use of the mine, including waste rock deposits, tailing facilities and concentrator.¹⁰⁰ The court ruling also stated that a mine that may cause significant harm to a Natura 2000-site needs a special permit for that before a permit according to the Minerals Act may be granted. After this decision was handed down, several other mine permitting processes had to be restarted, including those at Kallak/Gällöck and Laver. No new decision has been made on the mining permit for Norra Kärr.

Since the first wave of mining resistance in Finland, a number of networks and local groups have emerged and begun to organise, including initiatives to coordinate at the national level, among which Urbergsguppen, which works across the country.¹⁰¹

Beyond localised mining struggles, the VetoNu network is actively making efforts to "change the Mineral Law so that municipalities, county councils, local communities and indigenous people are given the right to say no."¹⁰² In recent years, the largest environmental organisation for nature conservation in Sweden, has also been involved in coordinating with the protest movements against mining projects.

Another very active protest movement has emerged in recent years in the eastern part of Skåne, a region where agriculture and tourism are of great importance. Mining company Scandivanadium's has applied for 11 exploration licenses for vanadium, covering 220 sq km in the region. These prospecting efforts were immediately met with strong opposition by the VetoNu network. Large protest meetings were held and through coordinated efforts more than 350 appeals opposing the mine were handed in- a new Swedish record.¹⁰³ These appeals have delayed Scandivanadium's exploration activities. Only a few holes in a small part of the area have been drilled so far. Worth mentioning is that the company initially presented itself as a part of the 'green transition', as vanadium can be used for stationary battery storage. However, the company has since taken a change in direction and is now also exploring for gold in Australia. Gold mines are certainly not part of the 'green transition.'



Discussion about alternatives to mining

In Sweden there is a growing discussion about the alternatives to opening new mines when it comes to sourcing the materials necessary for renewable energy and other green technologies. Communities and networks resisting mining have become leading advocates on this topic.

The first alternative promoted by groups protesting against mining is that recycling must be improved. Most of the metal contents of batteries and other green technologies is technically possible, but in the case of many metals, like lithium, recycling rates are very low.¹⁰⁴ In a potentially positive move, battery manufacturer Northvolt is building a recycling plant close to its battery factory in Skellefteå.

The second alternative put forward by advocates of non-extractive solutions is to revalorise the metals contained in mine waste.

The Swedish Geological Survey produced a report on this subject that showed that the mine waste at mines in Sweden contains the equivalent of 3,5 years of Swedish mine production of copper, 5 years of zinc and 8 years of lead.¹⁰⁵

There has also been much discussion about 'urban mining.' Research has shown that there is major potential for metal recovery from landfills and from pipes and cables that are no longer used in urban areas.¹⁰⁶

Beyond recycling and revalorising metals from waste, there is a growing discussion in Sweden about how to economise and reduce the use of metals in total.¹⁰⁷ For example, discussions are emerging that question the current logic underpinning the transition to electronic vehicles. Many groups are now arguing it might not be enough to transition to EVs, but that these vehicles also need to be smaller and that it is necessary to turn around the long-term trend of increasing numbers of cars on Swedish roads.

CONCLUSIONS

Despite major resistance to mining across the country, the majority of the parties in the Swedish Parliament support a pro-mining agenda. The centre-right Government that was in power in 2013 agreed on a Mineral Strategy that aims to rapidly expand the mining industry. According to this strategy document there could be 50 mines in Sweden in 2030.¹⁰⁸ Furthermore, there is an ongoing discussion on how to shorten the time for decisions on mining permits.¹⁰⁹ The strong support for a pro-mining agenda in Parliament will likely remain in the coming years.

On the other hand, local movements against mining projects have proved their strength over the last decade. Protests have delayed mining projects and made it harder for mining exploration companies to raise funds. In some cases, these companies have abandoned projects.¹¹⁰ These protests and a more lively public discussion led by local movements seems also to have influenced authorities and politicians on a local and regional level.

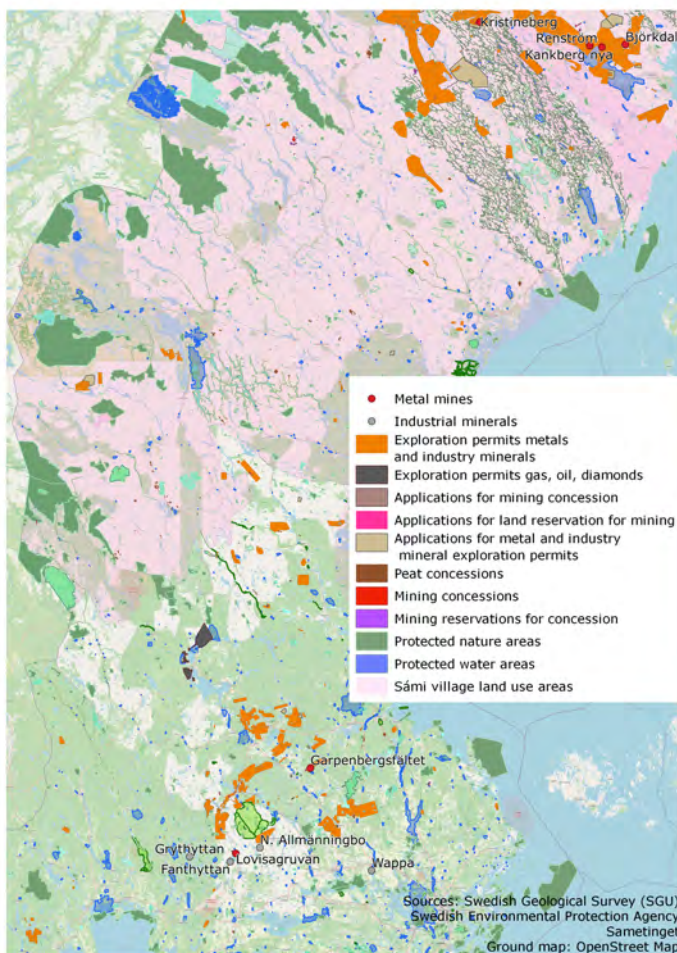
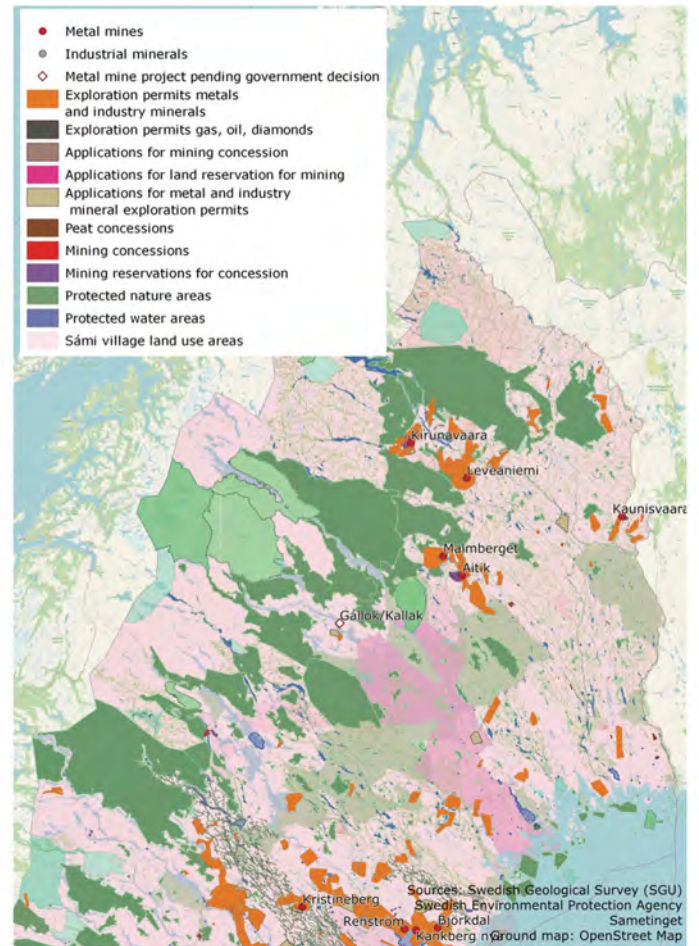
Figure 38



Figure 39

Until 2012 almost all mining licenses were approved by the Mining Inspectorate, however, the County Administrative Boards, who have an important consultation role, have rejected a few applications. This is, for example, the case when it comes to the proposed mines in Kallak, Laver and Norra Kärr. This puts the government in a difficult position. The County Administrative Boards represent the state on a regional level, so it is not easy for the central state to get support for a decision that differs from the one made by a County Administrative Board. There have also been splits within the parties concerning mining projects along regional and national lines.

There are several strong local organisations opposed to mining projects and these organisations are increasingly well-connected. If the present Government, the next Government, or the Swedish courts give a green light to some of the most controversial projects (Kallak/Gällö, Norra Kärr), it is likely that there will be even bigger and sharper protests than in Ojnarensko, 2012, and Kallak/Gällö, 2013.¹¹¹



Active Mines and exploration

Top Left: Full Sweden Map

Top Right: Northern Sweden

Bottom Left: Central Sweden

Bottom Right: Southern Sweden

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- ⁹³ Müller, A. (2019) *Elbilen och jakten på metallerna*. Skellefteå: Ord & Visor förlag, p. 48.
- ⁹⁴ See: <https://www.wise-uranium.org/mdafai.html>
- ⁹⁵ Müller, A. (2019), pp. 55-81.
- ⁹⁶ Editor's note: In order to start a quarry in Sweden the company needs a permit according to the Swedish Environmental Code. In order to start a mine one needs an exploration permit and an exploitation concession according to the Minerals Act and a permit according to the Environmental Code.
- ⁹⁷ UN Committee on the Elimination of Racial Discrimination. (2020, Dec 18) Opinion adopted by the Committee under article 14 of the Convention, concerning communication No. 54/2013. https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=CERD%2F2013%2F54&Lang=en
- ⁹⁸ Beowulf Mining press release. (2020, Nov 27) Kallak Update. <https://news.cision.com/se/beowulf/r/kallak-update.c3245022>
- ⁹⁹ Editor's note: Lake Vättern provides water to 500,000 people today, and in near future, with connection to larger cities, up to 2 million citizens are planned to depend on it for water supply. The proposed mine would be situated 1,5 km from the steep shoreline of the lake, 120 meters height above the lake, in an area where there are hundreds of homes and businesses, and people have lived for many generations.
- ¹⁰⁰ Hösta förvaltningsdomstolen (2016, Feb 22). Mål 2047:14. <https://www.domstol.se/hogsta-forvaltningsdomstolen/avgoranden/2016/43297/>
- ¹⁰¹ Urbergsgruppen. (2021) Webpage. <https://urbergsgruppen.se/>
- ¹⁰² VetoNu. (2021) Webpage. <https://vetonu.se/>
- ¹⁰³ Ystads allehanda. (2018, Dec 11) Författare: "Svenskt rekord i överklaganden." <https://www.ystadsallehanda.se/tomelilla/forfattare-svenskt-rekord-i-overklaganden/>
- ¹⁰⁴ According to the International Resource Panel (UNEP), in 2011 less than 1 percent of lithium has been recycled globally. (UNEP (2011), Recycling Rates of Metals - A Status Report. A Report of the Working Group on Global Metal Flows to the International Resource Panel. <https://www.resourcepanel.org/reports/recycling-rates-metals>) There is a growing work on the recycling of lithium-ion batteries, but the recovery of lithium is still lagging. When lithium-ion batteries are recycled, recovering lithium is considered "not cost-effective in comparison with primary supplies." In EU, in 2018, 52% of all waste portable batteries were not collected, and only 14 Member States met the 2016 collection target of waste portable batteries set at 45%. However, the currently applicable 2006 Battery Directive does not include specific provisions on lithium-ion batteries. The 2020 proposal for the new Battery Directive includes ambitious targets of 65% lithium-ion battery recycling for 2025, and 70% by 2030, with material recovery set for lithium at 35% (2025) and 70% (2030). (Commission Staff Working Document (2020, Dec 10), <https://ec.europa.eu/transparency/regdoc/rep/10102/2020/EN/SWD-2020-335-F1-EN-MAIN-PART-1.PDF>)
- As of 2020, it is estimated that there is almost no recovery of lithium from end of use products in EU. (European Commission, Study on the EU's list of Critical Raw Materials-Final Report(2020) <https://ec.europa.eu/docsroom/documents/42883/attachments/1/translations/en/renditions/native>)
- ¹⁰⁵ Sveriges geologiska undersökning. (15 Dec 2014) "Uppdrag att utföra en kartläggning och analys av utvinning och återvinningspotentialen för svenska metall och mineraltillgångar".
- ¹⁰⁶ Johansson, N. (2016) Landfill Mining: Institutional challenges for the implementation of resource extraction from waste deposits. Linköping university, Dissertation No 1799. <https://liu.diva-portal.org/smash/record.jsf?pid=diva2%3A1045630&dsid=-8576> ; Wallsten, B. (2015) The Urk World: Hibernating Infrastructures and the Quest for Urban Mining. Linköping university, Dissertation No 1720. <https://liu.diva-portal.org/smash/record.jsf?pid=diva2%3A872787&dsid=-8576>
- ¹⁰⁷ See, for example, Naturskyddsföreningen (Swedish Society for Nature Conservation). (2015) Mineralhierarki - en prioritering för mineralhushållning. (Mineral hierarchy - a prioritisation for mineral economisation). <https://www.naturskyddsforeningen.se/mineralhierarki>
- ¹⁰⁸ Näringsdepartementet (2013/2015) Sveriges mineralstrategi. För ett hållbart nyttjande av Sveriges mineraltillgångar som skapar tillväxt i hela landet Diarienummer: N2013.02. Regeringskansliet, p. 11.

¹⁰⁹ Müller, A. (2019), p. 114.

¹¹⁰ One example is the company Odin metals who abandoned a large exploration permit for gold in the region of Dalsland after meeting strong opposition from people living in the area and local politicians.

¹¹¹ SVT Nyheter. (2020, Dec 4) Gruvmotståndare beredda på strid: "Ska stoppa en gruva med civil olydnad." <https://www.svt.se/nyheter/lokalt/norrbottn/gruvmotstandarna-beredda-pa-strid>

Images:

26. View of Kiruna/Giron downtown, in the background looms LKAB's iron mine. Large part of the buildings in the picture are being closed, as part of the township is relocated due to the ground subsidence caused by the underground mine. Photo: Svein Lund.

27. Euro Mine Expo, mining industry conference and trade fair, Skellefteå, 2018. Photo: Svein Lund.

28. Canadian company Mandalay Resources, which runs a gold mine in Björkdal (Boliden mining district), organised "Lunch on sustainability" at Euro Mine Expo, Skellefteå, 2018. Photo: Svein Lund.

29. "Mining - a sustainable business." From the presentation of Zinkgruvan, subsidiary of Lundin Mining, at Euro Mine Expo, Skellefteå, 2018. Note that the company does not represent only itself, but the whole mining industry as sustainable. Photo: Svein Lund.

30. "Protect Ojnare Forest," campaign against Nordkalk's plans for a limestone quarry in the island of Gotland, June 2014. Photo: Kolonierna.

31. "Sámi village in the King's Garden in Stockholm." October 25, 2013.

32. On the United Nations Day in 2014 a delegation from the network Inga gruvor i Jokkmokk ('No mines in Jokkmokk') handed over a budkavle ('a bidding stick') that was carried from Ojnare forest in Gotland, via Kiruna/Giron and Jokkmokk/Jåhkåmåhkke/Dálvvadis to Tärnaby. The stick was received by Nätverket Stoppa gruvan i Rönnbäck i Björkvattsadalen, Tärnaby ('Network Stop the mine in Rönnbäck in Björkvattsadalen, Tärnaby'), together with representatives of Vapsten Sámi village, Vaapsten Sijte and Ubmeje tjeälddie. October 24, 2014. Photo: Stoppa gruvan i Rönnbäck.

33. "Demonstration mot gruvboomen" ('Demo against the mining boom'). Stockholm, 18 May 2014. Photo: Stoppa gruvan i Rönnbäck.

34. "Demonstration mot gruvboomen" ('Demo against the mining boom'). Stockholm, 18 May 2014. Photo: Stoppa gruvan i Rönnbäck.

35. "Protect the water!" Action against Tasman Metals' Norra Kärr Rare Earth Elements project, at historical Brahehus on the shores of Lake Vättern. Gränna, July 2014. Photo: Kolonierna

36. "No mines here - thanks!" Skåne, 2019. Photo: VetoNu.

37. "Now is the time for self-restraint! Green jobs and recycling!" (banner on the right) Manifestation for "Fast mark, rent vatten och levande kulturarv" ('Firm ground, clean water and living cultural heritage'). Sergelstorg, Stockholm, April 27, 2019. Photo: Stoppa gruvan i Rönnbäck.

38. Boliden has been planning a giant copper mine, with only 0.2% Cu grade, in Laver, Norrbotten, Sápmi/Sweden. The area in the picture would be covered by a tailings facilities, and the valley would be closed by a dam in each direction. Following the votes against the project by the County Administration, and a negative appraisal by Bergstaten (Mining Inspectorate), the Government refused the project in December 2020. The picture is from a presentation for the participants at a mining conference in Umeå/Ubmeje, arranged by Naturskyddsföreningen (Swedish Society for Nature Conservation) and Samernas Riksförbund (Sámi National Association). Photo: Svein Lund.

39. Protest against Beowulf Mining's iron project in Kallak/Gálllok, in the municipality of Jokkmokk/Jåhkåmåhkke/Dálvvadis, Sápmi/Sweden. December 2016. Photo: Mose Agestam.

CHAPTER 3

NORWAY

part of the 'green shift' or destruction of nature and livelihoods?

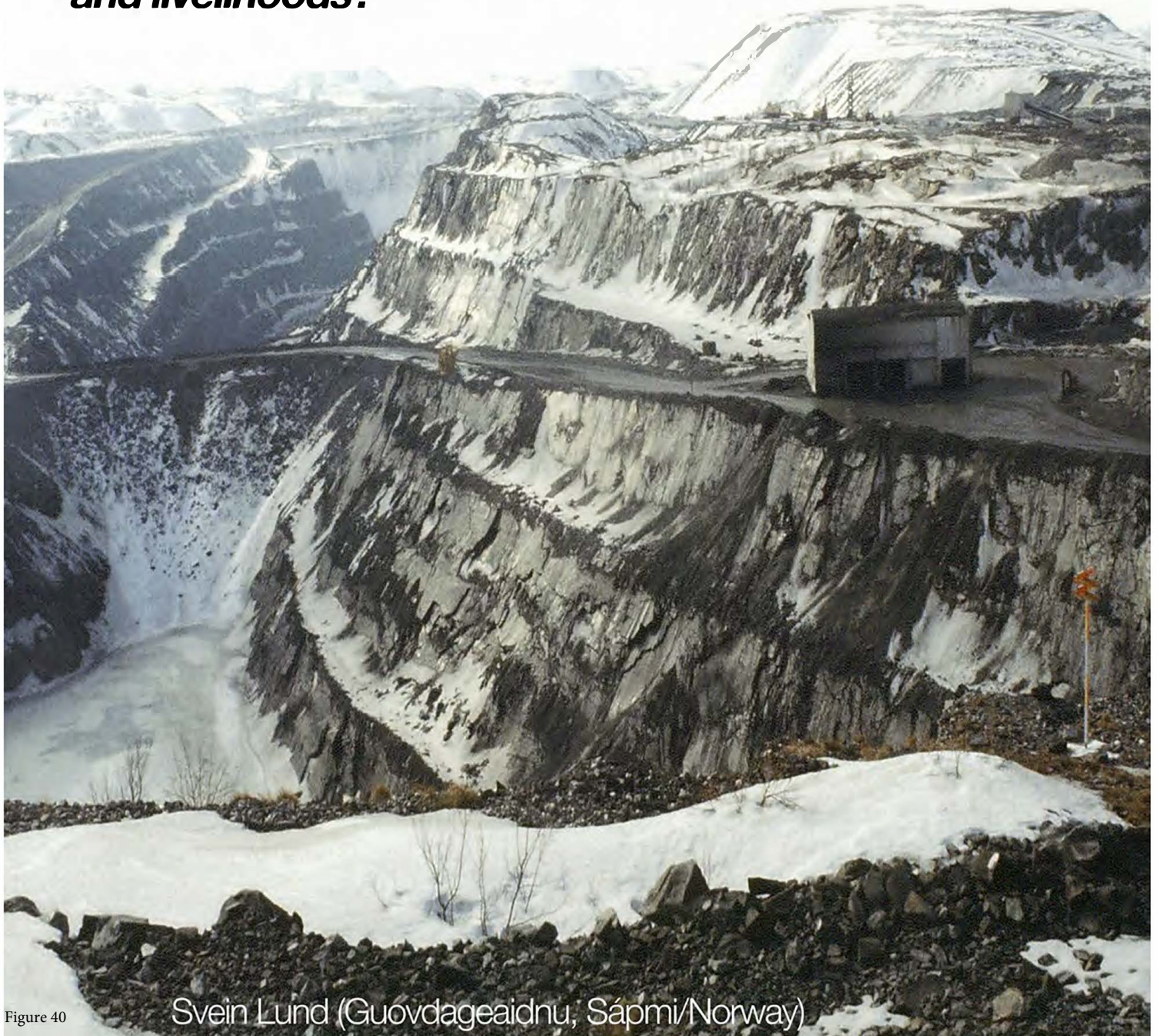


Figure 40

Svein Lund (Guovdageaidnu, Sápmi/Norway)

Norway and Sápmi in Norway

Active mines and exploration

May 2021



Figure 41



A brief history of mining in Norway

For more than five thousand years, minerals used for tools and weapons have been extracted from the mountainous area that later became Norway. In some areas, extraction took place on an almost industrial scale and tools have been found far from the place of extraction. Norway has since developed mineral extraction and processing of all the five main types of minerals: metal ore, industrial minerals, energy minerals, natural stone and building materials.

Bog iron ore was an export commodity in Norway over a thousand years ago. From the sixteenth century, extraction of copper, iron, silver and other metal ores from solid rock was a large and important industry, leading to the establishment of mining settlements across most of the country.

Iron ore mines are nationally prevalent. These mines, together with wood cut for charcoal, provided the ingredients for the many ironworks that operated in Norway from the 16th to the 19th century. The largest iron mine, in Sør-Varanger, operated for most of the 20th century. In post-war Norway, Norsk Jernverk (Norwegian ironworks) was one of the most prominent building blocks of Norwegian industrial society from the 1950s to the 1990s.

The silver mines at Kongsberg (1623-1958) also played a very important role in Norwegian and Danish-Norwegian history, with the establishment of the Kongsberg School of Mines, the country's first higher technical education institution.

Until the 20th Century, Norway had myriad copper mines, some of them dating back as far as the 14th century. Many of these mines also produced pyrite, which has long been an important raw material for industry.

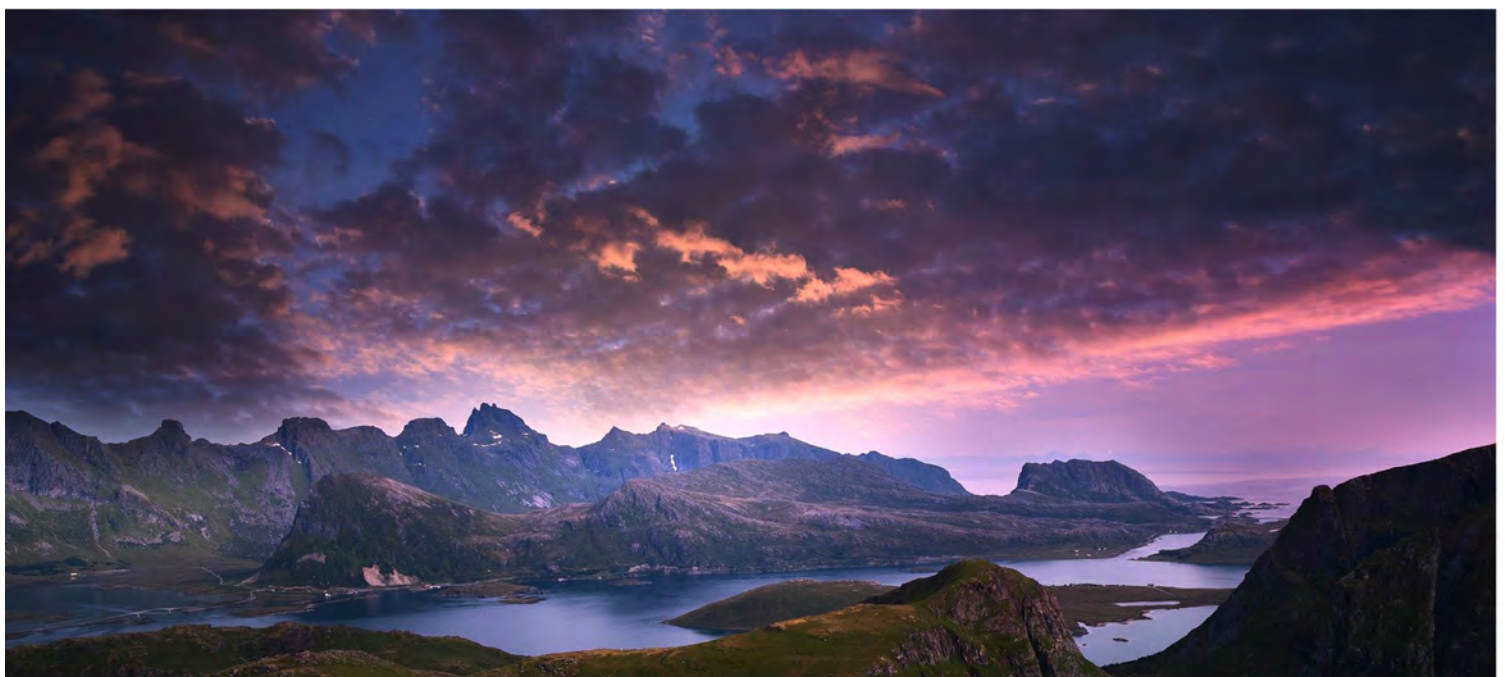
For some time, Norway was among the world's largest producers of nickel. Other metals that have been extracted include lead, zinc, cobalt, molybdenum, gold and more.

The coal mines on Svalbard have played a decisive role for the development of the Svalbard community, and were important for large industries such as the Norsk Koksverk (Norwegian Coke Plant/Works) and Norsk Jernverk in Rana.

A significant industry has developed around the extraction of industry minerals such as limestone, quartzite, ilmenite and olivine.

Norway also has a long history of utilising natural stone: soapstone for pots and for the decoration of the Nidaros Cathedral (in Trondheim), slate for ceilings, floors and stoves, marble, granite, larvikite and masi quartzite which decorates buildings in Norway and abroad.

Norwegian rock has been used for houses and castles, dams, jetties, roads and substrates for railway tracks at home and abroad. A lot of the material has been exported around the European continent, in areas where stone is less abundant. Stone exports are still ongoing, and some rock from northern Norway is exported to Russia.



New mineral investment and protests

Mining in Norway enjoyed a boom during the 20th Century which coincided with major hydropower developments around the country. At this time, concession laws were set up that restricted foreign investment in the natural resource industry. These laws remained in place until Norway joined the European Economic Agreement (EEA) in 1994. The country was then obliged to open up to investment from other EEA/EU countries. As an additional measure, at this moment Stortinget (the Norwegian Parliament) made the decision to open Norway up to investment from companies anywhere in the world. This became significant around 2005 as metal prices went up leading to a new mining boom.

In 2010, Norway passed a new Mineral Law, which stipulated that foreign companies have the same rights as Norwegian companies. By the following year, a single Canadian company, Dalradian Resources, had secured an exploration permit for more than 5% of Norway's surface area, and 25% of Finnmark County. The Mineral Law was followed by a 2013 Mineral Strategy, which emphasised promoting Norway should as an attractive country for investment by international mining companies.

Figure 43



Figure 44



Figure 45





Figure 46

Despite these moves towards liberalising the mining sector and attempts to attract foreign investment, since 2010 just two mines have succeeded in securing exploitation permits. Nussir ASA's copper mine by Repparfjorden/Riehppovuotna in Hammerfest / Kvalsund/Fálesnuorri, was approved by the Government. While Nordic Mining's rutile mine by Førdefjorden, Naustdal/Sunnfjord, was approved by the Directorate for Mining, prompting an appeal to the Næringsdepartementet (Ministry of Industries). This appeal was submitted by 13 organisations, mainly environmental, but also fishermen organisations.



Figure 47



Figure 48

Both plans have encountered a lot of resistance from a united environmental movement, both on the grounds of their environmental impacts and, especially, because both mines would dump tailings into the sea. Those opposed to mining have also emphasised the harmful effects the mines would have on traditional industries such as reindeer husbandry and fishing, and what these industries can provide in terms of permanent jobs. Impacts on recreational fishing and fishing as food for the local population, not just on fishing as a full-time activity, were also stressed. A youth nature organisation has carried out a protest action against drilling on Engebøfjellet by the Førdefjord and has collected around 4,000 signatures of people who have pledged to take direct action to stop the machines at the Førdefjord or Repparfjorden/Riehppovuotna. Among others, the fishing industry has protested against both plans. For Repparfjorden/Riehppovuotna, there is great opposition from reindeer husbandry and the Sámi Parliament. There have been a number of local demonstrations, and several demonstrations outside the Norwegian Parliament in Oslo.



Figure 49

Changing argumentation for mining

What has motivated Norway's drive to extract minerals throughout history? In the beginning it was obvious: minerals had a utility value and used by people for their own consumption, or they were needed in the industry that was to produce consumer goods and in the development of the country with roads, railways, ships and other infrastructure such as electricity supply and telephone lines. Meeting the nation's military needs has also been an important motivating factor. Norway experienced this during World War II, both directly through the extraction on Norwegian soil, where the molybdenum mines at Knaben were bombed by the allies, and indirectly, through the battles over Narvik/Åhkkánjárga as a shipping city for Swedish iron ore, and the conflict for the nickel mines on the Finnish/Russian side of the border in the north.

Since at least the 17th century, mining has also happened for another reason - as an investment with the aim of making money. Gradually, investment has become more and more divorced from the actual operation of mines in Norway. Mines were and are often owned by those who never set foot in the place where the minerals and metals are mined. For many, mineral prospecting and extraction have been very lucrative, either through operation and product sales, or perhaps just as often through the sales of shares and rights to prospecting and operation. Another side of this history is that mines have also resulted in enormous bankruptcies.

In recent years, an entirely different motivation for mining has been introduced in Norway - the so-called 'green shift.' This expression is a Norwegian innovation, like the paper clip or the cheese slicer, although they are far more useful and less likely to cause harm.

Figure 50



'The green shift' was supposedly launched in 2012, but it really took off after a book of the same title was published in 2015. In the same year, the Norwegian language council voted it 'new word of the year.' In 2016, at Geonor's mining conference in Mo in Rana, a representative from the Zero environmental foundation was invited to speak about the significance of minerals for the green shift. Rarely has a lecture on environmental issues attracted such an attention amongst representatives of polluting industries. The idea that we must produce more minerals in order to deliver environmentally friendly technologies that will replace fossil fuels was received with open arms. And it spread like wildfire.

The logic was simple:

1. The green shift means increased production of renewable energy, primarily wind and solar power, as well as electrification of transportation such as cars, buses and ships. This energy is then labelled as green, along with hydropower. Some also include nuclear power into this category.

2. This requires a lot of minerals for the construction for both energy generating installations and energy converters, primarily: copper, rare earth metals, lithium, cobalt, graphite and quartz, but also lead, nickel, aluminium, iron and silver. Additionally, limestone is required for the cement that forms the foundation of wind turbines.

3. The minerals needed for the production or use of 'green energy' thus become 'green minerals'.

4. The extraction of 'green minerals' is therefore a contribution to the 'green shift.' Since the vast majority of minerals could be included here, the mineral industry as a whole becomes classified as a green industry.

These ideas were embraced not only by owners and shareholders in the mining industry, but also by politicians and by public institutions related to mineral extraction. Perhaps the clearest formulation of this logic was articulated by the municipality of Bodø/Bådådjo, which in 2018 arranged a conference titled 'Minerals for the green shift – in the intelligent city'. In the invitation it said: "the mining industry is the most important player for the implementation of the green shift."

In 2015 a 'mineral strategy' was prepared for Finnmark.¹¹² It was in favour of major investments in development of mineral extraction in the county and it was approved by the county council with an overwhelming majority. The green shift is not mentioned. Four years later, the three northern Norwegian counties – Nordland, Troms and Finnmark – agreed on a common mineral strategy.¹¹³

Figure 51



Its goals are identical to the previous mineral strategy for Finnmark. What is different is the justification. The whole strategy is built on the mineral industry serving the 'green shift.'

At that time, the large mining projects at Førdefjorden and Repparfjorden/ Riehppovuotna had been in the planning process for at least 5 years. During that period the main arguments made in favour of these mines was that they would generate business development and jobs. Now the mining companies have welcomed the gift of the 'green shift' with open arms. They have proclaimed loud and clear that these mines are part of the green shift, rewriting history to claim that serving this shift is why they wanted to start them.

This new narrative has been a god-send for mining companies who had previously found themselves on the back foot when confronted by the environmental movement's strong arguments against mining. To some extent, the 'green shift' argument has even won the industry new, unusual allies. For example, environmental foundations like Bellona and Zero have 'switched sides,' supporting some mining using green shift logic. The rest of the environmental movement is still very skeptical towards the mining industry, and also towards the propaganda for the 'green shift.' They have observed how this narrative has been embraced by all developers and investors as well as by politicians from across the whole spectrum.

The very latest development is that the need for minerals for the 'green shift' is now also used as an argument to start mining the seabed using experimental technologies with unknown effects. Since some of the metals expected to be found in submarine hydrothermal vents are those in demand for development of 'renewable energy,' such deep sea mining is increasingly defined as 'green' too.

So, is the discourse of 'minerals for the green shift' just nonsense, or can it make sense? Under the following conditions the concept of the 'green shift' could be recuperated:

1. The 'green shift' must be a real shift in policy and practice with the goal of preserving nature and reducing greenhouse gas emissions and other pollution. The world's total energy consumption should go down. 'Renewable' energy must actually replace fossil energy, and must not lead to encroachments on nature that reduce the capture and uptake of carbon in plants and soil.

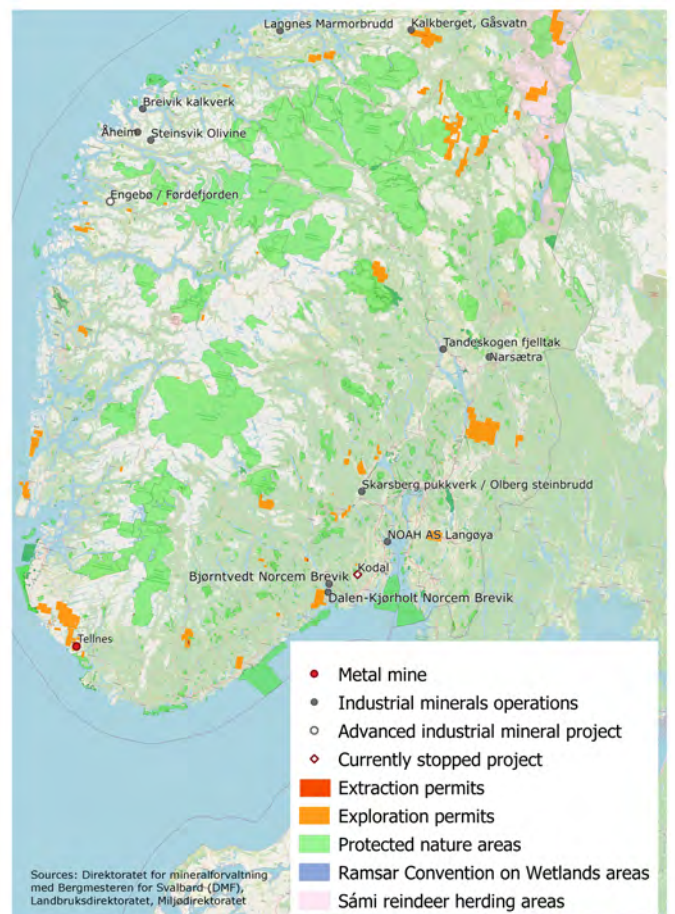
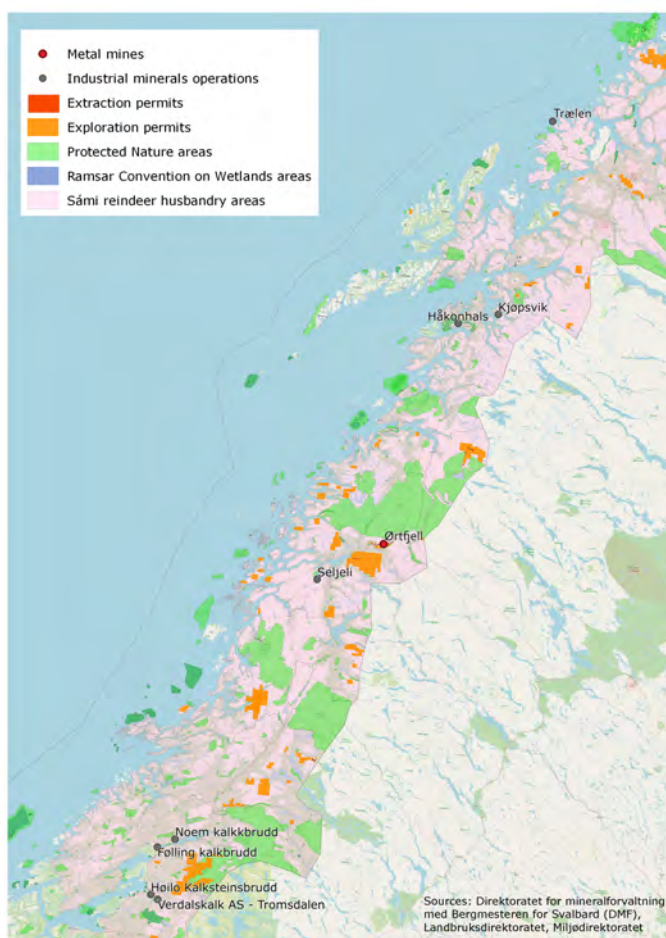
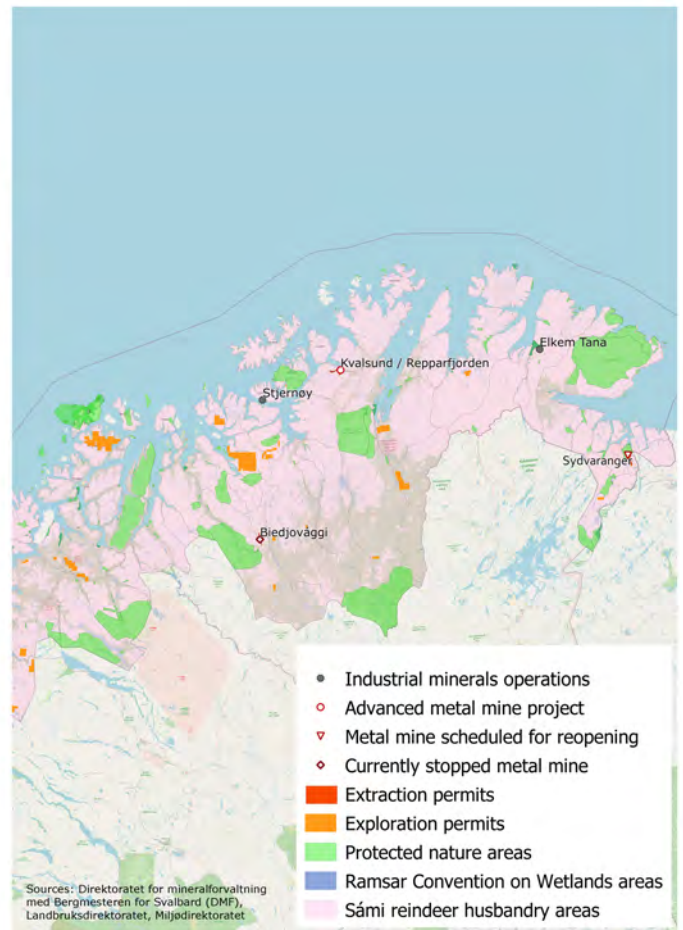
2. The possibilities for recycling and mineral recovery from deposits in old mines should be utilised as far as possible before a permit is granted for new extraction.

3. Mining deemed absolutely necessary should be carried out in such a way that nature suffers the least possible damage. This means, for example, that the dumping of mining waste into sea and waterways should be banned, utilisation of by-products, underground operations rather than open pits, and full rehabilitation of nature at closed mines funded by the company responsible for the extraction.

4. Permits for mining must only be granted where this will not harm traditional use of nature and where the local nature users give their permission through formal free prior and informed consent processes that legally recognise communities' right to say no to mining.

None of these conditions are currently met by the mining operations planned in Norway, nor does the Norwegian mineral strategy provide for them. Therefore, all talk of 'mineral extraction for the green shift' in Norway today is nothing more than propaganda and a marketing slogan for an industry which both runs and plans operations that are damaging the environment, the climate and Norwegian communities.

Further reading: Svein Lund's books and articles (mostly in Norwegian), available online at: <http://gruve.info>



Active Mines and exploration

Top Left: Full Norway Map

Top Right: Northern Norway

Bottom Left: Central Norway

Bottom Right: Southern Norway

NORWAY REFERENCES / IMAGES

¹¹² Editor's note: Finnmark is the county in the northern-most part of Norway, in traditional Sámi lands. Since 1 January 2020 the government has merged it with the neighbouring county Troms, against great protests from the local people. Finnmark will probably be re-established as a county on its own after the next Parliamentary election.

¹¹³ "Mineralstrategi for Nord-Norge," https://www.nfk.no/_f/p34/i3797fe6c-e1e0-4329-a30d-179bc6c5a759/mineralstrategi-for-nord-norge.pdf

Images:

40. One of the open pits at the closed iron mine Bjørnevatn, Sør-Varanger, Sápmi/Norway. The company Sydvaranger Gruve AS went bankrupt in 2015. In January 2021, the mine has been acquired by Minnesota-based Tacora Resources and is planned of reopening. Photo: Svein Lund.

41. Reindeer in the old mining area in Ulveryggen, Kvalsund/Fálesnuorri, Sápmi/Norway. The mine has been planned to reopen as part of Nussir ASA's copper project which would involve sea tailings disposal in Repparfjorden/Riehppovuotna. Photo: Svein Lund.

42. "The world needs green minerals." From a presentation by Nordic Mining's CEO Ivar S. Fossum. The company has a number of 'green mining' projects, including deep sea mining. Most noted are their rutile mine plans in Sunnfjord, which would involve dumping of 250 Mt of waste into Førdefjorden. Photo: Svein Lund.

43. Youth summer camp in Førdefjorden where Nordic Mining is planning a rutile mine with sea dumping of waste. August 2015. Photo: Mina Røed / Natur og Ungdom.

44. Protest at the Royal Palace in Oslo against the government's decision to allow dumping into Førdefjorden. April 17, 2015. Photo: Natur og Ungdom.

45. "The largest pollution scandal in modern times: dump the stocks!" "Førdefjorden will never be yours!" (banners). Protest in front of the AGM of Nordic Mining. Oslo, February 4, 2016. Photo: Natur og Ungdom.

46. "Protect Førdefjorden" / "Art village, not a destroyed village" (placards). The local people in Vevring, small village nearby, have used art as a protest method, and the village attracts many artists and has a long tradition with arranging art exhibitions. March at Vevring, February 6, 2016. Photo: Amanda Iversen Orlich / Natur og Ungdom.

47. Action at Førdefjorden against Nordic Mining's planned rutile mine. February 2016. Photo: Mina Røed / Natur og Ungdom.

48. Action at Førdefjorden against Nordic Mining's planned rutile mine. February 2016. Photo: Marta Valentinsen / Natur og Ungdom.

49. Kvalsund (Folldal Verk) closed mine. Nussir's project plans to use the underground deposit and dump the tailings into Repparfjorden/Riehppovuotna. October 2019. Photo: Johanne Frost Klepp/ Natur og Ungdom

50. Repparfjorden/Riehppovuotna. October 2019. Photo: Johanne Frost Klepp/ Natur og Ungdom

51. "No to landfill in the fjord!" Fjord seminar at Førdefjorden. October 2018. Photo: Alva Førsund / Natur og Ungdom.

Figure 52

CHAPTER 4

Sápmi

Svein Lund (Guovdageaidnu, Sápmi/Norway)





Figure 53

Who contributes the most minerals in Europe?

From which people's land have the most minerals and metals been extracted in Europe, often without consent? This question is not often asked, but it is time to ask and answer it. To do this, we must look to the European North.

The northernmost parts of Norway, Sweden and Finland, are respectively called Finnmark, Lapland and Lappi, while on the Russian side of the border the terms Russian Lapland or Лапония have also been used. All these names come from the people who have called themselves *sámit*, and who are now also officially referred to as the Sámi people in the national language of all four countries.

What should be counted as Sápmi (Sámi land) is debated, and many questions about older Sámi history remain unanswered. Nevertheless, we are able to state with certainty that: Sámi people have lived in and made use of nature in most of Norway from the far north to Hedmark in the south, in Sweden south to Jämtland, in the northern part of Finland and in the Kola Peninsula (Guladatsnjárga) in Russia. In all four countries, Sámi people have historically lived even further south, but in this context we can limit ourselves roughly to the areas that are nowadays used for reindeer grazing, or that we know have been used for this purpose in the last hundred years. Within this area, mining will particularly affect existing Sámi industries, Sámi nature use and Sámi cultural landscapes and sites.

Figure 54



Some of the oldest accounts we have of mineral extraction in the Sámi territories relate the extraction of iron ore from South Sámi areas in Trøndelag and Jämtland, as well as in northern Finland. The first known mines of solid rock in this area were in the Swedish part of Sápmi: the Nasafjell/Nássavárri silver mine and the copper mine in Ballangen/Bálát, both of which operated from the first part of the 17th century. At Nasafjell/Nássavárri, we know that the Sámi people were used as forced labor to transport silver ore using their reindeer, and that many of them migrated to Norway to escape enslavement. From Ballangen/Bálát, the legend goes that local Sámi people chased away or killed the evil mine owner.

Later, mines were established in Tornedalen (Torne River Valley) in the border area between Finland and Sweden, and then gradually up into the mountains. The most well-known mine is Kiruna/Giron, the largest mine in the Nordic countries, which was established in an area once dominated by the Sámi in population terms.¹¹⁴

On the Norwegian side, confrontations between mining, Sámi people and reindeer keeping areas took place from Røros/Plassje all the way to Sør-Varanger/Mátta-Várjját and Tana/Deatnu. Where mines were established, they had profound negative effects. Reindeer grazing areas were destroyed. And there was a significant movement of non-Sámi people into these areas, leading to the domination of the Norwegian language, a decline in the use of the Sámi language and cultural erosion. Examples of this can be found at Sør-Varanger and Kvalsund/Fálesnuorri.

The Sámi have been forced to see the areas they live in, use and call home invaded and more or less destroyed by mining. In some cases, they have also played a more active role. Ore deposits were often discovered by reindeer herding Sámi and other Sámi. Some of these mines are well-known to history, such as Mons Petter in Sulitjelma, but most have been forgotten. In Biedjovággi we know that there were three reindeer herding Sámi who were responsible for registering the copper ore with the authorities, which led to more thorough investigations and later also to mining operations.



In Sweden, there are still Sámi people whose surname is 'Grufvisare', ('mine pointer') which means that an ancestor had shown the authorities or mining companies the way to rich ore deposits in the mountains. Most miners came from faraway, non-Sámi communities, but there are also many examples of Sámi people working in mines, either involuntarily or voluntarily. Sámi miners are known to have worked in Kiruna/Giron, Sulitjelma, Sør-Varanger, Biedjovággi, Stjernøya/Stierdná and Auster-tana/Juovlavuotna. Sámi men worked both underground and above ground. Sámi women worked as cooks and cleaning staff at mines and in facilities. However, Sámi mining engineers and geologists can probably be counted on one hand, and there are hardly any examples of Sámi shareholders or directors in mining companies. The few known example of Sámi ownership related include two drilling companies in Guovdageaidnu, and attempts by Sámi people to make an income from gold panning in Karasjok during the 20th century.



It is difficult to accurately calculate how much mineral has been extracted and how much profit has been made from the Sámi area, but it is important to mention that Sámi territories have hosted and still host some very large mines. In Norway: Røros, Bleikvassli, Rana, Sulitjelma, Biertavárri, Biedjovággi, Stjernøya, Elkem Tana and Sydvaranger. In Sweden: Kiruna, Svappavaara, Malmberget, Aitik, Boliden, Pajala and a number of larger and smaller copper and gold mines throughout Västerbotten and Jämtland.

In Finland there has been a lot of mining in the southern parts of Lapland, but mostly outside the area that is currently widely thought of as Sámi Territory. In undisputed Sámi territory in northern Finland, it is primarily gold mining that has led to encroachment on nature and Sámi livelihoods. Small-scale mining operations that use heavy machinery have been and continue to devastate reindeer herding areas, fishing rivers, and local biodiversity. The most affected villages are in Vuotso/Vuohčču in the very southern part of Sápmi and areas in Inari/Aanaar.

Perhaps the most extensive mining interventions are found on the Russian side, including the nickel mines in Nikel, Zapoljarnyj and Monchegorsk, and mining towns such as Kirovsk, Apatity and Revda. These mines have led to major changes in both landscape and the demographic composition of the population.

Looking across the entire area of Sápmi, we can conclude that the Sámi People have become, largely against their will, the hosts of Europe's largest iron mine, for the largest copper, iron and gold mines in Norway and also for the extraction of lead, nickel, apatite, nepheline, syenite, quartzite and a number of other minerals.

We do not know with certainty how many Sámi People there are, but whether we estimate 50,000 or 100,000, we come to the same conclusion: no other People in Europe can measure up against the Sámi people when it comes to mineral production per capita.

Historically, neither geologists nor mining companies have previously had to ask the Sámi people for permission to prospect for deposits or to start mines. In Norway, the Sámi people got their own elected body from 1989, but in 1997 the Sámi Parliament complained that they had not even been informed when the government gave permission to international mining giants to search for gold and diamonds in the middle of the Finnmark plateau.



Norwegian legislation has since changed, with the introduction of the Finnmark Law in 2005, a new Planning and Building Law 2008, and the Mining Act of 2010. These law changes mean that the Sámi People must be informed and consulted about mining operations on their lands, but ultimately the final decision is still made by the central government.

The continued marginalisation of the Sámi was demonstrated most recently in the dispute over Nussir ASA's planned copper mine in Kvalsund/Fálesnuorri, which was granted a license despite the opposition of the vast majority of Sámi Parliament members who expressed concerns that the mine will affect both reindeer herding and Sámi fjord fishing areas. Regardless of Sámi opposition and international conventions on the rights of indigenous peoples and minorities, of nature conservation and biological diversity Norway is a signatory to, the central government has continued to override its own commitments and legislation in favour of mining.

Figure 58



This is a worrying state of affairs as a number of new mining plans that will interfere with Sámi areas are currently under consideration. Mining license applications have been made for gold mining in Bindal, quartz mining on Nasafjell/Nássavárri, and the expansion of quartzite quarries in Tana/Deatnu. Mining plans have also surfaced that would affect a number of reindeer grazing districts from Røros northwards. The common denominator here is that the mining companies do not seem to view the existence of reindeer herding and Sámi rights as an obstacle to their plans.

Despite these plans and negative precedents, the Sámi have had some success in resisting and stopping mining operations on their lands. In the 1990s, some of the largest international mining companies – Ashton Mining, De Beers, Rio Tinto Zinc – came to the Finnmark plateau looking for minerals, but withdrew due to Sámi protests. This situation led to a call for legal clarifications through the Sámi Rights Committee and the Minerals Act, temporarily cooling mining interest in the region.

Eventually, however, the Norwegian state decided that the Sámi People do not have a right to prevent mineral extraction in their territories. This decision has once again opened the door to the mining industry.

In recent years, experiences with mining in places like Biedjovággi and Nussir has led the Sámi Parliament to become more and more critical of mining. The majority now do not want to give permissions to any new mining projects, at least as long as the current Mineral Law is in place.

Figure 59



When this law was being prepared, a minority in the Mineral Committee proposed that in Sámi areas concessions should only be granted if the Sámi Parliament gave its approval. No one raised this proposal in the Norwegian Parliament. Instead, the legislation that was passed states that one must take into account Sámi culture and industry and that Sámi people must be consulted in all contexts. It does not, however, require the Sámi's consent and so does not prevent them from being run over in the end.

In 2020, Finland granted a permission for mineral exploration inside a protected area close to the Norwegian border, which is also a reindeer herding area. In Sweden, the dispute over the establishment of mines in reindeer keeping areas has been going on for years. The most famous is Kallak/Gállok in Jokkmokk/Jåhkåmåhkke/Dálvvadis, where there have been protests coordinated by the local Sámi people and conservationists. There are also live disputes in a number of other towns. Resistance has arisen in response to Boliden's attempts to expand its Aitik Mine near Gällivare/Jiellevárri and the copper mine in Laver, as well as in opposition to the reopening of the mine in Stekenjokk by Vilhelmina Minerals.

Little has been heard from Russia about new mining plans in reindeer grazing areas in recent years, however we may establish that Sámi interests have not stopped mine development there.

Surveying the facts, the conclusion we come to is that the Sámi area has provided great value in the form of minerals to mining companies and to society as a whole. There are great plans for expanded operations, but neither big words nor legislative changes give Sámi livelihoods and their nature uses any actual protection against the intrusion of mining companies.



Figure 60

Reflections on mining in Finnish Sápmi towards 2020s

Tero Mustonen, Snowchange Co-op (Selkie, Finland)

Indigenous Rights in Finland

According to the Finnish Constitution, the Sámi (Inari Sámi, Skolt Sámi and North Sámi) are the Indigenous Peoples of Finland. The Sámi Parliament and a range of Finnish laws protect Sámi culture, languages and 'impacts to livelihoods.' However, one of the major mining issues in the Finnish Sámi space is a complete lack of recognised Sámi land or water rights. Only the Skolt Sámi have special laws regarding for the land uses and exclusive access, due to their post-1944 forced migration from their former home territory in Petsamo, NW Russia.

The Sámi Parliament has a legal capacity to comment (*antaa lausunto*) if Sámi culture or livelihoods are affected by mining. Sámi communities also have a retroactive right to appeal mining decisions, albeit this is limited to the exploration and exploitation phases of the permitting process, not the concession phase. Finnish mining legislation also gives Sámi a special right to comment and inform mining authority TUKES (the Finnish Safety and Chemicals Agency) of their opinion regarding mining where it is perceived to affect Sámi culture or livelihoods. When this statute has been enacted in recent years, however, TUKES has been dismissive of the Sámi complaints in most cases.

Mining Processes in the Finnish Part of Sápmi

Figure 61



In this brief overview we summarise aspects of mining which are relevant for the contemporary situation in Sápmi, the Sámi homeland in Finland.

Old and New Gold Mining

Artisanal and 'small-scale' gold mining has been going on for decades inside the Lemmenjoki/ Leammijohka National Park which is a reindeer pasture space in central Sámi territory. The Sámi Parliament has been steadfast in complaining and issuing statements about this 'historical concession' inside a national park. In 2020, gold mining in Lemmenjoki/Leammijohka began to be phased out, but it will leave a legacy of environmental impacts, including water pollution, with unknown amounts of mercury, organic loading and other issues affecting waterways.

Industrial gold mining operations might soon affect Vuotso/Vuohčču, the southernmost of the Sámi areas in Finland, and especially the river Tankajoki that runs through the area. Local Sámi reindeer herding cooperatives and the Sámi Parliament has been commenting on the new gold mining permits given for this region.

Sámi gold mining in Vuotso/Vuohčču area has a long history. In the late 1800s, one of the Sámi in Purnumukka/Burdnomohkki community was shown the location of a gold deposit in a dream. This dream led to over a century of Sámi gold panning in the area, which hosts the Tankavaara Gold Museum, bringing tourism to the community.

Elsewhere in Sámi territory, a significant copper and nickel discovery has been made beneath the Viiankiaapa peatland. This peatland has Natura 2000 status and is protected under national conservation programmes. However, AA Sakatti Mining Oy, a subsidiary of mining giant Anglo American, is pushing ahead plans to mine in the area. There is a large amount of opposition to this project by local people, and yet regional zoning and planning by the Province of Lapland has reserved this area as a 'mining cluster' for Finnish Lapland.¹¹⁵

GTK

The Geological Survey of Finland (GTK) has studied and inventoried the mining potential of most of the Sámi space in Finland over the past 100 years. The Survey has shared this data with third parties (e.g. mining companies) and used the data to stake out its own mining claims.

In March 2012 GTK claimed an area in the Western part of Sápmi (Enontekiö), with a focus on nickel, gold and other metals. Subsequently GTK also reserved a research mining allocation towards Lätäseno part of the Western Sápmi. GTK has also explored smaller sites in the Teno/Deatnu and Näätämo/Njauddâm river systems in the eastern part of the Finnish Sámi space. Metsähallitus, the state landowner in the region has a policy of not supporting mining claims in the Sámi territories of Finland.

GTK data has supported a number of international mining companies that have staked out potential sites inside Sámi territory, for example Dragon Mining Ltd/Polar Mining in the 2010s. By law GTK cannot operate a mine on its own but it has been employed as a consultant in, for example, facilitating Dragon Mining to develop a mine. GTK benefits from priority access to 'state lands' in the Sámi space and acts as an important broker of access for international companies.

Figure 62



Diamonds in Utsjoki/Ohcejohka

In 2014, Karelian Diamonds Co reserved a large tract of the High Conservation Value area of Geavu Park in Utsjoki/Ohcejohka, in the Teno river catchment area, with the aim of opening a diamond mine. Opposition to this mine is often seen as one of the first and most important larger scale actions against mining in the Sámi territory during the 2000s. Opposition to the mine included a Sámi community resistance group and NGOs like the Snowchange Cooperative working together to stop the mine. As a result of this resistance, the company withdrew from Utsjoki/Ohcejohka and mining plans were abandoned.

Akkerman in the Western Sámi Area in 2020
Akkerman Finland Ltd has reserved a large tract "Hietakero of the Käsivarsi/Giehtaruohtas (the western part of the Finnish Sámi home area) for a potential mine. Here they hope to mine gold, nickel, copper, platinum, iridium and palladium.¹¹⁶

The concession was approved in February 2020 and will stay in place until 2022. All in all, the area stretches over approximately 245 km² and spans both Natura 2000 and wilderness areas. The area is traditionally used by the Ergon/Erkuna siida (Sámi village).¹¹⁷ The proposed mine has led to a large public opposition movement - Ei kaivoksia Suomen Käsivarteen/li ruvkkiid Giehtaruohttas duoddariidda- which has collected over 37,000 signatures opposing the mining plans. These signatures were handed to the Minister of the Environment Krista Mikkonen in September 2020.¹¹⁸ These actions have been led by Sámi, spearheaded by local women and aided by other Sámi activists.

Arctic Railway Plans

Pro-mining Finnish political parties have advocated and pushed for a new Arctic Railway, running from Rovaniemi via Sodankylä to Avvil/Ivalo, Inari/Ánar and further on to Kirkenes/Girkonjárga and the Barents Sea off the coast of Norway. These plans seek to link Finland's railway network with the Northern Sea Route across Siberia. China has supported this plan as a part of its 'Polar Silk Route' foreign policy initiative.

The Finnish Government sees the railway as a mechanism to support the transportation of mining resources to the ocean, streamlining trade exports and facilitating the speeding up of large-scale extraction inside the Sámi space.

Currently the railway plan is in private hands and is undergoing a regional zoning process. Consultants investigating the route have previously recommended the route that would have the most severe impacts on Sámi livelihoods. The County of Lapland wishes to mark down the routing of the railway and the Arctic Railway has been heavily criticised on the ground by Sámi siidas, the Sámi Parliament and environmentalists.¹¹⁹

In 2021, the economic viability of the project and the proposed route have been called into question. This has led private investors to work with Chinese stakeholders to advance both the EIA and the overall plan for the railway.

Conclusions

We can determine that, to-date, the large scale mine operators have been cautious of the Sámi home area due to the unclear legal context and processes and discussions of land rights for the Sámi.

A few pilot operators such as Karelian Diamond Co, and the companies which work in close proximity with National Geological Survey GTK, such as Dragon Mining and others, have moved into the western part of the Sámi area during the past two decades.

The increasing pressure on the Viiankaapa peatland and the Arctic railway plans indicate that mining plans will be developed aggressively in Sápmi in the coming years, despite the legal limbo.

SAMI REFERENCES / IMAGES

¹¹⁴ Editor's note: Kiruna mine was established in 1890, and is still being operated by the Swedish state-owned company Luossavaara-Kiirunavaara Aktiebolag (LKAB). See more in the Swedish report.

¹¹⁵ Read more: Lassila, M. (2020). The Arctic mineral resource rush and the ontological struggle for the Viiankiaapa peatland in Sodankylä, Finland. Globalizations. <https://doi.org/10.1080/14747731.2020.1831818>

¹¹⁶ There is also a smaller, earlier exploration in Gova-Labba siida area nearby, by the Geological Survey of Finland (GTK).

¹¹⁷ *Siida* is a traditional Sámi village/reindeer herding collective.

¹¹⁸ The audience was asked from the cabinet of the Minister of Economic Affairs and Employment (TEM) as well, the minister was unavailable to attend. The Ministry is responsible for drafting the new Mining Law.

¹¹⁹ See: <https://deeply.thenewhumanitarian.org/arctic/articles/2017/08/03/proposed-arctic-railway-would-cut-through-lapland-reindeer-habitat>

Images:

52. Biedjovággi copper and gold mine in Kautokeino/Guovdageaidnu, Finnmark, about 20 years after the mine was closed. Two open pits are filled up with mining sludge and water. Not much has been done to remediate the area to its natural state. Photo: Svein Lund.

53. Banner set up by the opponents to the mine in Kautokeino/Guovdageaidnu when the municipal council was considering the mining plan, 2013. The poster says in Sámi: "Clean future." Photo: Geir Jørgensen.

54. Demo outside of an indigenous conference in Alta, Finnmark, organised by Naturvernforbundet (Nature Conservation Association/ Friends of the Earth Norway). On the reindeer skin is a text in Sámi, "Ellos eana - min eatni" translation: "Live the earth - my mother." June 2013. Photo: Svein Lund.

55. Clear-cut at Beowulf Mining's exploration site, Kallak/Gállok, Norrbotten County, Swedish Sápmi. Photo: Ignacio Acosta.

56. Protest against Beowulf Mining's exploration works in Kallak/Gállok in the summer of 2013. Still from the documentary Gállok Rebellion. Photo: Kolonierna.

57. Protest against Beowulf Mining's exploration works in Kallak/Gállok, summer 2013. Still from the documentary Gállok Rebellion. Photo: Kolonierna.

58. Rönnsbacksnäset, in Rönnsbäck/ Raavrhjohke, where a local network is fighting a nickel mine proposed by Bluelake Mineral/Nickel Mountain AB. Photo: Stoppa gruvan i Rönnsbäck.

59. "We stand with Amazonia! Manifestation for the Amazon, Indigenous peoples' rights, Saepmie and nature's rights in Rönnsbäck, Ume River, Saepmie today!" September 2019. Photo: Stoppa gruvan i Rönnsbäck.

60. "Stop! Do not exploit Sápmi!" Camp at Kallak/ Gállok. July 2013. Photo: Mose Agestam.

61. Utsjoki/Ohcejohka, where Karelian Diamonds Co had plans for a diamond mine, which the company eventually withdrew as a result of the local opposition. Photo: Tero Mustonen.

62. Utsjoki/Ohcejohka. Photo: Tero Mustonen.

63. "Burning machine festival" at Kallak/Gállok. July 2017. Photo: Mose Agestam.

Figure 63

