Electric Vehicles: Driving Suffering and Pollution

Electric cars have become the symbol of the ‘low carbon’ economy. As an item of consumption first and foremost for the wealthy, the negative impacts of the required minerals and metals that are extracted are frequently downplayed, despite the thousands of extraction sites and related damaging infrastructure.

Electric cars are quite similar to their traditional fuel-guzzling counterparts. Both demand huge amounts of minerals and metals, as well as a centralized energy supply. While traditional cars depend on a reliable energy supply of gasoline or diesel fuel through an extensive network of service stations, electric cars also depend on a reliable supply of electricity through a massive network of charging points for their batteries.

However, the car industry and governments want to convince us that electric and traditional fuel cars are completely different. They promote electric cars as a product of a new era, a true ‘revolution’! They have made electric cars the main symbol of the ‘green transition to a low carbon economy.’ According to a claim made by Swedish carmaker Volvo, “It will allow us to (...) be a part of the solution when it comes to fighting climate change.” (1) While a business consultancy company refers to electric cars as “a source of enormous hope for the health of the planet.” (2)

The false discourse of ‘global’ benefits versus ‘local’ impacts

While corporations and governments promote electric cars as essential in the ‘global’ fight against climate change - with many NGOs and activist groups, especially in the Global North, endorsing this appeal, - the negative impacts of the mineral and metal ore extraction needed to produce such cars are downplayed, and referred to simply as ‘local’ impacts. The corporations claim, as usual, that these ‘local’ impacts will and can be fixed with more ‘sustainable’ business practices, ‘corporate social responsibility’ policies, ‘third-party’ certifications, ‘forest-smart’ mining operations (3), as well as increased recycling of minerals and metals.

But if something should be referred to as a ‘local’ phenomenon, shouldn’t this be the electric car itself? Proportionally speaking, Norway has the highest share of electric car sales worldwide. With its tiny population, the country has become wealthy due to the profits reaped from oil extraction, without forgetting the ensuing contribution to climate chaos. With this oil wealth, the Norwegian government offers subsidies to its citizens to purchase electric cars. According to Prime Minister Solberg, Norway witnessed “a Tesla [a company producing luxury electric cars] revolution in the beginning, because they were the first one with real cars, as some of my male friends would say — real cars, not just the small ones. (...) What happened was that especially (...) a family’s number two car became electrical quite early because that would be used for going to work in a city and not for long-distance driving.” (4) Among the many ideas and worldviews that this statement reveals, one is that electric cars will become an item of consumption, first and foremost, in the well-off neighbourhoods of wealthy countries.

And wouldn’t the ‘global’ phenomenon be the impacts of the extraction needed for electric cars?

Just consider the impacts of the many thousands of extraction sites located on just about every continent, run mostly by ‘globally’ organized transnational companies, attending to the demand for electric cars. And then there is the infrastructure needed to be able to run such cars. The damage caused by such extraction is destructive not only for ‘local’ mining areas, as the tailings of such mines contaminate much wider regions and territories, including major rivers, lakes and the oceans. There are also the global ‘corridors’ and all the logistics involved through which minerals, metal ore, and metals are transported from one place to another, 24 hours a day, in particular to production plants in China, where the factories of electric car companies are mainly based.

Another question is if this is really “the hope for the health of the planet.” When Norway is being portrayed as a ‘green’ country with ‘clean’ air in news reports due to the electric car ‘revolution’, it seems as if finally, the problem of global warming is being solved. What such reports conceal, however, are the CO2 emissions that result from burning oil and coal, throughout the long and complex production chain of the many materials needed for such cars, as well as the accompanying infrastructure, including the electricity charging points. On top of this, it is also important to take into account the devastating environmental and social impacts, particularly mineral and metal ore extraction, one example being nickel mining in Indonesia.

Halmahera Island, North Mollucas: stories from the mining frontier in Indonesia

To produce electric car batteries, nickel is one of the elements that will be in high demanded in the years to come. Indonesia has the largest nickel reserves in the world, and their extraction by public and private companies has turned Indonesia into the world´s largest producer. Indonesia´s nickel production has dramatically increased in recent years, from 130,000 metric tons in 2015 to 760 thousand tons in 2020. (5)

One of the frontier areas for nickel extraction is the North Mollucas region. This is a unique living space for communities dependent on agriculture, fishing and the local forests. Toety Ariely, a community activist from the region, recounts her experience growing up: “I spent my childhood in Tobelo, North Halmahera. There we often played many traditional games, using the materials obtained from our forests and land. My friends and I always swam at the beach. I remember, on one particular holiday, how our family and a neighbor sailed to some islands facing Tobelo: Kakara, Tagalaya and Larangane. We encountered so many dolphins in the sea around the islands. We went swimming, snorkeling and diving. The corals in the sea were still good and healthy. There were many fish because their habitats were still thriving and provided them with food. There were vast mangroves on these islands. And when nighttime came we could see so many stars in the sky. The moon provided us with enough light. There was no artificial light from the electric lamps that so pollute the beautiful night sky. In Kao Bay, we saw hundreds of fishing boats. It was paradise for the fisher folk”.

However, since the early 1990s hundreds of mining companies have set up operations in Halmahera in North Mollucas. Among them, nickel companies such as Weda Bay Nickel (WBN) which, in association with Indonesia Weda Bay Industrial Park (IWIP), formed PT IWIP, which extracts nickel in Central Halmahera, and PT ANTAM - a State-owned mining company – with mines in East Halmahera. Toety described to us what happened: “They destroyed our islands, forests, seas, and home. They kill us by destroying our Halmahera. They take so much nickel and other minerals from the womb of Halmahera Island. In return, what they give us are forestless mountains, barren lands, polluted seas, and other ecological disasters. And then, they make us fight each other in the name of ethnicity and religion. Fishermen and farmers have lost their livelihoods. We lost our living space. We lost our way of life. We do not have our marine ecosystem rich with fish anymore. We have no more

fertile lands that can grow anything. We do not have the forests anymore, which gave life to every organism within them (…) The aromas of cloves, nutmeg, and copra have been replaced by the pungent smells of mercury, cyanide and pesticides. The extracted minerals and profits made cannot redeem them. They cannot buy our feelings. They cannot buy our life memories of Halmahera. We know that the people who make up the State and the corporations (corporatocracy) cannot understand all of this because our life experiences are so different from theirs. For them, destroying the forests and mining the land stands for development."

Masri Santuly is also a community activist from the same region. About the impacts of PT IWIP, he told us the following: "Since the first mining investments, the main conflict that arose was around land. The government issued a permit to the company and unilaterally declared them to be the new landowner, evicting the community, directly or indirectly, from its own land. According to the community, the compensation offered by the company was far too low. The local government that should support the communities sided with the company. It is a tremendous cultural impact when people cannot be peasants anymore because of losing their lands and their sources of livelihood, and forced to become low-paid company workers. The communities can no longer open up new agricultural fields, they cannot catch fish and indigenous peoples like the Sawai cannot use the forest anymore, because it is now the company's territory. If they dare to disobey these rules, made by the company, they have to face the security forces of the company and also State officials. In contrast, the head of PT IWIP has all the freedom to carry out the company's activities. Now the company plans to destroy ??2,650 hectares of forests to expand its open-pit mining activities, including offices and factories. This will create many more problems in the future. Furthermore, the large amounts of water needed to process nickel ore will directly impact the Lukulamo and Kobe peoples, whose lives are closely tied to the river. More sacred sites and other sites of cultural heritage with histories that go far back will be destroyed… more rivers will be contaminated, more diseases will break out. More villages will disappear. For example, they plan to use the entire village area of Lelilef as an office area and airport for PT IWIP."

Death and destruction caused by electric car batteries, and beyond

Most reports about the transition to electric cars point out that the key 'local' impacts to be discussed– compared with conventional cars - is the additional demand for the car battery minerals, such as nickel, lithium and cobalt.

The Democratic Republic of Congo (DRC), the main cobalt-producing country in the world, has a mining sector the origins of which date back to colonial times, and which has been marked since then by plunder and severe human-rights violations, including workers´ deaths and child labour. (6) Cobalt is mined largely by large-scale companies, such as Glencore and China Molybdenum, but also by so-called artisanal or small-scale mining activities.

One of the numerous impacts of cobalt mining in DRC that receives too little attention in the patriarchal world order is the sexual violence and abuse against women. According to a 2020 study about sexual violence against women in the mining sector in several countries in Africa, there is evidence that in DRC, both the company and small-scale mining operations are structural drivers of such sexual violence and abuse: "Women working as large-scale mining employees are subject to violence and harassment in the workplace, often carried out by fellow employees, but effectively allowed to continue unchecked through inadequate workplace protections or outright refusal to recognise Sexual Gender Based Violence as a workplace issue. As Artisanal and Small-scale Mining (ASM) workers, women experience violence and exploitation in and around ASM sites, seemingly operationalised to maintain a gender order that concentrates resources and control with men. As

community members, women are at risk for increased violence within the home, as well as in the community through the arrival of workers and security guards.” (7)

Moreover, the increased extraction of other essential materials needed to produce electric cars is usually concealed, such as significant quantities of plastic, aluminium, rubber and particularly iron. After all, for capitalists, the move to electric cars does not mean producing fewer cars, on the contrary: the world’s vehicle fleet is expected to increase from the present 1.42 to 2 billion vehicles in 2030 (8), fuelling the increasing global demand of all the materials needed to produce them.

Steel is one of the main car components. An average of 900 kilos of steel is needed to produce just one car. This would mean about 130 million tons of steel to produce the 145 million electric cars expected to run in and around urban centers worldwide, particularly in the Global North, by 2030. (9)

The municipality of Grão-Mogol, in the north of the Brazilian state of Minas Gerais, a semi-arid savannah region, is slated to become one of the new frontiers of iron ore extraction, and one more example of large-scale destruction and death. A project being set up by the Chinese SAM Group, intends to extract iron ore and build a pipeline to the coast for the ore’s export to China. In a 2019 protest letter against the project, social movements and grassroots organisations described the initiative as “a true project of DEATH!” and continued with the following explanation: “The mining company will use 54 million cubic meters of water per year in a semi-arid region, which equals twice the annual consumption of the entire town of Montes Claros-MG [413,000 inhabitants]. To transport the raw material to China, they want to build a pipeline that takes the iron ore and also our water to the port of Ilhéus, in [the state of] Bahia. In addition, the project anticipates the construction of two tailings dams that will total 1.118 billion cubic meters - the largest such dam in Brazil! The Fundão dam, in Mariana, contained 54 million cubic meters and killed 21 people and the entire Doce River, reaching as far as the ocean.” (10) The latter in reference to a tailings dam of a company owned by Vale and BHP Billiton that collapsed in 2015; this was one of two mega-disasters involving tailings dams in Minas Gerais in the past six years.

As a result of the resistance struggle against the SAM Group, environmental licensing has been suspended by a Brazilian Federal Court, interrupting, at least for now, the attempts of the Minas Gerais state government to push through the licensing of the project, reflected by the policy of the federal government led by Bolsonaro to weaken environmental regulations. (11)

For capitalists there are no problems, only new opportunities

For the European Union (EU) political and economic block, the transition to a “green economy” represents an integral step towards fostering economic recovery post-pandemic. In 2020, EU leaders announced an increase in the EU target to cut greenhouse gas emissions from 40% to at least 55%, compared with 1990 levels, in order to make Europe “the first climate neutral continent.” (12) The plans are part of the European Green Deal adopted in 2019 that focuses on “green growth”, based on “a dramatic increase in demand for minerals and metals that the European Commission intends to meet through a large number of new mining projects – both inside and outside the EU.” (13)

As for the United States, its president Joe Biden recently launched the so-called Economic Recovery plan worth up US$ 4 trillion. People familiar with the plan claim that the “green transition to a low-carbon economy” would underpin almost every part of it, including investments in renewable energy infrastructure, such as building electric car charging stations. (14)

For capitalists like billionaire Elon Musk, owner of electric car company Tesla, the climate chaos and

Covid-19 are no particular problem, as long as they offer opportunities for profit making. Indeed, while the economic recession due to the pandemic made the global car industry shrink by 16% in 2020, a record of 3 million new electric cars were registered globally in the same year. (15)

Over in Indonesia, President Joko Widodo announced in August 2019 the construction of a new capital city in East Kalimantan, arguing that the present capital Jakarta faces too many problems such as worsening traffic, land subsidence and flooding. (16)
According to Widodo, the new capital city would be the first of its kind worldwide to only use electric vehicles. (17) Billionaire Masayoshi Son, together with Abu Dhabi's crown prince Sheikh Mohammed bin Zayed Al Nahyan and the UK's ex-prime minister, Tony Blair, are members of the project's Steering Committee, which is only accountable to the Indonesian president. Son's Japan-based Softbank has 'offered' to invest between US$ 30 and 40 billion in the new capital city, although it is not clear in what exactly. Son said in an interview that it could be for "education, a research center or hospital development." But probably far closer to the truth are his interests in what he calls "a new smart city, the newest technology, a clean city and a lot of artificial intelligence." (18) Because for Son´s bank, the latter represents a huge opportunity for astronomic profits in the future from its current investments in companies manufacturing electric vehicles and others extracting battery minerals.

Indonesia's new capital is also a project for which Elon Musk and his electric car industry dreams of becoming true. But for now, the project is on-hold due to the Covid-19 pandemic. If it takes off, it will lead to a tremendous scale of environmental and forest destruction in and around the roughly 200 thousand hectares of land where the project is being located

Toety Ariela from North Maluca has a message to Masayoshi Son, Elon Musk, other car producers, mining companies, and to the governments supporting them: "We do not need electric cars! If they think the electric car can be the solution to our planet from the threat of climate change, then according to us, keeping the forests and the mangroves on our island can save the earth from all the disaster that they have created. We just need our forests, seas, beaches, nature, homes, and life to come back again. We demand that they return our life and land to how it was before they came with the disastrous mining".

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