



# **Environmental Degradation, Land Grabbing and Social Impacts in Panwa Township due to illegal rare earths mining operations**



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## Abbreviations

<b>CDM</b>	-	<b>Civil Disobedience Movement</b>
<b>CSOs</b>	-	<b>Civil Society Organizations</b>
<b>EAOs</b>	-	<b>Ethnic Armed Organizations</b>
<b>NGOs</b>	-	<b>Non-Government Organizations</b>
<b>INGOs</b>	-	<b>International Non-Government Organizations</b>
<b>USGS</b>	-	<b>United States Geological Survey</b>

## Executive Summary

This research paper investigates the multi-faceted impacts of illegal rare earths mining in Panwa Township, Myanmar. The study focuses on the environmental degradation, illegal confiscation of local people's land and social impacts caused by the unlawful mining activities. Through analyzing the responses of local residents and migrant workers engaged in the rare earths mining activities, this paper presents the adverse impacts of such mining operations, including environmental degradation, damages to the livelihoods and social lives of the local communities. Key findings include deforestation, dumping of chemicals, and contamination of water resources, highlighting the severe environmental degradation. Furthermore, this research examines the involvement of local armed groups such as militia led by Zakhung Ting Ying, Border Guard Force (BGF), and military junta in illegal land grabs by exploiting locals' fears, as well as the exploitative practices of Chinese business owners. The socio-economic impacts include locals becoming homeless and landless, influx of Chinese nationals and migrant workers, labor rights violations, and sexual exploitation of female workers. In general, this research paper presents an analysis of the negative impacts of illegal rare earth mining based on the data collected. It also underscores the urgent need for environmental conservation, equitable land management, and regional stability, while emphasizing the rights and welfare of local communities to be protected by Ethnic Armed Organizations (EAOs) in cooperation with the people in the region.



# 1. Introduction

According to data from the United States Geological Survey (USGS), Myanmar is ranked as the fourth largest producer of rare earth minerals after China, the United States, and Australia. In 2018, Myanmar produced 5,000 tons of rare earth minerals, according to USGS statistics.

China is the largest producer and exporter of rare earth minerals in the world. In particular, it exports rare earth minerals extracted from deposits in northern Myanmar, its neighbor. According to USGS reports, in 2020 globally 240,000 tons of rare earth minerals were produced, of which China accounted for 140,000 tons. Myanmar produces 30,000 tons of rare earth minerals annually, most of which are exported to China. China controls more than 90% of the global market for the rare earth minerals. Northern Myanmar, specifically Kachin state, is a major source region for rare earth minerals. Although Kachin State is known as the "Land of Jade" for its production of world-famous jade, few people are aware that it is also the third largest source of rare earth minerals in the world.

The rare earth mineral deposits in Kachin State are located in the Panwa region, bordering China. Between Panwa and Chipwi, numerous rare earths mining pits are found in the mountains on either side of the upper Chipwi River, which runs diagonally from southeast to northwest.

After the 2021 coup d'état, illegal rare earths mining activities have rapidly increased in Panwa Township of Kachin State, leading to environmental degradation, illegal land grabs, and negative social impacts. Since the Chinese government imposed the restrictions on rare earth mining within its territory starting in 2016, rare earth mining activities have dramatically risen in Panwa Township, Kachin State, Myanmar, which borders China. Chinese mining

companies searching for rare earth minerals have depleted the natural resources of Panwa Township, causing irreversible damage to the region's ecosystem.<sup>3</sup>



Rare-earth mining process involves clearing forests and destroying hills by digging pits and tunnels. Ammonium sulfate solution is poured into dug pits and tunnels to extract the rare earth minerals. Then, the ammonium sulfate solution, which contains dissolved mineral particles, is piped into nearby ponds. The rare earth minerals are, then, filtered and extracted from these ponds, while the remaining ammonium sulfate- contaminated water is discharged into nearby streams. The discharge of these chemical-laced wastewaters pollutes the nearby streams and water resources. When the rare earth mining sites are abandoned, the dug-up hills, pits, and ponds containing residual chemicals are left contaminated without any cleanup, as the companies quickly move to new sites. The irresponsible mining practices of the Chinese companies have now severely polluted the Panwa region's environment with toxic chemicals, threatening the health of the local residents.

The adverse impacts of rare earth mining are clearly apparent in the daily life of residents in Panwa Township. Since the water in the streams near the mining sites is undrinkable, the locals are concerned about using natural stream water for consumption and have come to rely on purchased

drinking water. Furthermore, forcible land acquisitions are posing significant challenges to the agriculture of local people who rely on the land for their livelihood. The influx of Chinese nationals and migrants has created the insecurity in transportation for local women as well as social problems with anxiety.<sup>4</sup>



These rare earths mining sites highlight labor rights violations and the incidents of sexual exploitation. Before the military coup in 2021, only residents of Myitkyina Township were involved in rare earths mining. However, following the military coup, migrant workers from all throughout Myanmar surged into that industry in large numbers. Most administrative and technical roles have been taken over by Chinese workers, while Burmese workers have been compelled to do menial labor. Wage disparities are a significant factor in discrimination, with Burmese laborers earning much less than Chinese workers. Chinese employers do not have employment contracts or commitments with Burmese workers, who are subjected to unfair dismissals and get inadequate compensation for workplace injuries or deaths.

Female cooks, water watches, and mistresses/maids encounter additional hurdles. Chinese employers sexually harass Burmese female workers and frequently exploit their vulnerabilities, luring them into positions as mistresses/maids with money incentives and other promises. Female workers who do not get along with their Chinese bosses' risk getting laid off or fired.

*Health impacts from working in rare earth mining activities include respiratory diseases, neurological diseases, skin diseases and gynecological diseases.*

The implications of unlawful rare earths mining in Panwa township involve environmental and labor issues that are significantly worse than other areas. Drug usage has risen dramatically, including among male and female workers. In addition, as a result of Myanmar's continuous armed conflict, the influx of migrant workers looking for job opportunities has flowed into the Panwa region, increasing the migrants and settled population and leading to economic distortions. Unscrupulous employment brokers have made migrant settlers and job seekers easy prey. Despite collecting fees, brokers are unable to secure jobs and guarantees, exposing job seekers who come to work in the rare earth mining to severe socioeconomic suffering.

The purpose of identifying these issues is to seek the assistance of NGOs, INGOs, private media and relevant local authorities in addressing the environmental damage, labor rights violations, and sexual exploitation linked with illegal rare earths mining in Panwa township. There are efforts to raise awareness among locals and workers, close mines that local people oppose, alleviate the sufferings of affected residents, and find the sustainable solutions.

*“After the coup, there has been a surge in the number of mines. These mines once operated in Jiangsu, China. However, due to the Chinese government's restrictions, mining activities shifted to this side after their permits were revoked. Before this shift, we used to make wood for our livelihood in Panwa area.”*

*A local worker working in the rare earth mining industry*



## 2. Objectives

The objectives of this research study are as follows:

- (a) To identify the environmental impact of rare earths mining and its effects on the livelihood and social well-being of the local community
- (b) To understand the discrimination against workers and the occurrence of occupational hazards in the rare earth mining industry.
- (c) To know the occupational safety and health risks that Myanmar workers face
- (d) To find out the compensation amounts and systems in place for occupational injuries and accidental deaths of workers.
- (e) To understand the situation of vulnerabilities that Myanmar women face in the workplace.
- (f) To understand the causes of the significant increase in immigrant workers in the Panwa region.



### 3. Main Findings

#### (a) Environmental degradation

*“The companies don't provide drinking water for the workers. Our site gets water trucked in from far away, but some companies don't arrange to get it from far away. Workers just drink stream water at the mining sites. That water is sour.”*

*A woman laborer who works at a rare earth mining site*



Mining activities in Panwa township have severely damaged the environment, including deforestation and water pollution. Forests were cut down on hills cleared for mining. Ammonium sulfate solution is poured into the mountains mine pits, and mineral deposits are sifted in ponds at the base of the mountain to extract rare earth minerals. After mining, ammonium sulfate-contaminated wastewater was readily discharged into nearby streams, polluting the water in the streams. The abandonment of the mined hills and pits without rehabilitation of the environment resulted in further severe environmental degradation. According to the locals, the waters in the streams of Panwa region has turned sour and is unhealthy for drinking, leading to concerns about potential adverse health impacts due to decreased water quality.<sup>5</sup>



*"I don't want rare earths mining activities here. It's painful to see others extract our country's land and resources. The reason I don't want to allow it is that after the hills have been mined, there is nothing left."*

*A local resident from Panwa*

## (b) Land confiscation



Chinese companies, in collaboration with local armed groups such as militias, Border Guard Force, and the military junta, have been involved in illegal land grabs for rare earth mining purposes. They sought out lands and hills rich in rare earths minerals and forcibly seized them from villagers through village heads. Due to threats from armed groups operating in the area, landowners were reluctant but coerced to sell their ancestral lands. The armed groups threatened the villagers **"either negotiate to sell or we'll confiscate your land,"** and purchased the lands from them at low prices of roughly 20,000 yuan per acre, only to resell them to Chinese companies.

## (c) Livelihoods and social impacts



Forced land grabs have had a significant impact on the livelihoods of local people who rely on agriculture. Land confiscations have posed major challenges to their economic stability. The influx of Chinese nationals and migrant workers has created social problems in the region, and local women have expressed concerns about their safety. Additionally, the community's reliance on extractive mining industry has exacerbated drug-related issues, undermining its security.

*“There are also places where metal is baked. The person who worked there was unable to survive six months. They died after coughing up blood and vomiting it”*

*A worker working in rare earths mining industry*



## (d) Labor rights violations and sexual exploitation



Following the 2021 military coup, there was an increase in the demand for employment opportunities throughout Myanmar and the number of migrant workers in the mining industry expanded tremendously. People in conflict-affected areas of Myanmar have lost their regular jobs, traditional occupations, and ability to farm their land, resulting in a greater demand for employment to fulfil their basic needs. Refugees who have fled the conflict areas in these regions have arrived in Panwa region to seek job opportunities and are now employed as rare earth mining laborers to support their remaining families.

These migrant workers consist primarily young and middle-aged people including educated young people, teachers and other former civil servants who previously participated in the Civil Disobedience Movement (CDM) and military resistance movements. Discrimination and labor rights violations continue in the rare earths mining industry, with Chinese workers occupying administrative and technical positions and Burmese workers are relegated to basic manual labor roles. Burmese employees earn significantly lower wages than their Chinese counterparts. When disputes arise among workers, Chinese employers dismiss them without investigating the situation. Protective equipment against hazardous chemicals used in the workplace is not supplied, and compensation for

occupational injuries and deaths is limited. There is poor awareness among workers about these issues and labor rights. Chinese employers sexually exploit women in the workplace and put them under pressure to comply.

*“The problem for the girls is that they work as cooks, but they only get a good salary if they get along with the site leader and Law Pang/ the boss. If she does not follow their instructions, they will not hire her. She will get fired from their jobs.”*

*A woman laborer working in a rare earth mining site*

### (e) Drug and health problems



It is observed that drug use is on the rise among male and female workers in the rare earths mining industry. Workers who work with chemicals such as ammonium sulfate suffer from respiratory and skin diseases. Mistress/Maids has from gynecological problems and is at risk of abortion. Hazardous working circumstances and a lack of adequate safety measures have a severe impact on workers' overall and long-term health.

*“Burmese girls have a high esteem for Chinese men. They live with Chinese bosses over 60 years old because of money, despite the fact that they are only 16 years old. Marriages between Burmese women and Chinese migrant workers are usual. If they become pregnant, they are urged to travel to Myitkyina for abortions.”*

*A local worker working in the rare earths mining industry*

According to the findings, many problems have been discovered in the mining operations of Panwa Township including severe environmental degradation, illegal land seizures, social disruptions, labor rights violations, sexual exploitation, drug usage, and health issues. These findings highlight the urgent need for effective and wide-ranging reforms to address the consequences of rare earth mining, and to protect the rights and security of affected communities.

*“If you just dig holes, nothing will happen. However, it is stated that anyone who adds fertilizer suffers a disease that causes infertility and is unable have children.”*

*A local worker working in the rare earth mining industry*

*“Drugs are almost everywhere, and even though it's not officially permitted by the employers, workers including some women also use drugs.”*

*A local worker working in the rare earth mining industry*

*“Long term fertilizer/manure workers experience shortness of breath and other health problems. Some companies provide gloves and masks for use in the workplace, while others don't.”*

*A local worker working in the rare earth mining industry*



## 4. Analysis

Illegal mining activities by Chinese companies have caused environmental degradation, illegal land confiscation, social impacts, and labor rights violations in Panwa township, Kachin State. Forests are cleared for mining without rehabilitating the land, leaving bare mountains and pits and discharging chemical toxic waste into streams, polluting and endangering water resources for consumption. Local people who rely on agriculture are struggling to sustain their livelihoods as a result of forced land confiscation. The influx of Chinese nationals and migrant workers has created social problems as local women are concerned about their safety and movement. Violations of labor rights are widespread and there is discrimination between Burmese and Chinese workers, as well as lack of awareness about the dangers of being exposed to hazardous chemicals, and little compensation for the workplace incidents. Drug usage and related health issues as well as sexual exploitation of female workers are also reported. Along with the ongoing armed conflict in Myanmar, people's livelihoods are becoming more difficult, leading to a dramatic increase in the number of migrant workers. Migrant workers are increasingly heading to rare earths mining sites as they struggle to find work. There is an urgent need to address these issues and the negative impacts of illegal rare earths mining activities in Panwa Township. Interventions are also required to address these issues.





## 5. Recommendations

### 1. Environmental degradation



- 1.1. To reduce the environmental impact of mining operations, international environmental standards, regulations and laws should be followed. Strict guidelines for waste management should be established, mined areas should be rehabilitated, and chemicals and wastewater should be disposed of in a systematic way.
- 1.2. Since it is a lawless period in Myanmar, evaluations will be difficult to implement, nonetheless long-term impacts on ecosystems, water resources and local communities should be considered, and relevant stakeholders should promote sustainable practices that can be adhered to in the long term.
- 1.3. To ensure compliance with international environmental standards, regulations and laws, a powerful monitoring and enforcement mechanism involving local people, local armed groups and civil society organizations should be formed. It should include regular monitoring and penalties for rules violations.

## 2. Land confiscation



- 2.1. The rights of local communities should be protected and their participation in decision-making processes concerning land use and resource extraction should be emphasized. This includes recognizing customary land rights, protecting the rights of landowners, formalizing and strengthening land administration systems.
- 2.2. Coercion threats, including forceful land confiscations, must be avoided and community participation should be ensured, and fair compensation for land loss should be safeguarded, and issues of coercion, intimidation and violence should be prioritized.

## 3. Social impacts

- 3.1. Alternative livelihood opportunities and support programs for local communities affected by mining activities should be implemented. To ensure long-term communities' sustainability, this could include agricultural technologies, networking activities and entrepreneurship training for trade.

## **4. Labor rights violations and sexual exploitation**

- 4.1. Use labor laws and regulations to protect workers' rights in the mining industry. This should include fair wages, safe working conditions, access to health care and protection from discrimination and exploitation.
- 4.2. Conduct regular inspections of mining operations to ensure compliance with labor laws and regulations. This should include working hours monitoring, payment of fair wages, provision of workplace protective equipment and adherence to occupational health and safety standards.
- 4.3. Educate workers about their rights, labor rights, and relevant laws. Provide training on workplace safety and health risks associated with mining operations. Enable the workers to report any human rights breaches or exploitation in a timely manner.
- 4.4. Establish channels for reporting labor rights violations and sexual exploitation, conduct prompt and impartial investigations, hold perpetrators accountable and establish mechanisms for prompt provision of legal aid, counseling and medical assistance to victims.

## **5. Health and drug problems**

- 5.1. Access to health care services for miners and affected communities, especially those in remote areas, should be ensured. This should include regular health check-ups, treatment centers for occupational health issues and drug misuse awareness campaigns.
- 5.2. Implement effective prevention of drug trade and comprehensive rehabilitation programs to address the growing drug problems associated with mining operations.
- 5.3. Mining companies must prioritize occupational health and safety measures including proper precautions, protective equipment and regular monitoring of workers' health. They must

provide necessary support to workers suffering from occupational illnesses or injuries.

- 5.4. Collaboration with civil society organizations (CSOs), NGOs, INGOs working on health and drug issues should be pursued. This could include joint awareness campaigns, capacity building initiatives and advocacy for policy reforms.

The above recommendations are intended to address the multifaceted challenges of environmental degradation, land confiscation, social insecurity, labor rights violations and health issues caused by working in the mining operations.

*There is an urgent need for the cooperation of all stakeholders, including Ethnic Armed Organizations (EAOs), international organizations and civil society organizations to implement these recommendations. Urgent actions should be taken to avert the present circumstances promptly.*



*1 <https://www.bbc.com/burmese/burma-48467691>*

*2 <https://myanmar-now.org/mm/news/9407/>*

*3 Key Informant Interview with the worker from the rare earth mining site (2023)*

*4 Key Informant Interview with the affected community (2023)*

*5 Individual Interview with the affected community (2023)*