

“Does Anyone Care?”

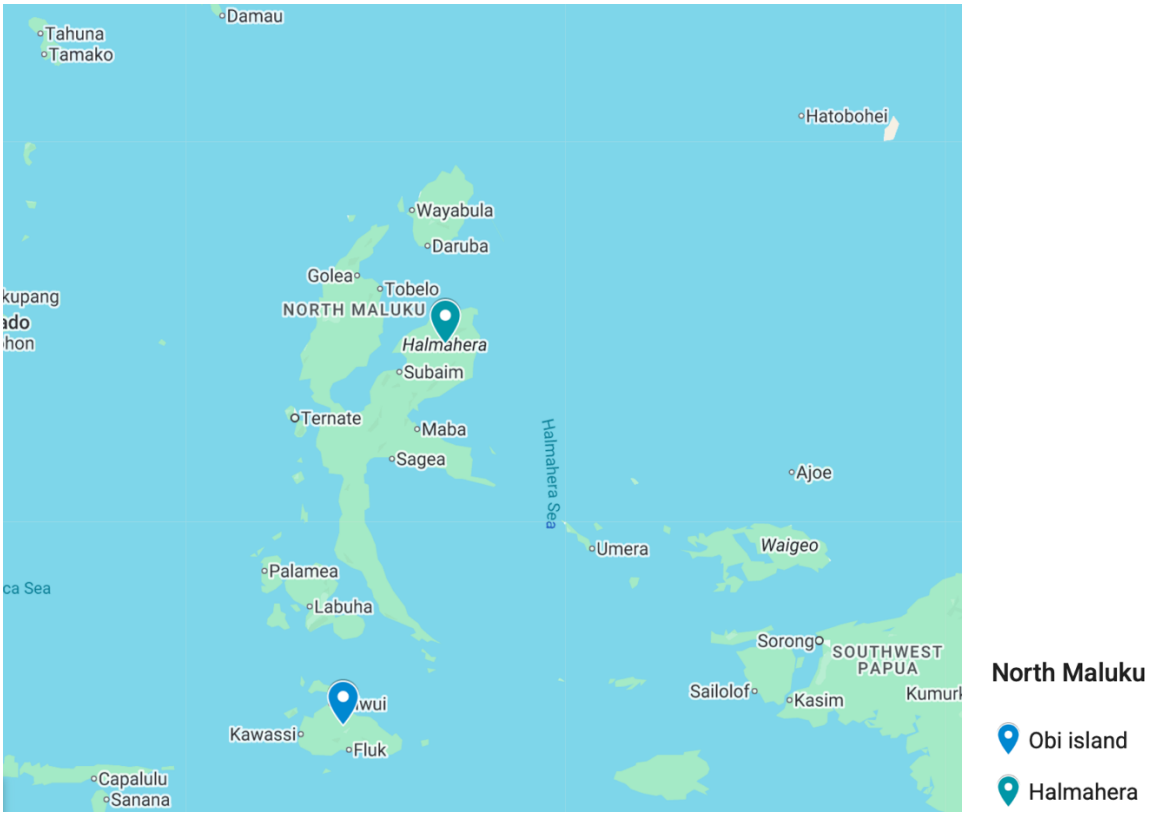
The Human, Environmental, and Climate Toll of Indonesia’s Nickel Industry

October 2025

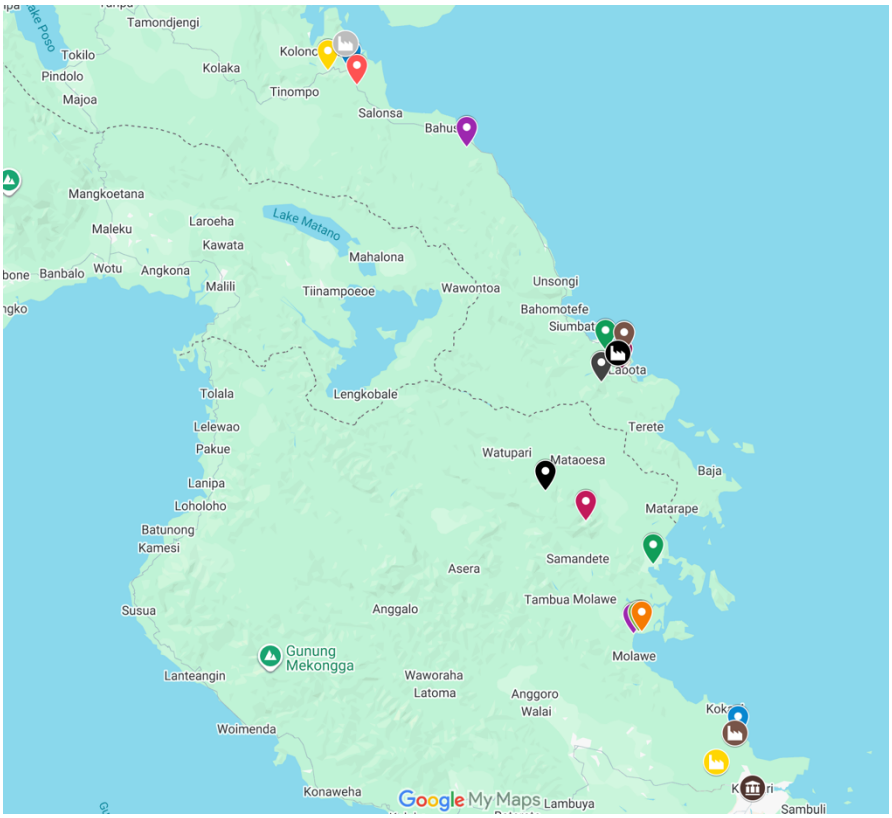
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Map of Indonesia. Credit: Nations Online Project



Map of Maluku Islands. Credit: Map created by Krista Shennum using Google My Maps.



Map of Sulawesi Islands. Credit: Map created by Krista Shennum using Google My Maps.

Southeast Sulawesi

- Tani Indah
- Mandiodo village
- Tapuemea village
- Tapunggaya village
- Kendari (SE Sulawesi capital)
- Lamonae Utama village
- Padalere Utama village
- Morombo Pantai village

Central Sulawesi

- Palu (Central Sulawesi capital)
- Towara village
- Molino village
- Tompira village
- Tondo village
- Fatufia village
- Labota village
- Bahomakmur village
- Kurisa village

Industrial Areas

- PT Gunbuster Nickel Industry
- Indonesia Morowali Industrial Park (PT. IMIP)
- Virtue Dragon Nickel Industry
- PT Obsidian Stainless Steel

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Glossary

AMDAL	Analisis Mengenai Dampak Ligkungan (Environmental Impact Assessment)
Captive coal plant	A coal-fired power plant that powers off-grid industrial activities and does not feed into the electricity grid
Check-dam	A temporary structure built to control erosion and sedimentation
CSR	Corporate Social Responsibility
Dust money	Compensation for air pollution and other local impacts provided by mining companies to local governments to disperse to residents
EIA	Environmental impact assessment
EV	Electric vehicle
FPIC	Free, Prior, and Informed Consent
GHG	Greenhouse gases
GNI	PT Gunbuster Nickel Industry
HPAL	High pressure acid leach
IMIP	Indonesia Morowali Industrial Park
IUP	Izin Usaha Pertambangan (Mining Business Permit)
IWIP	Indonesia Weda Bay Industrial Park
OSS	PT Obsidian Stainless Steel
Transition Minerals	Mineral resources essential for clean energy technologies, economies, or national security (also called critical minerals)
VDNI	Virtue Dragon Nickel Industry
WBN	PT Weda Bay Nickel

Summary

> “If everything is polluted, what is left for us to eat, what is left for us to breathe?”
> — Hargono, August 14, 2025, Tapuemea, Southeast Sulawesi

> “In the past, we could drink from the Lalindu River. It was our source of drinking water, washing, everything. Now, no one dares.”
> — Hastin, Lamonae Utama, Southeast Sulawesi

> “[Mining] dust kills crops, floods wash away homes, fish disappear. Yet when we protest, it is we who are jailed.”[1]
> — Jefri, Mandiodo, Southeast Sulawesi

Indonesia is the world’s largest producer of nickel, a key raw material in the renewable energy transition used in batteries for electric vehicles (EVs) and for energy storage. It is now a massive part of the country’s economy. Since 2016, the number of nickel smelters has surged from just two to more than sixty, leaving a trail of environmental destruction and human suffering in their wake.[2] In 2024, Indonesia’s exports of nickel-based products reportedly reached between USD 38 and 40 billion.[3] Demand has skyrocketed in recent years due to increasing use in electric vehicle batteries. In a scenario aligned with the Paris Agreement’s climate goals, global nickel demand is expected to increase roughly 60 percent by 2040.

The urgency to stop burning fossil fuels and have a “just transition” to renewable energy cannot be understated. The past ten years were the ten warmest years on record. Communities in Indonesia and around the world are regularly experiencing extreme heat, and more frequent and more severe extreme weather events.[4]

But for many people living at the frontlines of the nickel industry, the push to mine and process nickel is anything but a just transition. At multi-billion-dollar industrial

[1] Climate Rights International interview with Jefri, August 16, 2025, Mandiodo, Southeast Sulawesi.
[2] Tunnicliffe, Andy, “Indonesia’s Nickel Market Stranglehold Tightens, Again.” Mine, Issue 151, April 2025, https://mine.nridigital.com/mine_apr25/indonesia-nickel-market-2025 (accessed October 7, 2025).
[3] Ibid.
[4] World Meteorological Organization, “WMO Confirms 2024 as Warmest Year on Record at About 1.55°C Above Pre-Industrial Level,” January 10, 2025, https://wmo.int/news/media-centre/wmo-confirms-2024-warmest-year-record-about-155degc-above-pre-industrial-level (accessed October 7, 2025).

projects across Indonesia, local communities now find themselves in de facto "sacrifice zones," where the extraction of nickel comes at the cost of health, livelihoods, and rights.

This report examines the human rights, environmental, and climate impacts of nickel mining and processing operations in Indonesia, focusing on Central Sulawesi, Southeast Sulawesi, and North Maluku, three of the most prominent hubs of the Indonesian nickel industry.[5] Climate Rights International interviewed 93 people living near and working at nickel mining and processing operations in Southeast Sulawesi, Central Sulawesi, and North Maluku. Across these three nickel hotspots, communities report:

- severe air and water pollution;
- health problems related to mining;
- the destruction of fishing and farming livelihoods;
- lack of access to health and environmental information;
- land grabbing and a lack of or inadequate compensation for their land;
- dangerous working conditions at mining and smelting facilities;
- threats to Indigenous Peoples' ways of life; and
- fear of retaliation for speaking out.

While nickel projects could have brought economic growth and opportunities to communities across Indonesia, people living in once self-sufficient villages are now paying a heavy price for the energy transition.

These impacts are not isolated cases. Instead, they reflect government policies and indifference, and an industry that prioritizes financial and economic growth over the rights of local communities and workers—or meaningful climate action. Indeed, Indonesian, Chinese, and other foreign companies are taking advantage of the climate crisis to extract nickel in an unjust, harmful, and carbon-intensive way. Far from protecting people and the environment, the government is actively supporting this industry as it steamrolls over Indigenous and other communities.

[5] Climate Rights International has previously conducted in-depth research about the human rights, environmental, and climate costs of the Indonesia Weda Bay Industrial Park and nearby nickel mining operations on Halmahera Island in North Maluku. See Climate Rights International, "Nickel Unearthed: The Human and Climate Costs of Indonesia's Nickel Industry," January 2024, https://cri.org/reports/nickel-unearthed/ and Climate Rights International, "Ongoing Harms, Limited Accountability," June 2024, https://cri.org/reports/ongoing-harms-limited-accountability/.

The Climate, Human, and Environmental Cost of Nickel

Although the transition to renewables that use nickel is key to reducing our reliance on fossil fuels, Indonesia's nickel industry is perversely contributing to the climate crisis. Despite clear scientific evidence that the world cannot afford any new fossil fuel infrastructure if we are to limit the most dangerous impacts of the climate crisis, new captive coal plants have been built; these plants power nickel industrial activities but provide no electricity to local communities.

Across Indonesia, operating captive coal plants tied to nickel projects have 11.6 GW of generation capacity, with an additional 5.5 GW under construction and 1.5 GW in a pre-permit stage.[6] If fully developed, these nickel captive coal plants will be roughly equivalent to the capacity of all coal plants in Thailand and the Philippines combined.[7] This does not count the approximately 38.5 GW of coal capacity in the country's grid.[8] Burning this much coal to process nickel for the energy transition is simply not a climate solution.

In major nickel hotspots in Indonesia, the process of land acquisition has been characterized by land grabbing, little or no compensation, and unfair land sales. In the Southeast Sulawesi village of Tapunggaya, some residents believed they were leasing their land to nickel mining companies for seven years, only to have the mining companies treat the deals as permanent land sales. Some residents of Baho Makmur village, near the massive, 5,500 hectare Indonesia Morowali Industrial Park (IMIP) in Central Sulawesi, one of the world's largest nickel industrial zones, explained that their land had been absorbed into the industrial park without compensation to the landowners. They now face armed security officers if they try to access their lands. Meanwhile on Obi Island, some residents say they were relocated without any consultation from their homes in Kawasi village to a village, controlled

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[6] Global Energy Monitor and CREA, "Indonesia's Captive Coal on the Uptick," Figure 7b, November 2024, https://energyandcleanair.org/wp/wp-content/uploads/2024/11/EN-CREA_GEM_Indonesia-Captive_2024.pdf (accessed October 7, 2025).

[7] Thailand has 6.1 GW and the Philippines has 12.6 GW of coal generation capacity. Global Energy Monitor, "Coal Plants by Country (MW)," July 2025, https://docs.google.com/spreadsheets/d/1_6AkrRZOn3ZXhSV9O6tZnX-m7aJsfG9HiQ_iEqBkbW8/edit?gid=158680629#gid=158680629 (accessed October 7, 2025).

[8] Setiawan, Dody. "Captive Coal Expansion Plan Could Undermine Indonesia's Climate Goals." *Ember*, February 20, 2025, https://ember-energy.org/latest-insights/captive-coal-expansion-plan-could-undermine-indonesias-climate-goals/?utm_source=chatgpt.com (accessed October 7, 2025).

and established by Harita Nickel, a major nickel company, that lacks the basic things that made life in Kawasi viable.

As the nickel industry transforms once rural areas into industrial zones, Indigenous and other rural communities are experiencing existential threats to their livelihoods and cultures. People interviewed by Climate Rights International reported that the nickel industry's destruction of forests, acquisition of farmland, degradation of freshwater resources, and harm to fisheries has made it difficult, if not impossible, to continue their traditional ways of life. For example, Gusnah is a 58-year-old Indigenous Bajau woman from Kurisa village, just outside of Indonesia Morowali Industrial Park (IMIP). Prior to the arrival of the nickel industry, she ran octopus collection operations, managing crews of ten fisherfolk, but she says that pollution from the industrial park has destroyed the fisheries and her way of life. Now, Gusnah and her sister wake before dawn to collect plastic bottles from garbage bins, joining the ranks of waste pickers:

> We're embarrassed. Many people pass by, some who knew us before, when we were respected members of the seafood trade. Now they see two elderly Bajau picking through garbage.[9]



Two Bajau women who stopped fishing because the sea is polluted. They now scavenge, collecting plastic bottle waste to sell to generate money. Credit: Riza Salman for CRI.

[9] Climate Rights International interview with Hayati in Kurisa on August 22, 2025.

Nickel mining and processing operations threaten local residents' right to safe, clean drinking water, as industrial activities and deforestation pollute the waterways on which local communities depend. Community members are also concerned that increasingly common flooding events are linked to deforestation by nickel mining companies. Climate Rights International was visiting Molino village in Central Sulawesi in August 2025 when a dam at an upstream mining site collapsed during heavy rains, contributing to a flash flood that destroyed homes and fishponds.

In some villages in Central and Southeast Sulawesi, habitat destruction and severe water pollution has even led to increased conflicts between humans and crocodiles, as crocodiles seek food closer to human settlements. In the Southeast Sulawesi villages of Lamonae Utama and Padalere Utama, there have been a growing number of crocodile attacks in recent years, a new phenomenon since nickel mining arrived. In Towara village in Central Sulawesi, women who once dived for river clams now fear both pollution and crocodiles, who are coming closer to the villages due to habitat destruction by the nickel industry.

Across all three provinces, residents in villages near nickel projects also fear that health problems, including respiratory problems and other ailments, are the result of dust pollution from nickel mines, processing facilities, and captive coal power plants. Some workers in nickel processing facilities have been forced to change jobs due to exposure to toxics.

Residents report that a doctor at IMIP's clinic told them that the area is no longer suitable for human habitation because of the severe pollution. The types of health impacts reported are in line with what studies suggest may be expected with exposure to pollution from industrial sources and coal plants. Workers at IMIP also described systemic labor rights violations, including occupational health and safety risks, and gender-based discrimination. Women workers report that they have to navigate additional hazards, including sexual harassment and reproductive health risks from exposure to toxics.

A lack of transparency or provision of basic information by companies and the Indonesian government is making the situation worse. Community members have difficulties accessing information about nickel projects and the impacts of pollution on their health. Many people told Climate Rights International that they were not adequately consulted prior to mining and industrial operations.

Some residents feel deceived. For example, Hasnia, a resident of Kurisa village outside of the IMIP, explained that she was misled about what IMIP would eventually become:

> We were told they [IMIP] were building a canteen. It turned out to be a coal plant.[10]

People who speak out or protest against the impacts of nickel mining and processing face intimidation, harassment, or retaliation. Residents who protest can be charged with obstructing legal economic activity. Those who refuse to move can be accused of illegally occupying state land, even when they've lived there for decades. In some cases, community members say that the use of police or military personnel by nickel companies has prevented local residents from speaking out against land grabbing or serious environmental pollution. In Towara village in Central Sulawesi, some women fear that if they protest the local government will make it more difficult for them to access public services.

The involvement of military personnel is particularly concerning. Since independence, the military has often played a role in facilitating large-scale resource extraction, sometimes through intimidation and violence. The presence of soldiers at community meetings, and at people's homes in the middle of the night, sends a clear message: resist and face consequences.

Residents told Climate Rights International that their struggle is not only against corporations, but also against a government that promised jobs and development but has delivered little. Disillusionment runs deep, as villagers feel abandoned by the institutions meant to protect them. Where once community gatherings revolved around shared harvests and river life, today conversations are marked by grievances, debt, and illness.

The promise of industrial progress has, for many, become a story of dispossession and loss. According to Dian, a resident of Tani Indah village in Southeast Sulawesi:

[10] Climate Rights International interview with Hasnia on August 22, 2025.

> They said mining would bring development, but I feel we're falling.[11]

The desperation of many living in and around nickel projects is palpable. According to Herman, who lives in Kawasi on Obi island:

> I hope this report reaches the United Nations, so the world knows that people like us still exist. We ask that our health be prioritized. We also deserve a decent life. Don't just help those at the top. We down here are people too.[12]

The Role of Governments and Companies

The transition to renewable energy is essential, but strong government regulation and oversight, as well as greater corporate due diligence and supply chain management, are necessary to ensure that the growing transition mineral industry do not replicate the appalling labor and environmental practices that have long characterized mining and other extractive industries in Indonesia and around the globe.

The Indonesian government is actively promoting the nickel industry over the wellbeing of its citizens. Over the past decade, the Indonesian government has enacted policies and laws to prioritize the growth of the nickel industry, weaken environmental protection and the rights of Indigenous communities, and increase militarization. Under President Probowo Subianto's administration, the Indonesian government is also expanding the use of military personnel at nickel parks, food and energy estate projects, and other extractive industries. In a major step backwards, in March 2025 the Indonesian parliament passed revisions to the Indonesian National Armed Forces (TNI) Act, allowing active military members to hold civilian roles. Human rights groups fear this could intensify militarization and reduce accountability in regions affected by extractive industries.

The government and parliament should work together to strengthen laws and regulations to minimize the impacts of nickel mining and refining on communities, including on Indigenous communities. The Ministry of Energy and Mineral Resources should ensure that mining companies follow strict procedures that respect the environment and human rights. It should proactively monitor and investigate alleged

[11] Climate Rights International interview with Dian, August 13, 2025, Tani Indah, Southeast Sulawesi.
[12] Climate Rights International interview with Herman Marang, Kawasi, Obi Island, Sept. 28, 2025.

environmental pollution and make the findings of such investigations publicly available and accessible.

The Ministry of Agrarian Affairs and Spatial Planning should immediately recognize Indigenous communities' customary land rights. It should require nickel mining and refining companies to respect the rights of local and Indigenous communities, and impose penalties for violations, including the loss of operating permits.

Some nickel mining and processing companies are failing their human rights responsibilities under the United Nations (UN) Guiding Principles on Business and Human Rights. All nickel companies should fully and fairly compensate all community members, including Indigenous Communities, for their lands. Nickel companies should properly dispose of mine tailings to minimize environmental pollution and take immediate steps to prevent and remediate water and air pollution caused by their operations. All companies must ensure that Indigenous Peoples are able to provide full free, prior, and informed consent (FPIC) as established by international human rights law.

Global EV and battery manufacturing companies that source nickel from Indonesia should immediately use their leverage to push suppliers to address harms to local communities and the environment, and if necessary, stop sourcing nickel from companies responsible for such abuses. EV companies should also increase transparency about their transition minerals supply chains by providing public information about all suppliers, including those involved in mineral mining, refining, smelting, and battery production. In addition, they should conduct regular, transparent, and genuinely independent audits of mines and facilities where critical minerals are mined and refined.

The need to end fossil fuel extraction and use, and to transition rapidly to renewable energy, is urgent. Fossil fuels are the single largest source of greenhouse gas emissions driving global warming and were explicitly identified as such by the International Court of Justice (ICJ) in its recent Advisory Opinion on states' legal obligations in relation to climate change. As the ICJ underscored, accelerating the transition to renewable energy is not merely a matter of political will, it is now a matter of legal obligation to protect the climate system and the rights of present and future generations. Consistent with the ICJ's decision, the Indonesian government

should immediately stop the permitting of all new coal plants, including captive coal plants used to power industrial areas.

The urgency of the climate crisis should not be used as an excuse for the endless extraction of minerals like nickel and the serious impacts to frontline communities and ecosystems. High consuming economies, including countries in the Global North, should enact policies that curb demand for virgin raw materials and new mining projects, including by increasing access to public transit and ensuring that battery minerals are repurposed and recycled.

Key Recommendations

To nickel mining and processing companies in Southeast Sulawesi, Central Sulawesi, and North Maluku:

- Remediate existing pollution and minimize future air, water, and soil pollution from industrial activities by installing air pollution control mechanisms, properly disposing of industrial waste and coal ash, and treating wastewater from industrial facilities and coal plants based on the best available science and technologies;
- Fully and fairly compensate all community members for land taken without compensation or where insufficient compensation was previously provided;
- Immediately stop the construction of new captive coal plans and announce concrete, timebound plans to replace existing coal plants with renewable energy sources as soon as possible; and
- Make public all information related to future expansion, deforestation, land acquisition, and industrial activities, and make that information accessible to local communities, including by holding public meetings and providing information in local languages.

To the Indonesian government:

- Adopt, strengthen, and enforce national laws and regulations to minimize the impacts of nickel mining and processing on communities and to comply with international human rights, environmental and climate law, including customary international law;
- Hold accountable, including through criminal prosecutions and civil penalties, nickel mining and processing companies and their representatives responsible

for environmental damage and/or violation of the rights of individuals or communities;
- Fully implement the UN Declaration on the Rights of Indigenous Peoples, including the right to FPIC, and legally recognize Indigenous Peoples within Indonesia, including by passing the Indigenous Peoples Rights Bill; and
- Immediately stop the permitting of all new coal plants, include captive coal plants in national decarbonization and climate commitments, and move quickly to fulfill those commitments.

To electric vehicle companies:

- Leverage buying power to pressure mines, mineral processors, and suppliers to change practices that cause environmental or human rights harm, prevent abuses, and ensure accountability and justice for violations;
- Conduct regular, transparent, and genuinely independent audits of mines and facilities where nickel and other transition minerals are refined to ensure that suppliers respect human rights and the environment;
- Increase transparency about EV supply chains by collecting and providing public information about all companies in supply chains engaged in mining, mineral processing, and battery production; and
- Make time-bound commitments to decarbonize supply chains.

Methodology

This report is based on information collected during field research in Southeast Sulawesi, Central Sulawesi, and North Maluku, as well as remote interviews, conducted between July and September 2025. For context and continuity, we also include information from interviews conducted in 2023 and 2024 that were published in Climate Rights International's previous reporting on the Indonesian nickel industry: "Nickel Unearthed: The Human and Climate Costs of Indonesia's Nickel Industry" (January 2024), and "Ongoing Harms, Limited Accountability: Climate, Environmental, and Human Rights Violations in the Indonesian Nickel Industry" (June 2025).

Climate Rights International interviewed 75 people living near nickel mines, concessions, or industrial areas for this research. We also held a focus group discussion with an additional 18 individuals in Central Sulawesi, for a total of 93 individuals. Interviewees included 40 men, 52 women, and one child. Many community members interviewed for this report identified as Indigenous, including people from the Bajau, Kaliki, Mori, and Tobelo-Galela communities.

Climate Rights International also met with and interviewed local activists, NGO representatives, and academic researchers. We reviewed secondary sources, including peer reviewed literature, media reports, legal documents, and company reports. Climate Rights International also reviewed relevant Indonesian laws and regulations. All interviewees provided informed consent to participate in the interview. In some cases, we have given pseudonyms and/or withheld identifying information of interviewees to protect their identity because of the risk of retaliation. No financial incentives were provided to interviewees.

Prior to the release of this report, Climate Rights International wrote to the following: Ministry of Energy and Mineral Resources; Ministry of Finance; Ministry of Investment and Downstream Industry; Ministry of Marine Affairs and Fisheries; Ministry of Forestry; Ministry of Environment; Coordinating Ministry for Economic Affairs; Ministry of Industry; Ministry of Agrarian Affairs and Spatial Planning; Ministry of Health; Ministry of Primary and Secondary Education; and Ministry of Law and Human Rights. We also wrote to the following companies: ENERSTEEL; Gunbuster Nickel Industry; Harita Nickel; Indonesia Morowali Industrial Park; PT Antam; PT

Bukit Makmur Istindo Nikeltama (Bumanik); PT Obsidian Stainless Steel; Sumber Permata Mineral; and Virtue Dragon Nickel Industry. Copies of these letters and government or company responses can be found in the Appendix.

I. Background

Indonesia is the world's largest producer of nickel. It holds 21 percent of the 100 million metric tons of global nickel reserves.[13] In 2023 and 2024, Indonesia supplied more than half of the world's nickel.[14]

By 2030, the global appetite for nickel is expected to significantly increase, largely fueled by the rapid growth of the electric vehicle sector. North Maluku, Central Sulawesi, and Southeast Sulawesi have become focal points in the search for transition minerals because of their abundant nickel reserves.

Like other countries located near the equator, Indonesia is home to significant laterite nickel ore deposits, which are generally lower quality and found closer to the surface than the nickel sulfide deposits found in temperate countries, including the U.S., Canada, and Russia. Because of its lower quality, laterite nickel ore is significantly more carbon intensive to process into high-quality nickel that can be used in the production of batteries.[15]

For more than a decade, the Indonesian government has been taking steps to ban the export of nickel ore in attempt to develop the country's domestic mineral refining industry and boost export values. In 2009, the government passed Law No. 4 on Coal and Mineral Mining, which stipulated that companies with a mining business license or special mining business permit were required to process and refine mining products domestically within five years, effectively introducing a ban on the export of ore starting in 2014.[16] In 2014, a Ministry of Energy and Mineral Resources

[13] Other countries with significant nickel deposits include Australia (21 million metric tons), Brazil (16 million metric tons), Russia (7.5 million metric tons), New Caledonia (7.1 million metric tons), Philippines (4.8 million metric tons), Canada (2.2 million metric tons), China (2.1 million metric tons), and the United States (0.37 million metric tons). Statista, "Reserves of nickel worldwide as of 2022, by country," January 2023, https://www.statista.com/statistics/273634/nickel-reserves-worldwide-by-country/ (accessed April 4, 2023).
[14] S&P Global, "Indonesia – Mining by the numbers, 2024," September 18, 2024, https://www.spglobal.com/market-intelligence/en/news-insights/research/indonesia-mining-by-the-numbers-2024; Investing New Network, "Top 9 Nickel-producing Countries," June 4, 2025, https://investingnews.com/daily/resource-investing/base-metals-investing/nickel-investing/top-nickel-producing-countries/ (accessed October 7, 2025).
[15] International Energy Agency, "GHG emissions intensity for class 1 nickel by resource type and processing route," May 2021, https://www.iea.org/data-and-statistics/charts/ghg-emissions-intensity-for-class-1-nickel-by-resource-type-and-processing-route (accessed April 5, 2023).
[16] Law No. 4 of 2009 on Coal and Mineral Mining, https://peraturan.bpk.go.id/Details/38578/uu-no-4-tahun-2009 (accessed September 19, 2023).

regulation postponed the ban on the export of mineral ore until 2017.[17] After a series of additional postponements, the nickel ore export ban was finally implemented in 2020. This has been a factor in the massive increase in the number of nickel mines and processing facilities around the country. Much of the nickel industry has been funded by foreign investment, particularly from China.

Large industrial areas in Indonesia where nickel ore is processed are powered by captive coal power plants, which have been constructed for the sole purpose of powering nickel processing operations and do not provide electricity to the local population. Across Indonesia, operating captive coal plants tied to nickel projects have 11.6 GW of generation capacity, with an addition 5.5 GW under construction and 1.5 GW in a pre-permit stage.[18] 76 percent of the country's captive coal capacity is linked to nickel processing.[19] If fully developed, these nickel captive coal plants will be roughly equivalent to the capacity of all coal plants in Thailand and the Philippines combined.[20]

[17] Ministry of Energy and Mineral Resources, 2014, https://jdih.esdm.go.id/index.php/web/result/39/detail (accessed September 19, 2023).
[18] Global Energy Monitor and CREA, "Indonesia's Captive Coal on the Uptick," Figure 7b, November 2024, https://energyandcleanair.org/wp/wp-content/uploads/2024/11/EN-CREA_GEM_Indonesia-Captive_2024.pdf (accessed October 7, 2025).
[19] Ibid.
[20] Thailand has 6.1 GW and the Philippines has 12.6 GW of coal generation capacity. Global Energy Monitor, "Coal Plants by Country (MW)," July 2025, https://docs.google.com/spreadsheets/d/1_6AkrRZOn3ZXhSV9O6tZnX-m7aJsfG9HiQ_iEqBkbW8/edit?gid=158680629#gid=158680629 (accessed October 7, 2025).



Map of Southeast Sulawesi. Credit: Map created by Krista Shennum using Google My Maps.

II. Southeast Sulawesi

The Province of Southeast Sulawesi is one of the most prominent regions of the Indonesian nickel industry, home to more than one hundred nickel mines and at least three major processing facilities.

Climate Rights International visited six mining-impacted communities in Southeast Sulawesi, interviewing 43 residents, Indigenous Peoples, community leaders, mining industry workers, and activists about the ways in which the nickel industry has impacted their lives.

The following chapter highlights the human and environmental costs of the nickel industry in four regions in Southeast Sulawesi: Tani Indah; the Mandiodo Block; Wiwirano; and Morombo Pantai. As the interviews make clear, communities in Southeast Sulawesi are caught between the global demand for clean energy and local struggles to secure basic human rights, including the rights to health, water, and education.

Tani Indah Village

In Tani Indah, the bridge-like structure looms in the distance, spanning several kilometers over the surrounding landscape. Its metal frame reflects the sunlight, creating a blinding glare. The desolate landscape offers little in terms of comfort or sustenance. The road, a parched ribbon of reddish-brown dirt, bears the weight of rumbling trucks laden with cargo, their engines growling like distant thunder. Flanking the road, heaps of lifeless brown and black soil rise ominously, remnants of the pollution that chokes the air and renders the land inhospitable.



Hauling road in Tani Indah, August 2025. Credit: Riza Salman for CRI.

This barren expanse, devoid of greenery or shelter, is a hauling road that belongs to Virtue Dragon Nickel Industry (VDNI). The bridge-like structure is a conveyor belt used to transmit materials to VDNI's smelter from a nearby captive coal-fired power plant belonging to Obsidian Stainless Steel (OSS).

Health Impacts

Dian Wana Utami, a 31-year-old pregnant mother of two, resides in Tani Indah village, nestled between the smelter and the captive coal-fired power plant. Dian's house lies around 100 meters from VDNI's hauling road and 200 meters from the

coal plant. When Climate Rights International visited Dian, she was resting on doctor's orders, as she had nearly miscarried due to exhaustion.

To help support her family, Dian works as a raft driver, known locally as a *pincara*. She ferries customers to Lambuluo Village, about 300 meters away, for a fee of 10,000 rupiah (about USD 0.6) per person. Her raft is parked on the banks of the Motui River, not far from her home. To get there, she must pass by the open-air coal stockpile owned by Obsidian Stainless Steel.



A *pincara* ferry, August 2025. Credit: Riza Salman for CRI.

Living and working near the power plant, she said, “[It] gets into the house,” referring to coal ash coming from the power plant and stuck to the walls of her home.[21] Dian then showed us around her house, showing us black dust from coal ash that had accumulated in every corner, including on the eating and cooking utensils in the kitchen.

Dian often experiences shortness of breath, particularly at night, and a persistent cough. Her husband and two children, ages seven and thirteen, also frequently suffer from coughs. She believes these newly developed respiratory problems are related to her family’s exposure to coal ash and dust from the nearby coal plant.

[21] Climate Rights International with Dian Wana Utami, August 13, 2025, Tani Indah, Southeast Sulawesi.

According to Dian, her health was better before the coal power plant was built in 2017.[22]



Dian showing coal ash accumulated on her cooking utensils. Credit: Riza Salman for CRI.

Most people interviewed by Climate Rights International in Tani Indah reported respiratory problems. Children suffer from persistent coughs and stomach problems. Adults complain of chest pain, shortness of breath, and fatigue. For example, Samsuddin, a 70-year-old resident from Tani Indah, described developing serious respiratory illness that his doctors believe is linked to the mining industry:

> I have been sick for five years. It feels like something is holding my breath. It's so hard to breathe. The doctor said it is from the dust. I've spent more than 200 million rupiah (USD 12,190) on treatments, but I am not getting better.[23]

Pollution Threatens Livelihoods, Water, and Food

Not long ago, Tani Indah was known as a seafood hub. Fishponds—called *tambak*—lined the riverbanks, producing tons of fish and shrimp every harvest season. Fisherfolk, including Samsuddin and his neighbor Kamriadi, cumulatively caught up

[22] PT Obsidian Stainless Steel, "An Evolving Tradition of Excellence," https://oss.co.id/#:~:text=OSS%20is%20a%20stainless%20steel,essential%20infrastructure%20for%20living%20support (accessed October 4, 2025).
[23] Climate Rights International interview with Samsuddin, August 13, 2025, Tani Indah, Southeast Sulawesi.

to three tons of fish every three months, earning between 20,000 and 25,000 rupiahs (USD 1.20 to 1.50) per kilo.

Local residents say that the abundant life lasted until the start of construction of Virtue Dragon Nickel Industry's nickel smelter in 2013, which started operations in 2014. Now, the ponds are empty. Pollution has killed the plankton that feed the fish, leaving only small, sickly harvests.

Kamriadi, a 35-year-old fisherfolk from Tani Indah, explained:

> I used to sell enough fish to pay for school, repairs, and savings. Now, I struggle to get even 100 kilos a year.[24]

Some ponds have been destroyed altogether. Samsuddin told Climate Rights International that his fishpond was filled with soil by the mining company overnight. He received just 10 million rupiah (roughly USD 600) in compensation for the total destruction of his livelihood.[25]

Coal ash and industrial waste from nickel mining have polluted the water on which the community relies. Rainwater, once collected and stored for drinking, is believed to be contaminated, threatening residents' right to water. Families no longer trust what falls from the sky. Residents say that rainwater that once ran clear now turns black, "like coffee."

Villagers are also concerned that their food chain is contaminated by pollution from the nickel industry. For example, Samsuddin told Climate Rights International that he and other community members have decreased their consumption of fish out of fear that those fish have been poisoned by pollution:

> The fish look wrong inside. Dark, spoiled. We are afraid to eat what once sustained us.[26]

[24] Climate Rights International interview with Kamriadi, August 12, 2025, Tani Indah, Southeast Sulawesi.
[25] Climate Rights International interview with Samsuddin, August 13, 2025, Tani Indah, Southeast Sulawesi.
[26] Climate Rights International interview with Samsuddin, August 13, 2025, Tani Indah, Southeast Sulawesi.



Mining waste piled up on the side of access roads to Tani Indah. Credit: Riza Salman for CRI.

The collapse of farming and aquaculture has left families dependent on high-priced goods from local markets. Fish, once abundant, now must be purchased. Meanwhile, prices have soared since the mines opened, forcing some households into debt. What was once a self-sufficient community has become economically dependent on the mining industry.

Land Rights

Residents of Tani Indah told Climate Rights International that their land rights have been violated by mining companies. Many villagers report being coerced into selling their land at far below its market value. Compensation was meager—sometimes only 5,000 rupiah (USD 0.30) per square meter—which residents say is far too cheap. Others lost their land to encroachment by companies without their agreement and, in some cases, without compensation.

Saidah, a 48-year-old woman from Tani Indah, sold her family's land, passed down from her mother, on the condition that family members would receive employment.

> [We] sold land for 5,000-7,000 rupiah per meter. I believed the promise we would be hired. My son entered a company, then they fired him.[27]

[27] Climate Rights International interview with Saidah, August 13, 2025, Tani Indah, Southeast Sulawesi.

Dozens of land certificates were reportedly collected by a mining company and never returned. Residents did not believe that they were selling their lands when the land certificates were collected, and did not receive payment. According to Kamriadi, a community leader:

> During the land acquisition process for the hauling road, there were 83 land certificates. A company took all 83 of those certificates. They said it was to split the plots. But in reality, the certificates were taken entirely and never returned. It's been 10 years… Even now, people go to ask and are told, "We don't know where they are."[28]

In other cases, residents reported that companies encroached on their lands without notice or consent and, in some cases, without compensation. Samsuddin told Climate Rights International that a nickel company dumped waste on his land without his consent or prior notice.

> They dumped waste on my pond at night. I don't know what time it was at night, but during the night they buried it. When I came back in the morning, [my fishpond] was covered maybe 10 meters deep… I was lucky I went to complain. They ended up giving me 10 million rupiah (roughly USD 600) for it. But only after I caught them.[29]

Social and Cultural Consequences

In addition to nickel mining's impacts on the environment, livelihoods, and health, the nickel industry has reshaped the very fabric of village life. Farming and fishing were not only economic activities but cultural anchors—practices passed down through generations, tying families to the land and water. The erosion of those practices has left a void in the community's identity.

Frustration and anger have fueled activism. Kamriadi and some villagers have taken legal action against companies, despite what they describe as intimidation and threats.

[28] Climate Rights International interview with Kamriadi, August 12, 2025, Tani Indah, Southeast Sulawesi.
[29] Climate Rights International interview with Samsuddin, August 13, 2025, Tani Indah, Southeast Sulawesi.



Samsuddin posing in front of his hut, which is very close to OSS's coal power plant. Credit: Riza Salman for CRI.

In 2024, a coalition of local residents and NGOs, including Walhi Southeast Sulawesi, LBH Kendari, and YLBHI, filed a lawsuit against Obsidian Stainless Steel regarding the pollution from its facilities, which include a nickel and stainless steel smelter and captive coal plant.[30] On July 31, 2025, the Unaaha District Court ruled that Obsidian Stainless Steel had unlawfully polluted the environment and ordered the company to transparently provide information to the community regarding pollution, repair liquid waste and emission treatment installations, eliminate sources of pollution, and restore the environment.[31] Despite this ruling, when Climate Rights International visited Tani Indah in August 2025, we witnessed and filmed visible water pollution from the OSS facility.

Residents told Climate Rights International that their struggle is not only against corporations, but also against a government that promised jobs and development but delivered little. Disillusionment runs deep, as villagers feel abandoned by the institutions meant to protect them. Where once community gatherings revolved

[30] Environmental case Number: 28/Pdt.Sus-LH/2024/PN Unh, https://putusan3.mahkamahagung.go.id/direktori/index/pengadilan/pn-unaaha/tahunjenis/putus/tahun/2025.html.

[31] Walhi, "Morosi People's Lawsuit Granted, Court Declares PLTU Pollutes the Environment and Against the Law," August 4, 2025, https://www.walhi.or.id/gugatan-rakyat-morosi-dikabulkan-pengadilan-nyatakan-pltu-cemari-lingkungan-dan-melawan-hukum (accessed September 29, 2025).

around shared harvests and river life, today, conversations are marked by grievances, debt, and illness. The promise of industrial progress has, for many, become a story of dispossession and loss. According to Dian:

> They said mining would bring development, but I feel we're falling.[32]

The story of Tani Indah is not unique. Across Southeast Sulawesi, villages face the trade-offs of Indonesia's nickel boom. The metal, essential for batteries that power electric vehicles and smartphones, is fueling global transitions to cleaner energy. But in places like Tani Indah, that green future is being paid for in polluted rivers, diseased lungs, and destroyed livelihoods.

Mandiodo Block

Local residents say that nickel mining in North Konawe Regency's Mandiodo Block goes back to at least 1999, when state-owned PT Antam showed up in Tapunggaya, followed by PT Cinta Jaya in 2004. In 2007, PT Cinta Jaya started operations in Mandiodo Village. Mining spread to neighboring villages over the next few years, including Sriwijaya in 2009. Tapuemea also saw exploitation begin in 2009, while several companies, such as PT Sriwijaya, PT Cinta Jaya, and PT Bumi Konawe Minerina, started mining in Tapunggaya from 2010 onward. In some cases, residents provided different dates for the arrival of specific mining companies. PT Antam has held the IUP-OP (permit for production operation) for the Mandiodo-Lasolo-Lalindu area since April 29, 2010. The government suspended all operations in the Mandiodo Block in August 2023 due to a graft probe.[33] As of early October 2025, there have been no available public records regarding a possible restart.

Climate Rights International interviewed residents in the Mandiodo Block in North Konawe, which encompasses Mandiodo village, a regional hub for nickel maritime shipments, as well as people in the neighboring villages of Tapuemea and Tapunggaya, which lie directly below mining operations.

Mandiodo Village

[32] Climate Rights International interview with Dian, August 13, 2025, Tani Indah, Southeast Sulawesi.
[33] Aditya Hadi," Govt suspends nickel mining in Mandiodo Block amid graft probe," *Jakarta Post*, Aug. 14, 2023, https://www.thejakartapost.com/business/2023/08/14/govt-suspends-nickel-mining-in-mandiodo-block-amid-graft-probe.html.

Mandiodo village is a coastal settlement with 256 households and a population of just over 900 people.[34] Around seventy to eighty percent of the population are Bajau, an Indigenous seafaring people, while the remainder are Tolaki, Bugis, and other ethnic groups.[35] For decades, fishing and small-scale farming formed the backbone of local livelihoods.

Since 2007, Mandiodo has been absorbed into Indonesia's expanding nickel industry. Mandiodo village and the broader Mandiodo Block lie within PT Antam's IUP-OP (joint operation) legal concession, which covers the Mandiodo-Lasolo-Lalindu area (SK 158/2010), a status subsequently confirmed by the Supreme Court.[36] Additionally, several private IUPs exist within portions of the territory, including one issued to PT Cinta Jaya in 2009 for the Tapunggaya and Mandiodo areas.

Open-pit mining commenced in Mandiodo village in 2007 and continued, with limited interruptions, until August 2023, when the national government suspended all mining activities in Mandiodo Block amid a corruption and bribery investigation.[37]

Land Rights and Criminalization

Land disputes in Mandiodo have been widespread. Mami, a 70-year-old resident, told Climate Rights International that mining companies have taken his ten hectares of land without compensation. Mami's land is divided into five parcels, each of which covers two hectares.[38] According to Mami, in 2006 representatives from PT Cinta Jaya offered him 25 million rupiah per hectare (USD 1,506), but he refused to sell his land. The land is now within PT Antam's concession area, and Mami says he cannot access it. He told us that his land is guarded by the military at multiple checkpoints, making it impossible for him to enter. Mami has stopped fighting for his land because he doesn't want to get arrested:

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[34] Climate Rights International interview with Mandiodo Village Head, Alias Manan, August 16, 2025, Mandiodo, Southeast Sulawesi.
[35] Climate Rights International interview with Faisal, August 16, 2025, Mandiodo, Southeast Sulawesi.
[36] There are multiple rulings, for example see: Indonesian Supreme Court. "Search Results for kw10&utm." Mahkamah Agung, July 14, 2014, https://putusan3.mahkamahagung.go.id/search.html?q=kw10&utm (accessed October 7, 2025).
[37] Aditya Hadi, "Govt suspends nickel mining in Mandiodo Block amid graft probe," Jakarta Post, Aug. 14, 2023, https://www.thejakartapost.com/business/2023/08/14/govt-suspends-nickel-mining-in-mandiodo-block-amid-graft-probe.html.
[38] Land certificates are locally known as *Surat Keterangan Tanah*, or SKT.

> I never sold, never signed. Now soldiers guard it, and I cannot enter.[39]

Mami's experience echoes that of other villagers. Faisal, who heads the village's consultative group, told Climate Rights International that his in-laws were pressured to give up their land without compensation.

> If we enter [our land], we will be arrested and brought to the police station. [My in-laws] are afraid. We are just villagers. We don't want to be arrested. So, we just let [our land] go.[40]

Villagers who protest against land grabs face arrest and criminalization. Alias, a 38-year-old village leader, says he spent four months in prison in 2015 after leading a protest against a mining company that had taken land without compensation.

> We protested because the company had not paid compensation for land that had already been exploited. The community demanded payment.[41]

Environmental Degradation and Impacts on Livelihoods

Villagers interviewed by Climate Rights International consistently described a landscape transformed by mining. Coastal erosion is destroying homes. One Bajau neighborhood near the sea is particularly threatened. Alias Manan, the Mandiodo village head, explained how dire the situation is for residents:

> We cannot wait for government aid next year. Our houses may already be gone.[42]

Fisherfolk described sea waters turning red with sediment, driving fish further offshore. For Saharia, a 42-year-old resident, pollution from the nickel industry has made it more difficult and expensive for her family to continue fishing, as fisherfolk must spend more money on fuel to catch fewer fish. She explained:

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[39] Climate Rights International Interview with Mami, August 16, 2025, Mandiodo, Southeast Sulawesi.
[40] Climate Rights International interview with Faisal, August 16, 2025, Mandiodo, Southeast Sulawesi.
[41] Climate Rights International interview with Mandiodo Village Head, Alias Manan, August 16, 2025, Mandiodo, Southeast Sulawesi.
[42] Climate Rights International interview with Alias Manan, August 16, 2025, Mandiodo, Southeast Sulawesi.

> My husband spends 200,000 rupiah a day [USD 12] to fish but sometimes comes back with almost nothing.[43]

Mami told Climate Rights International that he earned 50,000 rupiah (USD 3) per day as a fisherman before mining arrived, enough to support his family and buy necessities like salt and rice. He described how he could catch fish easily near the shore, sometimes earning 100,000 rupiah (USD 6) in half a day. Now he has unstable income and was forced to stop fishing due to the impact of pollution on fisheries, and instead works as an occasional night guard for a nickel company, earning 50,000 rupiah per night.

Ani told Climate Rights International that her late husband earned between 50,000 rupiah and 100,000 rupiah (USD 3-6) per day as a fisherman before mining. Now, Ani relies on money given by her children or compensation from the mining company. She explained that, in the past, before mining, 20,000 rupiah (USD 1.2) was a lot of money, but now 100,000 rupiah (USD 6) is not enough to buy groceries for her children. She told Climate Rights International that life is now harder because she cannot earn a living with the destruction of fisheries and traditional livelihoods.

Fitriani relies on her husband's income from fishing and occasional work in mining. Fitriani's husband's catch is now often small, sometimes only two skewers of fish, which are often sold for 20,000 to 30,000 rupiah (about USD 1.2-1.8). Fitriani said this money is only enough to buy diapers for her toddler.

Health Impacts

Dust from mining and the transport of ore to coastal jetties coats the village. Air pollution, including dust, is directly associated with respiratory diseases and is also a risk factor for infectious respiratory disease.[44] Mami believes that recently developed health problems are related to the persistent exposure to dust. When Climate Rights International interviewed him, Mami had been sick for a month with a high fever. He had had a runny nose and cough for a week, which he attributed to the dust from mining activities. He was advised by a midwife to wear a mask, but he finds it

[43] Climate Rights International interview with Saharia, August 16, 2025, Mandiodo, Southeast Sulawesi.
[44] Rui Sun et al., "Air Pollution and Influenza: A Systematic Review and Meta-Analysis," Iran J Public Health, 2024 Jan;53(1):1–11. doi: 10.18502/ijph.v53i1.14678.

difficult to breathe with it on.[45] Besides, masks are expensive, and he cannot afford them.

> The dust is so bad it enters my bedroom. I cough all night.[46]

Residents told Climate Rights International that respiratory problems are common in Mandiodo. Ani explained:

> Many neighbors suffer from shortness of breath.[47]

Food insecurity, which some residents say is exacerbated by the impacts of mining on fisheries and farmlands, is also leading to cases of malnutrition. Karmila, a 27-year-old Bajau mother of four, lost her seven-year-old child to malnutrition.[48] Karmila's family still faces extreme food insecurity. Their diet typically consists of sago porridge with salt water; it rarely includes vegetables or fish. Fitriani's fourteen-month-old son is facing serious malnutrition and health problems, including heavy breathing and coughing. The family does not have access to cough medicine for the young child. Regarding her young son's diet, Fitriani elaborated:

> [He] only eats sinonggi (sago porridge) and milk when we can buy it.[49]

Residents are also concerned about a growing number of cases of stunting in children. Stunting is a form of impaired growth and development and is often linked to poor nutrition and exposure to illness.[50]

Healthcare facilities in Mandiodo are minimal. The only community health center (*pustu*) lacks staff and has no permanent doctors, leaving villagers without reliable access to medical care.

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[45] While typically a midwife would not advise community members on health problems, Mami repeatedly told Climate Rights International that a midwife is the main health professional assigned at the Mandido health outpost, suggesting that residents do not have access to adequate health care professionals.
[46] Climate Rights International Interview with Mami, August 16, 2025, Mandiodo, Southeast Sulawesi.
[47] Climate Rights International Interview with Ani, August 16, 2025, Mandiodo, Southeast Sulawesi.
[48] Karmila had eight children, but four have died: one of malnutrition at age seven and three possibly of fever related to Covid-19 at ages two months, two years, and three years.
[49] Climate Rights International interview with Fitriani, August 16, 2025, Mandiodo, Southeast Sulawesi.
[50] World Health Organization, "Stunting in a nutshell," November 2015, https://www.who.int/news/item/19-11-2015-stunting-in-a-nutshell (accessed September 26, 2025).

Consultations and Compensation

People in Mandiodo interviewed by Climate Rights International highlighted systemic failure by the government and companies to address the impacts of nickel mining.

Villagers stressed that companies rarely conduct public consultations before starting their operations. Faisal recalled only one public consultation by a mining company. He said it was held at a hotel outside the village, not in the village itself, and that only invited representatives of the community and the Mandiodo village government were allowed to attend.[51]

Residents claim that corporate social responsibility (CSR) funds from mining companies are inconsistently and unevenly distributed. CSR funds from mining companies are often used to improve local infrastructure, like schools or medical clinics, and are sometimes used to provide scholarships to local students. Jefri, a long-time activist, highlighted corruption in CSR programs, elite capture of benefits, and the link to environmental damage. According to Jefri:

> Dust kills crops, floods wash away homes, fish disappear. Yet when we protest, it is we who are jailed.[52]

Dust money is a form of compensation for air pollution and other local impacts provided by mining companies to local governments to disperse to residents.

According to Alias, the village head, Mandiodo receives dust money from some nickel companies. These compensation funds vary in amount. One company calculates the amount based on the number of households, paying 100,000 (USD 6) per household. Other companies calculate it based on metric tons of cargo transported, paying the village a rate of 1,000 rupiah (USD 0.06) per metric ton. These funds are deposited with the village government, through the village head, and then distributed to the community. The average compensation fund received by each household ranges from 600,000 to 800,000 rupiah (USD 36 to 48) per month, depending on the season and amount of ore transported.

[51] Climate Rights International interview with Faisal, August 16, 2025, Mandiodo, Southeast Sulawesi.
[52] Climate Rights International interview with Jefri, August 16, 2025, Mandiodo, Southeast Sulawesi.

But for many Bajau families who live in a neighborhood locally referred to as *kampung miskin*, or poor neighborhood, access to aid from companies is limited. Ani, for example, told Climate Rights International that she sometimes receives financial aid in the form of dust money, but she feels access to other kinds of aid is selective, only given to certain people or those more well-off.

Cultural Impacts

Residents say that mining has divided this community. Those employed by mining companies or who rent houses to miners are often supportive of mining operations, while others see mining as destructive.

For Saharia, a 42-year-old mother, mining gives opportunities. She feels happy and comfortable with the presence of mining, believing it has improved her family's lives and brought prosperity, although she admitted that her husband's fishing catch is scarcer. Some of her children work in mining: two operate excavators, one drives a 10-wheel truck, and one is a regular employee.[53]

But other residents, including Mami and several Bajau families, say that mining has decimated fishing grounds, which have been key to the livelihoods and culture of Bajau people for generations.

Social changes are profound. According to residents, early marriages, including child marriages, are becoming common, with Bajau girls often marrying migrant miners, who leave their families behind once they end their mining jobs and leave the area. Karmila told Climate Rights International that she was married at age sixteen. Dewi, a 20-year-old Bajau mother of two, was sixteen years old when she and her husband, a mining worker, had their first child. Ani lamented,

> My daughters married so young. Many men come, marry Bajau women, then leave.[54]

[53] According to Saharia, operators can earn Rp 8-9 million per month. Regular employees (like watchmen or sample collectors) earn a maximum of Rp 4 million with overtime, or a basic salary of Rp 3.5 million with food and transportation provided.
[54] Climate Rights International interview with Ani, August 16, 2025, Mandiodo, Southeast Sulawesi.

Such instability leaves young mothers, like one of Ani's daughters, 21-year-old Sofia, struggling alone. Sofia, a Bajau woman, married an ethnic Tolaki man, who works in the mining industry and now lives separately from her and their two children.

Despite hardship, the Mandiodo villagers expressed hopes for sustainable livelihoods in farming and fisheries, better education for their children, access to healthcare, and fair treatment by companies. Yet regret is strong—over polluted seas, destroyed land, and broken trust.

Mami lamented the loss of his livelihood as a fisherman, as fish are now scarce and require going far out to the sea. Meanwhile Alias regrets that mining has changed the condition of the village, which was once safe and where it was easy to earn a living from the sea. However, he also realizes that stopping mining operations is not possible.

Tapuemea and Tapunggaya Villages

The villages of Tapuemea and Tapunggaya sit near each other along a shallow bay. Most households historically relied on the sea and on seasonal crops such as cashews for livelihoods. Climate Rights International interviewed ten residents from the two villages. While regular wages from mining and occasional in-kind assistance such as rice have helped some households, the broader pattern is one of environmental degradation, livelihood precarity, and social strain. In 2022, a check-dam, installed by a mining company to catch rainfall and prevent erosion, broke and destroyed one villager's house, underscoring persistent concerns about safety and oversight gaps. Local voices call for transparent land processes, environmental monitoring, reclamation, safer work, and a fairer share of benefits.

Environmental Degradation and the Loss of Livelihoods

For generations, the people of Tapuemea and Tapunggaya have lived by the sea and the forested hills above their villages. But nickel mining has radically altered the local environment. The once clear coastal waters and agriculturally productive slopes are now marked by red sediment, deforested hillsides, un-reclaimed mining pits, and the constant risk of flooding and landslides. Villagers describe an environment that no longer sustains them but rather threatens them. Residents described shrinking fish stocks, the loss of cashew orchards, dust and noise from

hauling roads, unclear land transactions, and protests that drew a heavy security presence.



A resident of Tapunggaya at the mining area around the village. Credit: Riza Salman for CRI.

Impacts on Fishing

For generations, fishing was the backbone of village life, which revolved around the ocean's bounty. Each night, families would set out in their boats, navigating the waters under the stars, and return by dawn with a plentiful catch. This tradition not only nourished their families, but also supplied the local markets with fresh fish. The sea was both a food source and a way to make a living. As Dermawan Kasim, a resident of Tapunggaya, recalled:

> Before the mines, a night of fishing could bring in millions of rupiah. Today, there are nights when not a single fish is caught.[55]

Villagers link the decline in fish to visible changes in the sea: the water near the villages is now routinely muddy and red. In the words of Mustafa, one of few fishermen left in Tapunggaya:

[55] Climate Rights International interview with Dermawan Kasin, August 15, 2025, Tapunggaya, Southeast Sulawesi.

> In the past, we could catch 50 boxes of fish in a single night; now it's hard to get even two.[56]

Pollution from mining affects not only the size of the catch but also the effort required. Where once fish could be netted just off the beach, fisherfolks now must journey far from sight of the village. Fishing families are forced to travel hours farther out to sea, burning scarce fuel, in search of clean water and viable catch. Mustafa, for example, said:

> From here [my house in Tapunggaya] it takes a two-hour trip by boat, and even then, I have to look for bays that are not polluted. If there's current, the water turns red because the sediment flows [from the mining areas]…Every trip consumes precious liters of fuel, and with catches dwindling, costs often outweigh earnings.[57]

Others recall how near-shore waters provided food and income daily. Hargono, from Tapuemea, explained:

> Before the mines, one night at sea could bring in millions of rupiah. Now you may not get a single fish.[58]

Emarni described how residents can no longer catch fish near the shore in Tapuemea:

> It's already difficult to fish near the village. Only if we go far away can we get results. We leave around half past midnight, but near the shore there's nothing more.[59]

With rising fuel prices and low catches, families are starting to rethink whether each fishing trip is worth it, leading not only to less income but also a deep sense of loss. The ocean, which used to be a dependable source for the community, is now seen as an unpredictable gamble rather than a steady source of food and livelihood.

[56] Climate Rights International interview with Mustafa, August 15, 2025, Tapunggaya, Southeast Sulawesi.
[57] Climate Rights International interview with Mustafa, August 15, 2025, Tapunggaya, Southeast Sulawesi.
[58] Climate Rights International interview with Hargono, August 14, 2025, Tapuemea, Southeast Sulawesi.
[59] Climate Rights International interview with Emarni, August 15, 2025, Tapuemea, Southeast Sulawesi.



A view of the polluted sea from a resident's backyard. Credit: Riza Salman for CRI.

The Loss of Cashew Orchards

In addition to fishing, cashew production once served as a cornerstone of the economies of Tapuemea and Tapunggaya. Families maintained orchards for years, gathering nuts once annually and selling them to financially support themselves. A single tree could produce several kilograms in a season. During abundant harvests, families made enough money to pay for school fees, fix their homes, and invest in fishing boats.

For many, the cashew crop symbolized stability, offering reliable returns that spanned generations. That security was stripped away when mining companies began acquiring land. Families were offered around 30 million rupiah (USD 1,800) per hectare, with an additional 250,000 rupiah (USD 15) per cashew tree, which some residents told us was not a fair price. At the time, the sums seemed tempting to households. As discussed in the section on lack of public participation, most families were given little to no information and did not understand the impact mining would have. Years later, many see the deals as a grave mistake that did not adequately compensate them for their loss. Emarni, whose family once owned more than a hundred trees, explained:

> If people had known the impacts, many would not have sold…Cashews were our future. Now there's only red soil [60]

Her words capture not only the loss of income but also of continuity. Each tree might have produced nuts for decades, far outstripping the one-off payments villagers received. Instead of shade and harvests, families now look out on bare ground and mining pits. The orchards that once stood as a living savings account for the future were replaced by cash that quickly ran out. What had been a renewable livelihood was converted into a finite payout.

Dependence on Mining Wages

With the sea no longer reliable and orchards stripped away, most families in Tapuemea and Tapunggaya have turned to the mines. What had once been villages of fisherfolk and farmers are now dominated by wage workers. As Hargono described:

> About eighty percent of people shifted to mining, because while fishing depends on luck, a company job brings a guaranteed monthly salary.[61]

Basic positions in the mines such as handling tarpaulins, taking ore samples, or working security, typically pay around 4–5 million rupiah (USD 240-300) per month. For families who had seen their earnings from fish or cashew collapse, the stability of a wage was a powerful draw. Some companies even advertise training and insurance as part of their recruitment. For a time, this gave people hope that the mines could offer not only jobs but also skills and protection.

But many villagers described how fragile this system is. When licenses lapse, disputes erupt, or production halts, wages vanish overnight. Workers are sent home, often with no certainty of being rehired. As Emarni explained:

> If the mines stop, our future ends.[62]

Many older residents described being excluded from employment, noting that anyone over 50 struggled to get hired.

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[60] Climate Rights International interview with Emarni, August 14, 2025, Tapuemea, Southeast Sulawesi.
[61] Climate Rights International interview with Hargono, August 14, 2025, Tapuemea, Southeast Sulawesi.
[62] Climate Rights International interview with Emarni, August 14, 2025, Tapuemea, Southeast Sulawesi.

For households that already gave up their fishing boats and orchards, the sudden loss of wages leaves no fallback. Dependency on mining jobs has replaced self-sufficiency with insecurity: when the industry slows, families are left with empty hands and empty nets.

Flooding and Disasters

The loss of forest cover and exposure of unremediated mining areas to the natural elements is a significant trigger of flooding. Natural forests retain water from precipitation events and help prevent flooding or landslides.[63]

Hargono is the former village secretary for Tapuemea and a member of Mandiodo Watch, a community group monitoring mining activities in Tapuemea, Tapunggaya, and Mandiodo villages. Hargono told Climate Rights International that the villages have experienced multiple severe floods that he believes are linked to mining:

> After mining, the sites are abandoned as pits, leading to landslides, floods, and dust.[64]

Sahowati, a long-time resident of Tapunggaya, connected deforestation directly to the new normal of flooding at her doorstep:

> When the rain is heavy, flooding always comes in front of our house because the hills above have lost their trees.[65]

In addition to flooding events, residents also described mining-related disasters. For example, in 2022 a check-dam built by a nickel mining company above the two villages collapsed after days of rain.[66] Saut, whose house was directly in its path, lost nearly everything. Saut described how red mud from the mining areas engulfed his two-story house, carrying his home and family, including his wife and children,

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[63] M Rogger et al., "Land use change impacts on floods at the catchment scale: Challenges and opportunities for future research," Water Resour Res 53,7 (2017) 5209-5219, doi: 10.1002/2017WR020723 (accessed January 2, 2024).
[64] Climate Rights International interview with Hargono, August 14, 2025, Tapuemea, Southeast Sulawesi.
[65] Climate Rights International interview with Sahowati, August 15, 2025, Tapunggaya, Southeast Sulawesi.
[66] Check-dams are typically temporary structures built to control erosion and sedimentation, and they require frequent maintenance to function properly. U.S. EPA, "Check Dams," December 2021, https://www.epa.gov/system/files/documents/2021-11/bmp-check-dams.pdf (accessed September 29, 2025).

more than 50 meters towards the road. One child was found crying, stuck in a tree. His wife sustained injuries and was taken to the hospital. Saut explained:

> My brick house was wiped out by a check-dam slide. My wife and children were carried away. Thankfully, they survived.[67]

Saut believes the landslide was due to both the heavy rain and the company's negligence in building and supervising the check dam. The mining company responsible built a new house for Saut, but he has not been compensated for his wedding makeup business, which was lost in the landslide and was a significant source of income.



Saut and his wife. Red mud from the mining areas engulfed Saut's two-story house, carrying away his wife and children. Credit: Riza Salman.

Dermawan Kasin, a 65-year-old resident of Tapunggaya who has worked for multiple mining companies in the area, told Climate Rights International that he believes the mining company's failure to maintain the check-dam caused the collapse:

[67] Climate Rights International interview with Saut, August 15, 2025, Tapunggaya, Southeast Sulawesi.

> The check-dam was built, but then never inspected again. There should have been checks every three months, but it was left alone.[68]

Air Pollution and Health Impacts

In addition to the impacts of mining on water and land, dust from uncovered hauling trucks and stockpiles is now part of everyday life in the area. Residents are increasingly concerned about the impacts of red dust from mining activities that settles on their houses, food, and in their lungs.

Hargono, a resident and former village secretary of Tapuemea, described how villagers are chronically exposed to air pollution:

> School children, kindergarteners, employees, marketgoers, office workers, all pass through and breathe in dust… Respiratory infections, tuberculosis, and skin problems are rising because of dust.[69]

For mothers like Sahowati, dust and flooding are part of daily life. She explained that, when heavy rains fall, her yard floods because the hills above have been stripped bare. The muddy water that pours through the village carries with it the same red earth that coats their homes. Like other women, Sahowati spoke about the constant cleaning and the emotional toll: every day begins with wiping red powder from tables and sweeping it out of corners, knowing it will return by evening. The dust, she said, is not just a nuisance but a reminder that her children are growing up breathing it in.

Residents describe a gnawing fear about what long-term exposure will mean.

> If everything is polluted, what is left for us to eat, what is left for us to breathe?[70]

For Tapuemea and Tappunggaya, dust is not simply the by-product of mining; it is an everyday hazard that seeps into homes, classrooms, and bodies. It is visible in the

[68] Climate Rights International interview with Dermawan Kasin, August 15, 2025, Tapunggaya, Southeast Sulawesi.
[69] Climate Rights International interview with Hargono, August 14, 2025, Tapuemea, Southeast Sulawesi.
[70] Ibid.

red that stains their water, audible in the coughs of their children, and felt in the unease of parents who fear that the air itself has turned against them.

Health and safety concerns stretch beyond coughs and rashes. Parents and teachers worry especially about pedestrian safety for children. One elementary school stood right beside a haul road and ore stockpile. On dry days, the classrooms filled with fine dust; when it rained, heavy trucks slid dangerously close to the schoolyard. Hargono recalled:

> Young children had to walk the same road as ten-wheeled dump trucks.[71]

After repeated complaints, protests, and mediation, the school was finally relocated, but only after years of pressure.

Corporate Social Responsibility and Rice Handouts

Corporate social responsibility programs are mandatory in Indonesia for companies that conduct business in a natural resource-based or a natural resource-related field, but the specifics of those programs appear to be left largely up to the companies.[72]

Community members described receiving handouts of rice from companies, but that distribution is sporadic and appears to be tied directly to nickel shipments leaving their shores. Community members explain that, whenever barges are loaded and dispatched, nickel mining companies may distribute sacks of rice to households. But the scale of the exchange is strikingly unequal. Dermawan Kasim put it plainly:

> Only after four barges of ore are shipped do we receive a single sack of rice. Each barge carries nickel worth billions of rupiah, yet what trickles back to the community is a 15-kilogram sack of rice. Families see the imbalance clearly.[73]

Some recalled that in earlier years, companies distributed slightly more generous rations, up to four sacks for every four barges. But as operations changed hands, even this modest support was reduced. Emarni explained how the scheme left

[71] Ibid.
[72] Government Regulation No. 47 of 2012, https://peraturan.go.id/files/pp47-2012bt.pdf.
[73] Climate Rights International interview with Dermawan Kasin, August 15, 2025, Tapunggaya, Southeast Sulawesi.

families vulnerable: the rice might last a few weeks, but once it ran out, they still had to buy food from their own dwindling incomes.

Some residents expressed skepticism about the distributions, arguing that they do not represent real corporate responsibility. The deliveries are inconsistent and seem to occur only when the company sees profits from exports. As one local resident described the situation:

> When the barges move, we get rice. If shipments stop, we get nothing.

For many households, the rice handouts have become a reminder of dependency rather than relief. They highlight the massive gap between the value extracted from the land and sea and the minimal share returned to the people whose environment is being sacrificed.

A Dependent Economy

Nickel mining has created an economy that runs in cycles of activity and abandonment. When barges are being loaded and wages are flowing, there is money in the villages; when permits are suspended or companies halt operations, families are left stranded. As Emarni put it simply:

> When the mine is running, money circulates; when it stops, our future is gone.[74]

This dependency has eroded the sense of self-reliance that once came from fishing and farming. Villagers no longer control the rhythm of their livelihoods. Instead, they wait for company schedules, for barges to move, for contracts to renew. Compensation is often irregular, and even rice handouts are tied to shipments, leaving households in limbo when operations stall.

For women, the uncertainty is especially tough. Many express a feeling of resignation, realizing their children can't build a future in a place where their livelihoods depend on decisions made by others. Nurtina shared her frustration:

[74] Climate Rights International interview with Emarni, August 15, 2025, Tapuemea, Southeast Sulawesi.

> We women must push our kids to leave here. There's no future in a mining village.[75]

These experiences highlight a deeper issue: mining has not only changed the economy but also how people view their futures. Instead of investing in boats, orchards, and community bonds, families now talk about temporary wages, short-term relief, and hopes that their children will find opportunities elsewhere. The mines have replaced independence with dependency, and in doing so, they have hollowed out the foundations of village life.

Food and Water Insecurity

In the past, families in Tapuemea and Tappunggaya relied on the sea and their gardens to feed themselves. Fish and shellfish were caught right off the beach, while cashew and fruit trees provided additional food and cash. Today, villagers describe a very different reality, one where meals depend not on what the sea yields, but on whether a barge has sailed or how much money is left in the household budget.

When shipments pause, there is no rice, and families must rely entirely on cash to purchase food in markets. This has made daily meals more expensive. Where marine protein was once abundant, fish now must be bought. As Mustafa explained, catches near shore are no longer possible, and buying fish is often the only option. The effect is that households who once lived from what they could catch now spend much more of their limited wages just to put food on the table. Drinking water, which villagers once could collect and drink from rivers and wells, has become a burden. Wells and small streams, once reliable, are now often turbid and reddish, especially after heavy rains. Many households now purchase drinking water at around 5,000 rupiah (USD 0.30) per 19-liter cooler, an expense that adds up quickly for families.

Together, these shifts have turned food and water, once freely available sources of sustenance, into commodities families must buy.

Lack of Public Consultation and Access to Information in Land Acquisition

When nickel companies arrived in Tapuemea and Tapunggaya, land became a major focus of negotiation. In the late 2000s, families remember a "land rush," when company representatives began buying plots. Many villagers say they were barely

[75] Climate Rights International interview with Nurtina, August 15, 2025, Tapunggaya, Southeast Sulawesi.

informed about what was happening to their land and sea. Some describe being left completely in the dark, while others recall hurried consultations, or “socializations,” held late at night, with only a handful of residents invited.

Emarni, whose family lost cashew orchards during the first wave of land acquisitions, told Climate Rights International that, while a small group gathered at the village head’s house for what was called a “socialization,” many households, including her own, never knew it was happening:

> There were no community meetings. They just came directly and said whoever wanted to sell, they gave an advance payment…Many villagers didn’t know. Suddenly after evening prayers there was a meeting, but not everyone was there.[76]

Others confirmed this pattern. Hargono, who served in village administration, recalled that companies sometimes coordinated only with local leaders, without ensuring broader participation:

> The socialization was conveyed by the village head, but not everyone took part. In the end only a few people signed [an agreement with the mining companies].[77]

Mustafa also described how land sales were managed through village officials, with little room for questioning and little access to information. While Mustafa understood that his land was to be used for mining, he was not informed about the potential negative consequences of mining. He recalls that at the time, people were eager to sell their land because they didn't understand the mining process.

For many, the experience left a sense of powerlessness. Decisions were made quickly, often without full explanation of what mining would mean. The lack of genuine consultation meant that families were not given a chance to weigh the long-term consequences.

[76] Climate Rights International interview with Emarni, August 14, 2025, Tapuemea, Southeast Sulawesi.
[77] Climate Rights International interview with Hargono, August 14, 2025, Tapuemea, Southeast Sulawesi.

Mustafa described how some villagers believed they were agreeing to short-term leases, only to discover later that the companies treated the deals as permanent sales:

> They [villagers] thought they were leasing the land for seven years, but the company treated it as a permanent sale.[78]

This mismatch of understanding left deep scars. Some families still hold certificates for land they thought was temporarily leased, while companies insist that they now own it outright.

Today, land ownership remains entangled in overlapping permits and state claims. For villagers, these overlapping claims create constant uncertainty. They fear that at any moment a company or government agency might arrive with papers declaring their land no longer theirs. The result is a sense of dispossession, not just of soil and trees, but of security itself.



Mining activities around Tapuemea and Tapunggaya villages. Credit: Riza Salman for CRI.

[78] Climate Rights International interview with Mustafa, August 15, 2025, Tapunggaya, Southeast Sulawesi.

Protests, Policing, and Intimidation

As the mines expanded and disputes over land and roads deepened, residents of Tapuemea and Tapunggaya increasingly turned to protest. Demonstrations erupted over issues ranging from unfair land sales to companies using public roads as hauling routes, to overlapping operations, where multiple firms claimed the same ground. For villagers, protests became one of the few ways left to demand recognition of their rights. Hargono noted that when companies ignore what people say, protesting is their last option.

But standing up to powerful companies often meant facing the full weight of the state's security forces. One resident, Nurtina, recalled plainly that a peaceful protest was met with force:

> We protested. Police and army showed up. Tear gas was used.[79]

Villagers describe the shock of being treated not as citizens defending their homes, but as enemies of order. Trucks carrying armed personnel would arrive quickly, and the sight of soldiers in uniform was often enough to scatter a crowd. Yet protests continued, sometimes lasting for days.

In these tense moments, women played a crucial role. Mothers and daughters, who usually take care of families, found themselves protecting their community from violence. Knowing that their presence could restrain violence, they stepped to the front of the demonstrations. Nurtina explained:

> We, the women, stood in front so they wouldn't beat us.[80]

When the response to protests is tear gas and intimidation, it increases the mistrust between villagers, companies, and the government. For communities like Tapuemea and Tapunggaya, protesting isn't just an option; it's essential for making their voices heard in a system that often ignores their needs regarding land and livelihood. Unfortunately, the way these protests are handled has turned hopeful moments into fearful ones, reinforcing the feeling that they live under an industry that takes away a lot while giving very little in return.

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[79] Climate Rights International interview with Nurtina, August 15, 2025, Tapunggaya, Southeast Sulawesi.
[80] Ibid.

Wiwirano District

Climate Rights International went to Lamonae Utama and Padalere Utama, two villages situated along the Lalindu River in North Konawe Regency, Southeast Sulawesi. Neither village hosts an active nickel mine. However, they sit downstream of major concessions in Morowali and Routa, where intensive mining and deforestation accelerate erosion and contamination.

We interviewed women, farmers, families, and a local official who revealed how mining in upstream concessions contaminates the Lalindu River system. This system served as a clean water source for communities before mining. The downstream effects have fuelled flooding, soil degradation, water insecurity, biodiversity loss, health risks—and even human-wildlife conflict.

Human-Wildlife Conflict

Crocodile-human conflict has intensified in the Lalindu River basin, particularly in the villages of Lamonae Utama and Padalere Utama. Once rare, avoidable, and "friendly" encounters are now more frequent and deadly. Villagers attribute this change to upstream nickel mining, which has transformed the ecology of the Lalindu River, poisoning fish stocks, altering habitats, and forcing crocodiles to seek food closer to human settlements.

Kasrin, a secretary of Padalere Utama Village, told Climate Rights International that there have been a growing number of crocodile attacks in recent years, something that had not happened in decades. He explained that it is very risky for the villagers to gather food from the river, but they have few options left, as food is becoming increasingly scarce.

We discovered a similar situation in the neighboring village of Lamonae Utama. Two villagers we interviewed reported a recent rise in crocodile attacks, with the most recent incident occurring in 2023. Hastin, a resident of Lamonae Utama Village, identified the victim of the 2023 attack as her cousin, who was killed by a crocodile while collecting water:

> Since the water turned murky, the crocodiles are different. They attack. Before, they never dared.[81]

Prior to the arrival of upstream nickel mining, crocodiles were known but not feared. They remained largely in remote stretches of the Lalindu River, rarely threatening humans. Since intensive nickel mining began upstream in Routa and Morowali, that balance has collapsed. Sedimentation and runoff from nickel mines have decimated fish populations, causing a "fish crisis". This runoff includes heavy metals, oil spills, and dust from mining operations.

Flooding has intensified, displacing wildlife. Crocodiles, deprived of food and habitat, now venture into populated areas, bringing them into direct conflict with people. In the words of Kasrin:

> The fish are now gone. Now, crocodiles come to us.[82]

Locals believe that polluted water from nickel mining makes crocodiles' eyes blurry, forcing them to abandon their natural habitats and seek new ones. Consequently, crocodiles are now found in more areas, including on land, under palm oil trees, and even in villages, not just in the river. The villagers we interviewed said that sightings have increased sharply in the last six years. Residents also reported crocodiles sunbathing on sandbanks, destroying fishing nets, and appearing during daylight hours.

Fishing, once a cornerstone of local diets and incomes, is now perilous. Nurjanah, a resident of Lamonae Utama described the risks for fisherfolk:

> People are afraid to set nets in the river. The crocodiles destroy them, or worse – they attack.[83]

Farmers avoid riverbanks where they once fetched water, leaving them more reliant on expensive piped water systems. Children no longer swim or play near the river that once was a source of life.

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[81] Climate Rights International interview with Hastin, August 17, 2025, Lamonae Utama, Southeast Sulawesi.
[82] Climate Rights International interview with Kasrin, August 17, 2025, Padalere Utama, Southeast Sulawesi.
[83] Climate Rights International interview with Nurjanah, August 17, 2025, Lamonae Utama, Southeast Sulawesi.

Flooding

People living downstream from mining concessions told Climate Rights International that floods have occurred more frequently and with higher intensity since mining in the area started. Mining has stripped forests in Routa and Morowali, including on steep slopes, which can accelerate erosion. Flooding is no longer solely a result of the rainy season. According to Hastin, flooding now occurs even without heavy rain in her village, which she attributes to upstream rainfall in the Morowali and Routa mining regions.

Communities in Indonesia, like Lamonae Utama and Padalere Utama, are already experiencing—and are projected to continue experiencing—an increase in precipitation due to climate change.[84] Upstream deforestation is a significant trigger of flooding and will likely compound the impacts of increased precipitation on communities already experiencing increasing floods that damage their homes and food systems.

For example, a major flood event in 2019 is etched into memory in Lamonae Utama and Padalere Utama. Flood waters swept across both villages, submerging homes and fields for nearly three months. The villagers we interviewed recalled that they had to swim out of their houses through windows and furniture floated away. Moreover, all the crops died, and palm oil fruits rotted.

For villagers who once welcomed seasonal floods as a blessing, enriching the soil with mountain silt, these new torrents brought only ruin. Hastin explained that, before the 2019 flood, she and other farmers could plant four times a year. Now, the planting season has become as unpredictable as the timing of floods. Previously, farmers could anticipate annual floods and plan their planting accordingly, ceasing activity during the flood season. She explained:

> Now after the water recedes, the land is coated in red sludge, like cement. Nothing grows.[85]

[84] World Bank Group and Asian Development Bank, "Climate Risk Country Profile: Indonesia," 2021, https://climateknowledgeportal.worldbank.org/sites/default/files/2021-05/15504-Indonesia%20Country%20Profile-WEB_0.pdf (accessed September 29, 2025).
[85] Climate Rights International interview with Hastin, August 17, 2025, Lamonae Utama, Southeast Sulawesi.

Floods now occur more frequently—sometimes three or four times a year—with little warning, making it impossible to predict and prepare for them. The floods are not only more frequent but also last longer. This unpredictability severely impacts farming activities, as crops are frequently damaged or destroyed before harvest. Even when the floodwaters recede, the remaining muddy water, contaminated with nickel and other mining byproducts, renders the land unsuitable for planting.

> Due to the rain upstream, the floods arrived suddenly in broad daylight. The water was yellow, almost reddish, and muddy. When touched, it felt rough because it was mixed with dirt.[86]

Access to Water

The Lalindu River once sustained everything in Lamonae Utama and Padalere Utama villages. Its waters were clear enough to drink, wash, and bathe in. Farmers relied on its waters for irrigation and predictable floods to fertilize their fields. Fisherfolk caught *sepat* fish and other freshwater fish in abundance. But villagers now describe a different reality. Hastin from Lamonae Utama Village described the importance of the Lalindu River:

> In the past, we could drink from the Lalindu River. It was our source of drinking water, washing, everything. Now, no one dares.[87]

Communities no longer drink from the Lalindu River. Instead, they must buy piped water from government systems or purchase gallons at 6,000 to 8,000 rupiah (USD 0.36 to 0.48) each, including for irrigating their farming plots. The river has become murky, polluted, and dangerous. Kasrin from Padalere Utama Village pointed to weak government monitoring, which he said contributed to the prolonged impacts on communities. He said:

> As for the impact on water, it's very [obvious]. The water is never clear. Floods come very quickly. But there's no follow-up from the government.[88]

[86] Ibid.
[87] Ibid.
[88] Climate Rights International interview with Kasrin, August 17, 2025, Padalere Utama, Southeast Sulawesi.



Polluted Lalindu River. Credit: Riza Salman for CRI.

Impacts on Livelihoods

Farming and fishing were once the lifeblood of these communities. Now, both are precarious. Vegetable crops are easily wiped out by floods. Oil palm, promoted as a long-term investment, also fails when flood waters submerge the fruit. Farmers speak of uncertainty: some abandon planting altogether, while others watch their crops rot. Hastin, from Lamonae Utama Village, said:

> We plant water spinach, spinach, chilli, and eggplants, but when floods come, all are submerged, nothing can be harvested.[89]

Fishing families suffer as wetlands lose their productivity. In the past, the Lalindu River yielded baskets of fish. Nurjanah, whose husband is a fisherman, recalled him hauling in twenty skewers of fish in a single trip prior to mining. Now, it is difficult for her husband to catch as many fish due to increased water pollution:

> Now? Ten if we are lucky; sometimes [he catches] none at all. Fish prices have gone up, but the supply is dwindling.[90]

[89] Climate Rights International interview with Hastin, August 17, 2025, Lamonae Utama, Southeast Sulawesi.
[90] Climate Rights International interview with Nurjanah, August 17, 2025, Lamonae Utama, Southeast Sulawesi.

With freshwater fish disappearing, families must buy expensive marine fish, which becomes a sharp burden on household economies.

Health Impacts

Dust from mining trucks and mining sites upstream drifts into villages, posing risks to the health of local residents. Villagers reported increasing cases of active tuberculosis (TB) and respiratory problems. Studies have found that exposure to air pollution, including particulate matter, can increase the risk of developing active TB from latent TB and may also increase the severity of the infection.[91] As described by Hastin from Lamonae Village:

> Many people are now suffering from tuberculosis. It never used to be this common. They say it's due to mining dust, so we're advised to wear masks when going out.[92]

However, very few villagers wore masks when Climate Rights International visited Lamonae Utama Village, suggesting the local residents are likely uninformed about the serious risks of exposure to air pollution on their health.

Residents are also concerned that pollution from nickel mining and its resulting impacts on food security, traditional livelihoods, and flooding is contributing to malnutrition in children. While additional research is needed to confirm the link between nickel mining and malnutrition, families told Climate Rights International that they went for weeks eating only instant noodles and sardines during flooding periods.

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[91] S. Bhargava, "Environmental pollution, particulates and pulmonary TB," ScienceDirect, July 2025, https://www.sciencedirect.com/science/article/abs/pii/S0019570725001507 (accessed July, 2025); A. Cohen, "Pollution and Tuberculosis: Outdoor Sources," PubMed Central, March 2007, https://pmc.ncbi.nlm.nih.gov/articles/PMC1831752/#:~:text=Air%20pollution%20from%20outdoor%20sources,health%20effects%20of%20air%20pollution (accessed July, 2025); and Rutgers Global Health Institute, "Air Pollution and TB: Exploring the Connections," Nov 2019, https://globalhealth.rutgers.edu/news/air-pollution-and-tb/#:~:text=Epidemiological%20research%20shows%20that%20tuberculosis,the%20body%27s%20immunity%20against%20tuberculosis (accessed July 11, 2025).

[92] Climate Rights International interview with Hastin, August 17, 2025, Lamonae Utama, Southeast Sulawesi.

Land Tenure, Consultations, and Governance

Mining has not only reshaped rivers but also land tenure. With little support from companies or government, villagers describe survival in stark terms. Villagers move uphill to farm in protected forest zones, risking violation of forestry regulations.

Hastin described the survival strategy of her community as *nafsi-nafsi* (save yourself):

> Now, whenever there's vacant land, it's immediately cultivated, even in forest areas. Save yourselves, save yourselves.[93]

Villagers described being excluded from decision-making. Companies held public consultation meetings but invited only select villagers. Many never received invitations. Promises of compensation for lost land remain unfulfilled.

After serious flood events, community members are left to recover without support from the government or upstream mining companies. Hastin explained:

> They said there would be help for flood victims. Until now, there hasn't been any. There hasn't been any at all. It was promised, but there hasn't been any.[94]

Local officials visit occasionally, often accompanied by journalists during floods. But support ends as soon as the cameras leave. Kasrin from Padalere Utama Village said:

> Officials came, asked questions, then left. The river is always red, nothing changes.[95]

Protest carries risks. Villagers recall that when students demonstrated against mining elsewhere, they were arrested, while officials who supported the companies walked free. Fear of criminalization keeps many silent.

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[93] Ibid.
[94] Ibid.
[95] Climate Rights International interview with Kasrin, August 17, 2025, Padalere Utama, Southeast Sulawesi.

Morombo

Bajau village in Morombo Pantai, Southeast Sulawesi, is home to roughly one hundred Bajau families. The coastal village is surrounded by nickel mining concessions. Residents must pass through multiple nickel mining areas to leave the village by land.

Residents face the cumulative impacts of nearby nickel mining, including the loss of Indigenous culture and rituals, collapsing nearshore fisheries, lengthy and costly routes to clean water and healthcare, diminished school access due to mining hauling roads, and, in some cases, children working at night to guard mining equipment.



Map of Morombo Village (green pin). Credits: Map created by Krista Shennum using Google My Maps.

Threats to Culture, Fisheries and Food Insecurity

Before nickel mining, the sea was the first to welcome a Bajau child. When a newborn came into the world, mothers would carry the baby to the sea, the very place that sustained the Bajau community, a seafaring Indigenous group long known as “the people of the sea.” Bajau mothers would dip the baby into the water, not just to cleanse the newborn, but to welcome the child into life with the blessing of the sea. The saltwater was believed to strengthen the baby, protect their spirit, and connect them to their ancestry— to all those who came before and made their living from the tides.

Now, mothers worry that the yellowed water will cause rashes, infections, and illness. Some say the ocean smells different. Others fear what invisible poison might lurk beneath the surface. Bajau mothers now distrust the very sea that once nourished them. Diana, a mother over 60, has four grown-up children in their 20 and 30s, whom she dipped into the sea as soon as they were born. Her children are among the last generation to experience that tradition.

> [We] don't do it anymore. The sea is dirty.[96]

Young Bajau mothers shared the same sentiment:

> The sea used to be clear. Now it's yellow. We're afraid.

What's vanished is not just a ritual, but a line of inheritance that once ran from salt to shin to soul. Rumanta, a 60-year-old Bajau women, lamented:

> Our grandchildren no longer know the sea.[97]

Elders recall a time when things were different. Before mining, the water was clean enough for kids to swim in, and they could gather *meti* (shellfish) right near shore. Now, people have to go much farther out to harvest *meti*. Worse, the kids keep getting sick: waterborne diseases, skin rashes, and breathing problems from pollution. As a result, fewer families are maintaining the traditional ways of living by the sea.

Fishing, which was a key source of food and livelihoods for Bajau people in Morombo, is now much more difficult by pollution from nickel mining. Diana told Climate Rights International:

> I could catch two to three kilos of fish per day. I earned between 30,000 rupiah and 100,000 rupiah [USD 1.8 – 6] daily, enough to buy coffee, sugar, rice, and other essentials for my children. We could eat every day. Now I earn only 20,000 rupiah [USD 1.2] per day, enough for just a liter of rice (less than

[96] Climate Rights International interview with Diana, August 24, 2025, Morombo, Southeast Sulawesi.
[97] Climate Rights International interview with Rumanta, August 24, 2025, Morombo, Southeast Sulawesi.

> 1 kg). Most days, I can't cook three meals – sometimes just one. We eat plain rice or sago.[98]

Other mothers shared that they now struggle with food security due to a decrease in fish. Utete, a 50-year-old Bajau woman, explained:

> We preferred the past. Even with no money, we could eat from the sea…If we don't catch fish, we go without food…[99]

Fisherfolk must now travel much farther from shore, burning expensive fuel. Belalo, a 60-year-old Bajau man, is one of the village's last remaining fisherfolk. He explained:

> Before, we fished nearby, now we must go far. The fuel is expensive.[100]

Health Impacts

The Bajau face a dual health crisis: illnesses they attribute to pollution and an inability to access treatment. Residents report widespread skin irritation from contact with the polluted water. Children still swim in what local residents describe as "murky, reddish-yellow waters" near their stilt houses because they have nowhere else to play. Residents told Climate Rights International that they often feel itchy after swimming in the polluted seawater. Community members attribute respiratory problems, including tuberculosis, to dust from mining operations. "Even our food gets mixed with dust."

To reach the nearest hospital, villagers must take an expensive boat journey. When Belalo's daughter-in-law became seriously ill, the community had to pool 350,000 rupiah (USD 21) to purchase fuel for the boat to transport her to a hospital in another regency. Many residents say they cannot access care. Utete told Climate Rights International:

> I am also sick, but I can't get checked. There's no money.[101]

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[98] Climate Rights International interview with Diana, August 24, 2025, Morombo, Southeast Sulawesi.
[99] Climate Rights International interview with Utete, August 24, 2025, Morombo, Southeast Sulawesi.
[100] Climate Rights International interview with Belalo, August 24, 2025, Morombo, Southeast Sulawesi.
[101] Climate Rights International interview with Utete, August 24, 2025, Morombo, Southeast Sulawesi.



A Bajau child swimming in polluted water. Credit: Riza Salman for CRI.

The community health center, which is uphill from the community, lacks adequate staff and equipment. Community members say the lack of medical services has resulted in a continued reliance on traditional healers for childbirth and medical care. To access the health center, residents must travel through a dusty mining hauling road, which becomes muddy on rainy days.

The most visible daily struggle is the journey for clean water. Elderly women like Pehuwe and Sahana, both over 60, must row small boats one to two hours each way to collect drinking water from a nearby island, carrying ten containers per trip. They must repeat this exhausting and dangerous task, sometimes daily.

“Our boat once capsized,” Pehuwe said briefly.[102] There was a long pause, followed by blank stares from the two elderly women, before they left us and continued arranging the containers on their boat. They must endure the routine because there are no options left.

[102] Climate Rights International interview with Pehuwe, August 24, 2025, Morombo, Southeast Sulawesi.



Pehuwe and Sahana, on their way to get clean water. Credit: Riza Salman for CRI.

Education Impacts and Child Labor

Access to education has always been difficult for the community, with the only elementary school a one to two hour walk from the village, and the only secondary school hours away by boat. The impact of the mining industry has made that access even more challenging.

The walk to elementary school now includes mining hauling roads, which pose health and safety risks because the roads are dusty in the dry season and muddy on rainy days. It was raining when Climate Rights International went to the school compound with Belalo and our car almost overturned due to the muddy, hilly road we had to navigate upon arrival.

For students attending secondary school, the trip is exhausting and expensive. Students like Alda must travel by boat, “hitting the sea at 3 a.m. every morning to arrive at school [in Mandiodo] on time.” He returns at 2 p.m., exhausted. He is 19-years-old, but is still in the second year of junior high school. He has repeated several grades due to the difficult commute.

The reduction in fishing income for families has made the cost of the commute unaffordable for some. Some have turned to child labor to help support their

families. Climate Rights International interviewed Irvan, 12 years old, who stopped attending school after being bullied. He now works as a nighttime security guard for mining equipment, earning up to 2 million rupiah (USD 120) per month. Another teenager, Bayu, said he left school in his final year of elementary school for the same job.

Abandonment: No Consultation, No Compensation

Residents told us there was no consultation before mining operations began. They found out only as it happened. Without any information about the nickel mines, members of the community were not able to exercise their right to free, prior, and informed consent.

Since operations began the community has received no meaningful support from mining companies despite the visible environmental damage and economic hardship. According to Diana:

> There's been no change [for the better] here.[103]

Employment opportunities may be exclusionary. Some residents say that mining does not offer an economic alternative for the community, since most community members are not literate, and the mining companies require employees to read and write. Utete told Climate Rights International:

> There are jobs, but they're selective. If you can't sign your name, you can't get hired. We are illiterate.[104]

Villagers feel that the economic benefits of mining flow entirely to outsiders while the environmental and social costs are borne by the Bajau.

The community's plea is simple: "We want support: houses, boats, engines, fishing gear." Diana, and other women, feel abandoned.

> We're tired of living like this. But who cares?[105]

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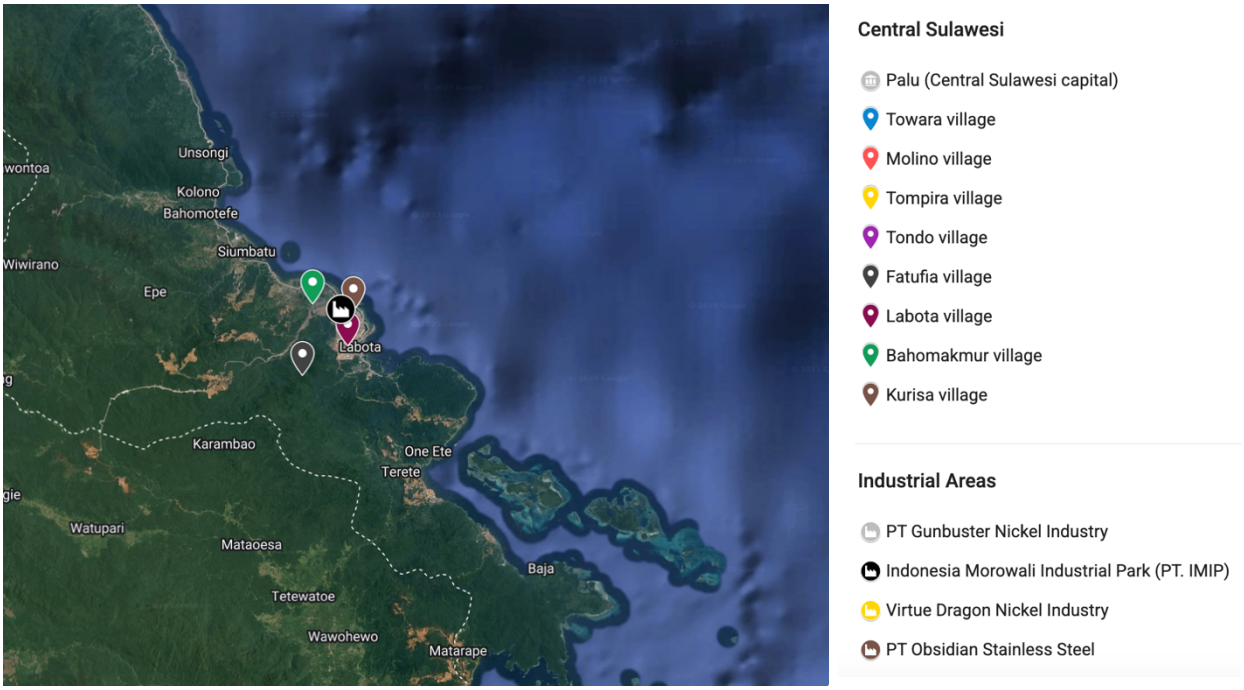
[103] Climate Rights International interview with Diana, August 24, 2025, Morombo, Southeast Sulawesi.
[104] Climate Rights International interview with Utete, August 24, 2025, Morombo, Southeast Sulawesi.
[105] Climate Rights International interview with Diana, August 24, 2025, Morombo, Southeast Sulawesi.

III. Central Sulawesi

Central Sulawesi is perhaps the most well-recognized hotspot for nickel mining and processing in Indonesia. It is home to an estimated 113 nickel mines and seventeen processing facilities, including the 5,500-hectare Indonesia Morowali Industrial Park (IMIP).[106]

Climate Rights International visited eight mining-impacted communities in Central Sulawesi, interviewing 44 residents, Indigenous Peoples, community leaders, mining industry workers, and activists about the ways the nickel industry has impacted their lives.

The following chapter highlights the human and environmental costs of the nickel industry in two major nickel hubs in Central Sulawesi: IMIP and the villages of Towara, Tompira, and Molino.



Map of Central Sulawesi showing the villages surrounding IMIP. Credit: Krista Shennum using Google My Maps.

[106] Riza Salman, "Banjir Morowali, Makin Parah Sejak Ada Industri Nikel," Mongabay, January 3, 2025, https://mongabay.co.id/2025/01/03/banjir-morowali-makin-parah-sejak-ada-industri-nikel/; and Bloomberg Technoz, "RI Banjir Smelter Nikel: 44 Beroperasi per Maret, 19 Menyusul," March 19, 2024, https://www.bloombergtechnoz.com/detail-news/32862/ri-banjir-smelter-nikel-44-beroperasi-per-maret-19-menyusul (accessed October 6, 2025).

Morowali

The Indonesia Morowali Industrial Park (IMIP) is a massive industrial park that hosts fifteen operational nickel smelters and more than fifty companies that employ an estimated 90,000 workers.[107] It is touted by the government and companies as a major success story.

But speak with people working at and living next to this industrial giant, and you may hear a different story. While some residents and workers support the industrial complex due to new jobs and economic opportunities, others are seriously concerned about the impacts of IMIP on their lives. Climate Rights International interviewed IMIP workers and residents of Fatuvia village's Kurisa neighborhood, Baho Makmur village, and Labota village near IMIP, who told us about children hospitalized weekly with respiratory infections, about water so polluted it burns skin, and about promises broken and protests silenced.



A busy street near IMIP. Credit: Riza Salman for CRI.

[107] Nickel Industries, "Indonesia Morowali Industrial Park (IMIP)," https://nickelindustries.com/section/indonesia-morowali-industrial-park-imip/ (accessed October 1, 2025); and IUCN-NL, "Nickel Mining-Related Sustainability Impact at Landscape-level in Morowali, Indonesia," June 2025, https://www.iucn.nl/app/uploads/2025/07/Morowali-report-IUCN-NL-finale-versie-high-res.pdf (accessed October 6, 2025).

Background on Local Communities

The Bajau, sometimes called sea nomads, are an Indigenous group who have fished these waters for generations. Their culture centers on the ocean: they read currents like others read maps, know every reef and fishing ground, and pass down the knowledge through families. The Bugis people, renowned sailors and traders originally from South Sulawesi, established communities in the area decades ago. They built boats, traded goods, and connected these remote shores to broader Indonesian commerce.

In the 1990s, the government relocated families from Java and Bali as part of its transmigration policy in which it settled (some would say colonized), other parts of the country. Each family received two hectares of land, tools for farming, and promises of prosperity in Central Sulawesi's undeveloped expanses. They cleared forest, planted crops, and built villages.

Baho Makmur village alone houses more than 1,000 households, while there are over 170 families living in Kurisa, a hamlet of Fatuvia village .[108] Across all affected villages, thousands struggle to survive in the shadow of one of Indonesia's national priority projects in the biggest nickel industry hotspot in Southeast Asia.

Workers' Rights Violations at the Indonesia Morowali Industrial Park

IMIP is a core industrial hub of the global electric vehicle battery supply chain. Yet behind the gleaming promise of green energy lies a darker reality for the tens of thousands of Indonesian workers who power this industrial giant.

Climate Rights International interviews with five workers and union leaders conducted in August 2025 revealed a pattern of systemic labor rights violations, environmental degradation, and gender-based discrimination. Women workers navigate additional hazards, including sexual harassment and reproductive health risks from exposure to toxics. Meanwhile, surrounding communities breathe air so polluted that it corrodes metal roofing within weeks.

The "3-Shift 3000" System: Occupational Danger by Design

[108] Climate Rights International interviews with residents of Kurisa on August 22, 2025, and interview with Nurman Hidayat of Baho Makmur on August 23, 2025.

Afdal Amin, head of the Morowali Industrial Workers Union (SPIM), doesn't mince words about a "3-shift 3000" system he refers to as unfair.

Under this system, there are three shifts per day and 3,000 workers assigned across those shifts. Afdal explained to Climate Rights International that workers at IMIP originally operated under a "3-shift 4000" system. The move to lay off 1,000 workers while still keeping furnaces hot in the industrial park pushed workers to toil up to fifteen consecutive nights in a row in some departments before a so-called "long rest," when workers disappear to sleep. Afdal Amin explained:

> They forced it down to 3,000. That's 1,000 jobs lost through layoffs, forced resignations, or transfers to other sites… No time for family, no time for the union.[109]

The "3-shift 3,000" system's impacts go well beyond job losses. Workers say it leads to fatigue and unsafe working conditions, with workers' lives at stake.

The shift change came in around 2019 or 2020 when Afdal was still working for a company in the industrial park. Around the same time, Indonesia's government pushed significant deregulatory changes by passing the Omnibus Law on Job Creation, which unions feared would stretch hours, ease layoffs, and sideline collective bargaining.[110]

While Afdal was organizing and leading protests against IMIP's new system in 2020, he was laid off after working for four years. While he initially fought back against his layoff, Afdal ultimately decided to drop his wrongful termination case rather than return to work under what he considered unsafe conditions.

"Ratno" has worked at Dexin Steel Indonesia (DSI) for over seven years, advancing from a construction crew member to a safety control specialist.[111] The young father of two described the work environment inside the nickel and smelter facility as intensely noisy, with noise levels reaching up to 95 decibels (dB), far exceeding the recommended safe threshold for human ears. National regulations limit occupational

[109] Climate Rights International interview with Afdal Amin, Morowali, August 22, 2025.
[110] Human Rights Watch, "Indonesia: New Law Hurts Workers, Indigenous Groups," October 15, 2020, https://www.hrw.org/news/2020/10/15/indonesia-new-law-hurts-workers-indigenous-groups (accessed October 9, 2025).
[111] "Ratno" is an alias to protect the worker from possible retaliation.

exposure to 85 dB, meeting internationally recognized standards.[112] Ratno explained that the measurement of 95 dB is taken ten meters from the machinery, suggesting that closer exposure would be even louder.

Ratno recently underwent a medical checkup where the doctor confirmed that, while his hearing was still within normal limits, early signs of hearing degradation had begun to appear. He told Climate Rights International:

> There are already symptoms. My hearing is starting to decline.[113]

Ear protection is available, but its distribution is inconsistent. Ratno explained that workers are expected to request personal protective equipment (PPE) and supervisors may say, "if you need it, just come and ask," rather than proactively distributing PPE. This passive approach to occupational safety places the burden on workers rather than employers to ensure compliance and prevention.

Accounts from other workers show that employers provide basic PPE, but the distribution is often delayed, sometimes by months. According to Ratno's experience, gloves and masks are often delayed up to eight months, while masks are rationed—five per month per worker. He elaborated:

> If you work for 20 days, you should have been given 20. But here, you only get five.[114]

"Daria" also reported having insufficient access to PPE when she worked with hazardous materials in a chemical lab.[115] Despite the risk, protective equipment was severely lacking.

> In the lab, we stand the entire time. We directly inhale chemical substances…Only ten masks were provided per person each month. We [were expected to make the ten masks last for] 30 days.[116]

[112] Ministry of Manpower Regulation No. 5 of 2018, https://peraturan.go.id/files/bn567-2018.pdf;
[113] Climate Rights International interveiw with Ratno, Morowali, August 22, 2025.
[114] Ibid.
[115] "Daria" is an alias to protect the worker from possible retaliation.
[116] Climate Rights International interview with Daria, Morowali, August 22, 2025.

Daria developed a respiratory condition that her doctor linked to her work in the lab, so she transferred to an office job. But she says she still regularly goes to the medical clinic for checkups. She recalled that, a few days before she left the lab, a room caught fire because an old wiring system that "should have been replaced" had exploded. But "we were told just to use it."[117]



Drone image of IMIP and its surrounding area. August 2025. Credit: Komiu for CRI.

Poor occupational safety measures have led to serious accidents and fatalities. In December 2023, an explosion at a smelter at IMIP killed roughly twenty workers.[118] Winarsih, head of SPIM's women's division, also discussed several fatal accidents. She believes these deaths could have been prevented if companies had implemented proper safety protocols. For example, she cited an incident when a member of SPIM was struck by hot furnace slag and died from head injuries. While the worker was wearing a helmet, the helmet did not have a face shield and failed to properly protect him from workplace hazards. In another incident, in 2024, a male worker fell from a conveyor after his broom got caught and dragged him from the conveyor high above the ground. Despite working at a dangerous height, the worker

[117] Ibid.
[118] Wall Street Journal, "Explosion Kills 19 at Chinese Nickel Smelter in Indonesia," December 27, 2023, https://www.wsj.com/world/asia/explosion-kills-19-at-chinese-nickel-smelter-in-indonesia-eb69db59?reflink=desktopwebshare_permalink (accessed October 3, 2025).

was not provided a body harness to prevent what she described as an avoidable accident.[119]

Asri Sonah, chief of the Mining and Energy Workers Federation (FPE), told Climate Rights International that the union has been reporting safety violations to the Ministry of Manpower since 2020, but he stated, "to this day nothing has changed."[120] Workplace accidents continue to happen. Some make the news, he said, but others don't.

Gender-Based Violence: Impacts on Women Workers

Female workers at IMIP face compounded vulnerabilities. Union representatives believe that women comprise less than one percent of the IMIP workforce, isolated in a sea of male workers.[121] They report that sexual harassment is normalised and is considered routine.

The consequences extend beyond the workplace. Pregnant women do not receive proper accommodations and basic facilities are lacking. Many female workers are unable to access water during lab work, which can lead to urinary tract infections. Toilets are located fifteen to thirty minutes away from workplace stations, through hazardous zones and unmonitored quiet areas where sexual harassment lurks.[122]

"Daria" works in a workshop room of Dongjin Technology Research Indonesia (DTRI), which consists of over six hundred male workers and only four women. She told Climate Rights International that harassment is "treated like it's normal." Whistling and catcalling is routine. Sometimes her only protection is a glare, a small, practiced act of refusal in a system offering no institutional safeguards.[123]

Sexual harassment poses a significant safety threat in workplace environments, particularly in high-risk areas such as crowded bus queues or during shift transitions when women must go through dark, quiet areas where no CCTV cameras monitor workplace safety.

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[119] Climate Rights International interview with Winarsih, August 23, 2025, Morowali, Central Sulawesi. https://betahita.id/news/detail/10607/satu-nyawa-melayang-di-pt-imip-masyarakat-sipil-minta-audit-k3.html?v=1728766746.
[120] Climate Rights International interview with Asri Sonah, Morowali, August 22, 2025.
[121] Afdal Amin of SPIM and Asri Sonah of FPE told Climate Rights International.
[122] Climate Rights International interview with Winarsih, August 23, 2025, Morowali, Central Sulawesi.
[123] Climate Rights International interview with Daria, Morowali, August 22, 2025.

Winarsih told Climate Rights International that women rarely come forward with reports despite the prevalence of these incidents, due to multiple barriers including deep-seated shame, insufficient education about what constitutes harassment, absence of clear reporting mechanisms, and fear of retaliation from perpetrators or employers. According to Winarsih:

> As women, we always stay alert, afraid someone will grab our butt or brush against our chest. It makes walking [through the workplace] uncomfortable.[124]

The culture of silence is perpetuated by a troubling normalization of harassment within many workplace cultures, where companies often rely on written policies that exist only on paper without implementing active enforcement measures or providing meaningful education to prevent such incidents.

Reproductive Rights Violations

Women encounter significant workplace barriers that undermine their health and family needs. In some cases, companies deny requests for menstrual leave even when legally mandated, forcing women to work through severe pain or use their sick days.

Indonesian labor law officially grants two days of menstrual leave per month.[125] Yet, some women workers told Climate Rights International that this right is inconsistently respected and sometimes outright denied. According to Daria, women workers who are not protected by unions are particularly vulnerable. She explained that women seeking to access their right to menstrual leave face various challenges, including from managers requiring proof of menstruation, engaging in verbal shaming, questioning the pain or discomfort, or pressuring them to power through.

New mothers face particularly harsh conditions. Women in Indonesia are granted three months of paid maternity leave, split before and after childbirth.[126] However, workers feel that this isn't enough, particularly in demanding and male-dominated industries like IMIP. Women report facing pressures to come back to work before

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[124] Climate Rights International interview with Winarsih, Morowali, August 23, 2025.
[125] Law No. 13 of 2003 Concerning Manpower, https://www.flevin.com/id/lgso/translations/Laws/Law%20No.%2013%20of%202003%20on%20Manpower%20(BKPM).pdf (accessed October 3, 2025).
[126] Ibid.

they fully recover. In some cases, when they do return, new mothers find that essential facilities, such as lactation rooms, are lacking in the workplace.

When Winarsih returned to work after giving birth to her second child, now a year and a half old, she was still lactating, but said her workplace had no lactation room, no breast milk storage facilities, and no break time to accommodate breastfeeding. She told Climate Rights International that she pumped breast milk during breaks but was forced to dump it:

> I had to throw away my breast milk because there was no refrigerator.[127]

Eventually, a mini fridge arrived in her office, but it was not provided by her employer. It was purchased collectively by her co-workers, using shared funds.

Access to Housing and Healthy Living Conditions

IMIP's industrial boom has created a housing nightmare that shows just how brutal unchecked growth can be for ordinary people. With thousands of migrant workers pouring into the area, the scramble for any kind of shelter is intense. Workers are now paying up to 1.1 million rupiah (USD 66) a month, roughly a third of their paycheck, to sleep in crowded, poorly maintained boarding houses.[128]

These expensive rentals offer little in return: thin-walled structures with poor ventilation, multiple families crowded into single units, and limited access to clean water or proper waste management. The housing shortage has spawned entirely new neighborhoods in the shadow of IMIP's industrial complex, creating what some sardonically call *"Warga Negara IMIP"* – citizens of the IMIP nation-state. These are communities whose lives revolve entirely around the nickel industry, with no alternative livelihoods.

Environmental hazards compound the housing crisis, threatening the lives of workers and other residents. Workers live adjacent to factory waste, furnace exhaust, and sulfuric acid storage facilities, with black particulate matter coating every surface.

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[127] Climate Rights International interview with Winarsih, Morowali, August 23, 2025.
[128] Climate Rights International interviews with workers as well as residents.

> You sweep [the dust] up, and it's thick again in no time.[129]

Daria has moved from one boarding house to another to find a better place to stay. When she first arrived in Morowali from her hometown in South Sulawesi, she rented a room in Baho Makmur, a village near the IMIP's factories and smelters.

> I was exposed to dust every day. I coughed a lot.[130]

She moved to a boarding house farther from IMIP, although now has challenges accessing safe drinking water. Daria told Climate Rights International that she is always careful about the water quality because:

> There are tiny worms sometimes [in our drinking water]. That's why I always use a water filter.[131]

The environmental hazards and poor living conditions have forced workers to make a difficult choice regarding their families: bring their families with them to Morowali and risk their exposure to pollutants, or leave their children behind. Winarsih told Climate Rights International she made the hard decision to leave her children in their hometown to keep them healthy:

> I don't bring my children. No one to watch them here, and I don't want them breathing this air.[132]

Air Pollution and Children's Health

Every parent we interviewed in the villages near IMIP lamented the health impacts of industrial pollution on their children. Persistent coughs won't go away. Asthma appears in toddlers, as do infections that require trips to the doctor and even hospitalization.

Astrid, a 22-year-old mother from Labota, struggles to keep her two toddlers, aged two and three, safe from the polluted air. She knows something is terribly wrong because of a simple pattern. When she takes her kids to visit family in her

[129] Climate Rights International interview with Winarsih, Morowali, August 23, 2025.
[130] Climate Rights International interview with Daria, Morowali, August 22, 2025.
[131] Ibid.
[132] Climate Rights International interview with Winarsih, Morowali, August 23, 2025.

hometown in Muna in Southeast Sulawesi, they stop coughing. Their breathing eases. They play like normal children. But as soon as they return to Labota, the children get sick.

> As soon as we come back here, they're in the hospital for days.[133]

Hasnia, a 42-year-old mother from Kurisa, reported that her seven-year-old daughter developed asthma that follows a consistent pattern:

> She gets better for a week, then [her asthma symptoms] come back.[134]

The cycle never breaks for some children: brief recovery, renewed illness, growing medical bills, deepening desperation. The youngest victims are infants. Several nine-month-old babies have been transferred to hospitals in Makassar, the capital of South Sulawesi, because local facilities were unable to manage their respiratory distress.[135]

The air has become the enemy. Coal dust covers everything. In Kurisa, which is located around two kilometres from IMIP, roofs that should last five to seven years now need replacement every five to six months as the metal is eaten away by whatever is in the air. Sulphur dioxide (SO_2) emissions from coal plants are the main cause of acid rain, as the SO_2 reacts with water in the atmosphere to create sulfuric acid, which causes acidification of water sources and decay of building materials. Acid rain can be combatted by installing scrubbers and other pollution control technologies at active coal plants and by decarbonizing from fossil fuels.

Residents told Climate Rights International that a doctor at IMIP's clinic told them that the area is no longer suitable for human habitation because of the severe pollution.[136]

The Four O'clock Horror

Every day around 4 p.m., something happens to the air in villages near IMIP. Nurman Hidayat, a resident of Baho Makmur who also chairs the village's council, described

[133] Climate Rights International interview with Astrid in Labota on August 22, 2025.
[134] Climate Rights International interview with Hasnia in Kurisa on August 22, 2025.
[135] Climate Rights International interview with Nurman Hidayat in Baho Makmur on August 23, 2025.
[136] Climate Rights International interview with Lukman in Kurisa on August 22, 2025.

a daily smell in the village like sulfur, which he guessed is a mix of chemicals from the smelting process:

> At four in the afternoon, the smell makes it so you can't breathe. [137]

Astrid, a 22-year-old mother of two and resident of Labota village, shared that dust particles are constantly present in the air, which she believes contributes to her children's respiratory problems. Astrid recalled a specific incident when a strong, gas-like odor lingered in the air for two days, forcing her family to shut all doors and windows.

> It smells like gas; it really smells. So strong it reached our boarding house.[138]

Residents don't know exactly what they're breathing—nobody has told them and to their knowledge, nobody has tested it properly. They just know it burns their eyes, tightens their chests, and sends them indoors to shut windows and doors, hoping walls might protect them from their own air.

Mental Health Crisis

In the industrial zones where workers toil day after day, a silent mental health crisis unfolds behind factory walls and dormitory doors. The roots of this despair run deep, tangled in a web of circumstances that trap workers in impossible situations. Online gambling has emerged as a serious problem, according to Daria. Many workers, exhausted from endless shifts and cut off from their families, find themselves scrolling through gambling apps during their free moments. What starts as a desperate hope for extra income often quickly transforms into mounting debts. Nurman Hidayat, a resident of Baho Makmur village in Morowali, doesn't mince words about what's happening in his community. "High suicide rates," he said, "especially among workers." He particularly pointed to Block E of Bahodopi neighborhood, where he says drug abuse has exploded.[139]

The isolation compounds everything. Both Indonesian and Chinese workers, who left their homes seeking opportunity, find themselves trapped in a cycle of work and

[137] Climate Rights International interview with Nurman Hidayat on August 23, 2025.
[138] Climate Rights International interview with Astrid in Labota on August 22, 2025.
[139] Climate Rights International interview with Nurman Hidayat on August 23, 2025.

loneliness, where the psychological burden keeps growing. Asri Sonah, a leader of the FPE workers union, told Climate Rights International:

> Just this month, one man committed suicide.[140]

A resident of Baho Makmur, Nurman Hidayat, for example, said that suicide rates among workers staying in house rentals in the village have increased.[141]

While some clinics offer some counselling, workers and residents say the services do not meet the scale of the crisis. According to Asri Sonah, there is not sufficient mental health infrastructure in place to help workers before they reach a breaking point.

Water Pollution

Concerns of water pollution has forced families to turn to purchased water to survive. Astrid's family in Labota buys drinking water worth 7,000 rupiah (USD 0.4) per gallon that lasts up to three days if they're careful. For bathing and washing, they use water piped from the mountains—infrastructure a company installed but the community must maintain themselves.

Some families, such as those living in Kurisa and Baho Makmur, now depend on well water. However, during the dry season, which can stretch seven or eight months, wells often go dry, leaving villagers struggling to access clean water. Villagers in Baho Makmur used to rely on water from the local Bahodopi River, but can no longer do so since IMIP dammed the river. Nurman Hidayat suspects that saltwater and sulphur from the industrial operations have contaminated the groundwater, though no independent testing has confirmed this.[142] Lukman from Fatuvia, summed it up:

> Now, the Red Sea isn't in the Middle East. It's here in Morowali.[143]

Loss of Livelihoods: The Fisherfolk Who Can't Fish

Before IMIP came to Morowali, residents lived off fishing, seaweed farming, and seafood trade. Fisheries were near the shore, productive, and accessible even

[140] Climate Rights International interview with Asri Sonah, Morowali, August 22, 2025.
[141] Climate Rights International interview with Nurman Hidayat, Baho Makmur, August 23, 2025.
[142] Climate Rights International interview with Nurman Hidayat on August 23, 2025.
[143] Climate Rights International interview with Lukman in Kurisa, Fatuvia village, August 22, 2025.

without boats or engines. Now, the sea is polluted and fisherfolk can no longer rely on the bounty of the sea. Fishing families told Climate Rights International that they routinely brought in 3 million to 5 million rupiah (USD 180 to 300) monthly prior to the arrival of the nickel industry and were self-sufficient.

Residents say that IMIP's facilities discharge superheated wastewater, likely from captive coal plants, about 300 meters into the sea. When the hot water reaches the villages, it's still hot enough to kill fish. Gusnah, a 58-year-old resident of Kurisa, said:

> It's hot and poisonous. If you bathe in it, you itch. Fish die from the heat.[144]

Debris and pollutants, including coal dust, are affecting water quality. The sea pollution in Kurisa, particularly, is so notorious that neighbours from nearby villages refuse to eat fish caught in its waters.[145] Fishing areas have been overtaken by sediment and pollutants, forcing locals to fish many miles away or stop altogether. Before IMIP, Hasnia, a 42-year-old Bajau woman from Kurisa, says she could earn up to 1 million to 2 million rupiah (USD 60 to 120) in a single day trading fish.

Before the expansion of IMIP, residents of Kurisa, particularly women like Hasnia, played a vital role in the local seafood supply chain. They were not only fishers but also suppliers, delivering fresh catch to the industrial kitchen facilities inside IMIP. It was a source of pride and economic independence. However, once the company began to formalize procurement, small-scale local suppliers were gradually excluded or subjected to an increasingly rigid and system deemed exploitative. They were required to deliver fish that was pre-cleaned, prepped, and even cooked under tight schedules, without compensation for the added labor. Fish had to be delivered by 10 a.m. sharp, creating a narrow and unworkable window for fisherfolk to return from the sea and process the catch. Hasnia described these demands from IMIP:

> At first, we didn't have to clean [the fish]. Later, we're instructed to clean the fish and make it ready for cooking. We should deliver them on time, at 10 a.m. at the latest.[146]

[144] Climate Rights International interview with Gunsah in Kurisa on August 22, 2025.
[145] Climate Rights International interview with Astrid in Labota on August 22, 2025.
[146] Climate Rights International interview with Hasnia on August 22, 2025.

The company set low, inflexible prices that could drop at any time. Suppliers were subjected to caps; for example, they were only allowed to deliver 100 kg per day, despite greater demand. Residents say that when extra fish was available, IMIP sometimes refused to buy it, often leading to spoilage and loss for the suppliers. In some cases, payments were delayed. This pushed some families to withdraw from supplying altogether, no longer able to afford the upfront costs of fuel, labor, and handling. Now, Hasnia says she relies on her boarding house rentals and homemade snacks and drinks sales to neighbours.[147]

Some fisherfolk have stopped fishing completely. Where once residents could put a net in front of their houses and catch fish, now they need a boat, at least five liters of gasoline for a round trip, and luck.

Gusnah's livelihood transformation encapsulates the destruction of traditional livelihoods. The 58-year-old Bajau woman ran octopus collection operations, managing crews of ten fisherfolk. She and the team could earn between 2 million and 3 million rupiah (USD 120 to 180) in a week from buyers who came from as far away as Kendari, the capital city of Southeast Sulawesi. She told Climate Rights International:

> Now, [IMIP's] presence makes it impossible to catch anything.[148]

Today, Gusnah and her sister Hayati, 56, wake before dawn to collect plastic bottles from garbage bins. They have joined the ranks of waste pickers: people who once fed the community are now competing for trash. They earn 3,500 rupiah (USD 0.21) per kilogram of plastic bottles. A full sack weighing five kilograms brings 17,500 rupiah (USD 1). On a good day, working from morning until 1 p.m., or 3 p.m. to 5 p.m. to avoid the worst heat, they might fill two sacks, earning 35,000 rupiah (USD 2).

> We're embarrassed. Many people pass by, some who knew us before, when we were respected members of the seafood trade. Now they see two elderly Bajau picking through garbage.[149]

[147] Climate Rights International interview with Hasnia in Kurisa on August 22, 2025.
[148] Climate Rights International interview with Gusnah on August 22, 2025.
[149] Climate Rights International interview with Hayati in Kurisa on August 22, 2025.

In addition to collecting plastic bottle waste, the two sisters also generate their income from cleaning fish, working for individuals who collect fish for sale. They are paid 1,000 rupiah (USD 0.06) per kilogram and are able to clean up to 50 kilograms of fish a day on average.[150] But this work is infrequent, only when there is a catch. When the sisters run out of money, they turn to loan sharks disguised as "cooperatives" that are organized by outsiders and charge very high interest rates. Like many residents, Gusnah and Hayatiare find themselves trapped in a cycle of debt.[151]

Land Taken Without Compensation

As part of the Indonesian government's transmigration program, families moved to Morowali from more populated parts of the country and were given plots of land for farming and settlement. At the time, Morowali was peaceful and unpolluted. In 2012, some residents of Desa Baho Makmur were granted additional farmland in the neighboring village of Keurea. This land allocation came from the village head. They were given official land ownership papers, known as SKPT *(Surat Keterangan Penguasaan Tanah)*, although no full land certificates were issued. Each SKPT represents two hectares of land.

Transmigrants were asked to form farming groups and cultivate the land, which they did. Many cleared the land, planted crops, and invested in its development. Residents told Climate Rights International that their land was absorbed into IMIP's territory as the industrial park expanded, even though they did not hand over land titles or certifications and the industrial park expanded.

Residents were barred from accessing the land once it was within IMIP's boundaries. IMIP's security and apparatus prevented villagers from entering, and doing so could provoke confrontation with armed personnel, including police and private security.

Nurman Hidayat, the chairperson of the Baho Makmur village council, moved to the village with his parents in 1993 as part of the transmigration program. In 2012, he was granted land ownership papers (SKPT) for two hectares, but this land now lies within IWIP. Nurman told Climate Rights International that he and other landowners

[150] Climate Rights International interviews with Gusnah and Hayati in Kurisa on August 22, 2025.
[151] Climate Rights International interviews with Hasnia, Gusnah and Hayati on August 22, 2025.

were barred from accessing the land once it was absorbed within IMIP's boundaries by IMIP's security apparatus.

> My land has been taken, and I can't get in anymore. If we persist, we'll face the authorities.[152]

Social Impacts

Residents of the villages near IMIP say they feel abandoned by their government, betrayed by promises of development, and sold out by local leaders who sided with industry over community. There is a "crisis of trust," according to Lukman from Kurisa.[153]

The burden falls hardest on women. Astrid, for example, manages her household on her husband's salary of 7 million rupiah (USD 420) monthly from his job as a safety officer at a company operating in IMIP. After paying 1.1 million rupiah (USD 66) for rent and payments for water, loan payments for land back home, and food, the money is gone.

> I often think we should leave. This place isn't right for us anymore. But then I think, "If we go home, what work would we do?"[154]

The paralysis defines hundreds of families. Can't stay, can't leave. Slowly suffocating, financially and literally.

Many residents say they were not informed about IMIP before it started. Some, like Gusnah, were not aware of any public consultation, while some others, like Nurman Hidayat, described being invited to a hotel where completed environmental assessments were presented for viewing, giving him no opportunity to actually provide input.[155] According to Nurman:

> The AMDAL was already done when we arrived. No framework, no real socialization. Seven representatives per village were invited to hotels far from communities, documents already signed. This was our "consultation."[156]

[152] Climate Rights International interview with Nurman Hidayat on August 23, 2025.
[153] Climate Rights International interview with Lukman on August 22, 2025.
[154] Climate RIghts International interview with Astrid on August 22, 2025.
[155] Climate Rights International interview with Gusnah on August 22, 2025.
[156] Climate Rights International interview with Nurman Hidayat on August 23, 2025.

Residents feel deceived. Hasnia said that she and her neighbors in Kurisa were misled about what IMIP would eventually become:

> We were told they [IMIP] were building a canteen. It turned out to be a coal plant.[157]

Lack of Compensation

Since operations started, the communities near IMIP have received little compensation for the impact the complex has had on their lives. Lukman listed the total of assistance he has received from IMIP, despite the serious impacts the industrial park has had on his family and their way of life:

> Once, they gave us fourteen sheets of zinc roofing.[158]

Villagers told us they had received no "dust money" or compensation for the pollution from the industrial park or for the nonstop loud bangs and noise from the industrial complex that can be heard across the villages. According to residents, there have been no meaningful corporate social responsibility programs. Community members believe that infrastructure promises have not been adequately fulfilled, as primary and secondary schools, where built, were located in polluted environments, and the community still has poor infrastructure.

During our visit, we saw crater-like potholes in the road that become ponds on rainy days, waste piled on roadsides, and industrial noise audible from kilometers away. Despite living near one of the country's largest industrial parks, where national and international companies have invested billions of dollars, the communities living near IMIP continue to lack even basic infrastructure like safe roads and higher education.

Some of those who fight back face consequences. Lukman, a community leader from Kurisa, described a three-day demonstration in May 2025 that was responded to by armed police and military personnel. During the protest, villagers climbed a mountain to reach IMIP's site, demanding to shut down machinery due to excessive noise and pollution. Residents said that IMIP seems to have viewed the protest as a security or vandalism risk. Afterwards, nine people who participated in the protest

[157] Climate Rights International interview with Hasnia on August 22, 2025.
[158] Climate Rights International interview with Lukman in Kurisa on August 22, 2025.

were blocked from travel and placed under police surveillance, requiring them to report to the police monthly.[159] Nurman was jailed in 2008 for protesting after floods which he believes were caused by mining debris destroyed his home.[160]

Community Demands

Residents of Kurisa want fair compensation for their land, assistance relocating, and a chance to restart their lives somewhere their children can breathe. They have been seeking reliable professional legal aid to file a class action, to no avail. Lukman summed up common sentiments:

> Free us. It's no longer suitable to live here.[161]

Sugianto agreed:

> We're ready for relocation. We've already signed petitions.[162]

Beyond relocation, residents said they need immediate aid, including medical treatment for hundreds of children with respiratory disease; clean water that doesn't require purchasing by the gallon; air monitoring so they know what they're breathing; access to their own medical records; and protection from retaliation when they speak out.

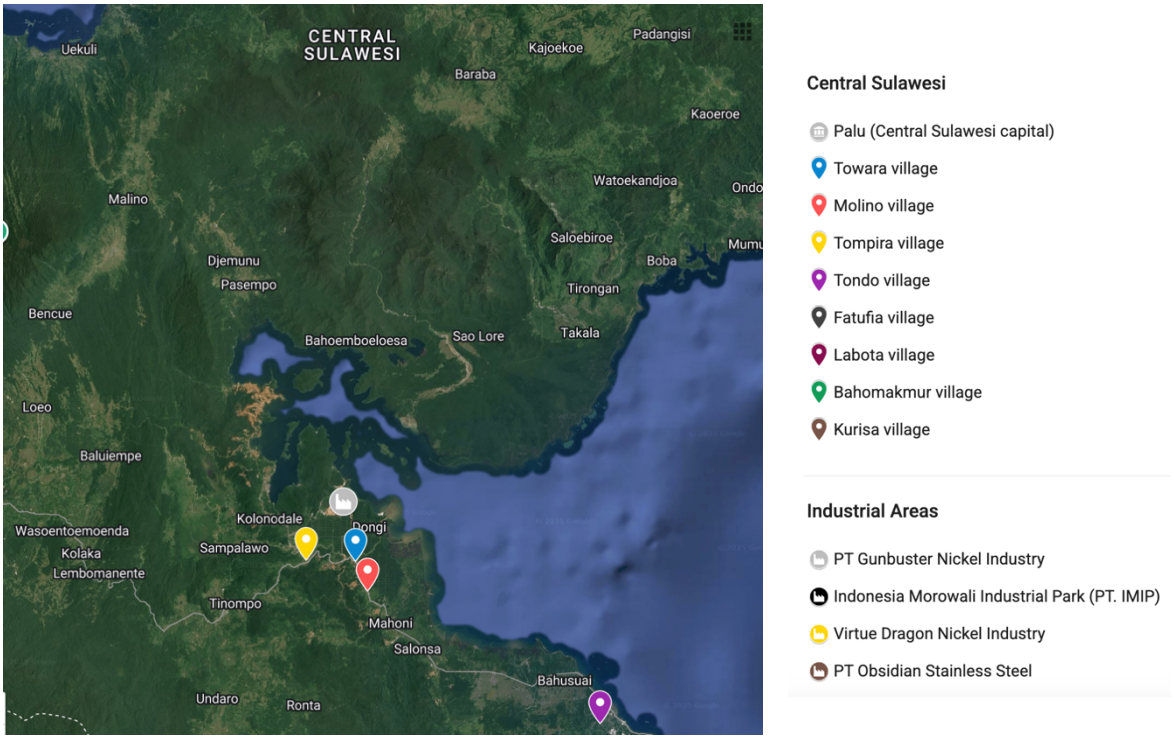
Towara, Tompira, and Molino Villages

This section documents the story of how nickel mining and processing has affected the residents in three neighbouring villages—Towara, Tompira, and Molino—in Petasia Timur District, North Morowali Regency, Central Sulawesi. This area has shifted from small-scale farming, coastal, and riverine livelihoods to the frontline of Indonesia's nickel boom.

The shift accelerated after PT Gunbuster Nickel Industry (GNI) built a large smelter complex in North Morowali's Stardust Estate Investment (SEI) Industrial Zone, which

[159] Climate Rights International interview with Lukman in Kurisa on August 22, 2025.
[160] Climate Rights International interview with Nurman Hidayat on August 23, 2025.
[161] Climate Rights International interview with Lukman on August 22, 2025.
[162] Climate Rights International interview with Sugianto in Kurisa on August 22, 2025.

was inaugurated in December 2021.[163] Several mining companies reportedly have concessions upstream from the villages and supply ore to SEI.[164]



Map of Central Sulawesi and villages surrounding PT Gunbuster Nickel Industry. Credit: Krista Shennum using Google My Maps.

Towara sits near the coast, along with the offshoot village Towara Pantai. Residents, many of them women, have protested about dust from nickel mining operations and trucks, the construction of hauling roads, repeated flooding, and contaminated water. Molino village lies roughly four km from Towara and ten km from Tompira village. In August 2025, it was hit by a flash flood that swept away houses, injuring residents.

Tompira lies along the Laa River, where people traditionally gathered river clams, locally known as *meti.* Today, the village is encircled by mining concessions, including three nickel concessions and multiple sand-gravel mines that feed smelter

[163] Cabinet Secretariat of the Republic of Indonesia, "President Jokowi Inaugurates Nickel Smelter in SE Sulawesi," December 27, 2021, https://setkab.go.id/en/president-jokowi-inaugurates-nickel-smelter-in-se-sulawesi/?utm_source (accessed October 2, 2025).
[164] PT Gunbuster Nickel Industry, "Second to None Smelting Company," https://gunbusternickelindustry.com; InfoSulteng, "Warga Towara Desak Pemkab Morowali Utara Atasi Dampak Lingkungan Akibat Tambang Nikel," September 19, 2024, https://infosulteng.id/warga-towara-desak-pemkab-morowali-utara-atasi-dampak-lingkungan-akibat-tambang-nikel/ (accessed October 6, 2025).

construction.[165] Locals voiced concerns over water quality in the river, resulting in declining harvests or river clams (*meti*).

While Climate Rights International did not conduct interviews with workers at PT Gunbuster Nickel Industry (GNI) or other nickel mines in the area, there have been serious and well-documented occupational hazards and disasters, including an explosion in June 2023 that killed one worker and injured several others.[166]



Drone image of Towara village under mining concession. Credit: Komiu for CRI.

Access to Water

The transformation of Towara's water tells the story of the village's broader metamorphosis. Residents spoke of the Putemata River with the reverence reserved for something sacred and lost. Arif, a 38-year-old Mori and Bugis Indigenous man and environmental activist from Towara, recalled:

[165] Satya Bumi and Walhi, "Neo-Extractivism in Indonesia's Nickel Frontier," October 2023, https://satyabumi.org/wp-content/uploads/2023/11/ENG_policy-paper_Neo-extractivism-in-Indonesias-Nickel-Epicenter.pdf (accessed October 2, 2025).
[166] Business and Human Rights Resource Centre, "Indonesia: Another serious safety accident occurs in PT GNI, resulting in one death and several injuries," June 27, 2023, https://www.business-humanrights.org/en/latest-news/indonesia-another-serious-safety-accident-occurs-in-pt-gni-resulting-in-one-death-and-several-injuries/ (accessed October 9, 2025).

> Before the company came, residents got clean water from the spring [that fed] the river. Now it can't be used at all."[167]

For Jurana, a shopkeeper and mother of three who arrived in the village in 1986, water defined the rhythms of daily life. She remembered walking for hours through dense forest, when the area was *"hutan sekali"*—thick forest. Communities would wake in the middle of the night to fetch water from distant sources. Rivers sustained not just drinking water, but entire livelihoods. Women would dive for *meti*, river clams that had been harvested for generations, their protein sustaining families through lean times.

Today, the Putemata runs thick with what residents described in visceral terms. Arif described the river:

> [It's] not just muddy, [the river is] already red and brown.[168]

The transformation happened gradually, then suddenly. Mining operations upstream sent sediment flowing downward, turning clear streams opaque. But a catastrophic change came in 2021, when massive floods, which locals say were exacerbated by deforestation and mining activities, destroyed the village's gravity-fed water system.[169] Before that flood, Towara relied on piped spring water from a mountain spring, but the landslides and flooding severed the pipes.

Families now must depend on a patchwork of failing systems. Three bore wells were recently installed and require constant maintenance and communal payments for electricity.[170] Residents contribute 10,000 rupiah (USD 0.60) per household for prepaid credits to keep the pumps running.[171]

Givent, an environmental activist from Towara village, told Climate Rights International that his community struggles with access to clean water for daily needs, including bathing.

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[167] Climate Rights International interview with Arif in Towara on 19 August 2025.
[168] Ibid.
[169] Deforestation is a significant trigger of flooding. M Rogger et al., "Land use change impacts on floods at the catchment scale: Challenges and opportunities for future research," Water Resour Res 53,7 (2017) 5209-5219, doi: 10.1002/2017WR020723 (accessed January 2, 2024).
[170] Residents state that the wells were installed from multiple sources: communal contributions, the village government, and company CSR programs.
[171] Climate Rights International interview with Jurana in Towara on 19 August 2025.



Drone photo taken after flash floods. Credit: Givent/Komiu for CRI.

Air Pollution: The Dust That Makes Children Sick

Households connect recurring coughs, especially among children, to dust from hauling roads and pollution from industrial activities. Jurana, a 49-year-old mother from Towara, keeps careful track of her family's health with the precision of someone who cannot afford to not notice patterns. Since nickel mining companies arrived, she has observed a steady increase in respiratory problems. Her second child suffers frequent coughs, particularly during dusty seasons. When asked about the impact on her family, she specified that they experience *"batuk yang tidak sakit"* or coughing that doesn't hurt.[172] It's a phrase that captures something essential about how mining's health impacts manifest as the gradual wearing down of bodies, especially young bodies that are more vulnerable from exposure to air pollution.

The case of five-year-old Fajar, Arif's son, provides a window into childhood in this nickel mining hotspot. In 2023, Fajar suffered from an acute respiratory infection for three months. When Arif sought medical documentation linking the illness to dust exposure, the doctor's response was: "We won't provide it unless you tell us what it's for." [173]

[172] Climate Rights International interview with Jurana in Towara on 19 August 2025.
[173] Climate Rights International interview with Arif in Towara on 18 August 2025.

People interviewed by Climate Rights International believe there may be a link between mining operations and other health impacts, including rising rates of stunting and malnutrition in children. Contaminated water is believed to affect the health of nursing mothers, who struggle to provide adequate nutrition to their infants. Givent, from Towara, is concerned about the link between water pollution and maternal and newborn health:

> If the water mothers drink after childbirth isn't good quality, how can they properly nourish their babies?[174]

Pollution and dust have become a constant presence, settling on homes, coating vegetables in gardens, and infiltrating lungs. During a focus group discussion with Komiu (a local environmental group) and Climate Rights International attended by twenty villagers, mothers spoke of the exhaustion that comes from constantly fighting a battle against contamination they cannot win. Every surface cleaned is dirty again within hours. Every breath inhales particles that shouldn't be there.

Impact on Livelihoods

The economic transformation of Towara follows a predictable but devastating arc. Rice fields that once sustained families now lie abandoned, poisoned by mining runoff that makes the soil unusable.

> The fields are finished. Now, we can't work with them anymore.[175]

Farmers have attempted to adapt, shifting to cocoa and cashew trees near their homes, but even these hardy crops struggle to produce food in the polluted environment. Fishing and shellfish collection have suffered as rivers silt up and turn red in rains. Fisherfolk can only catch fish that are further offshore because mining-related pollution has damaged fisheries located near the shoreline, while fishing ponds are clogged with red soil. Women who once dived for river clams now fear both pollution and crocodiles, who are coming closer to the villages due to habitat destruction by the nickel industry.

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[174] Climate Rights International interview with Givent from Komiu in Towara on 19 August 2025.
[175] Residents raised this point during a focus group discussion organized by Komiu in Towara on August 19-20, 2025.

In the coastal village of Tompira, a way of life that has sustained families for generations is also being systematically destroyed. What was once a thriving community of shellfish collectors now struggles to survive as nickel mining operations and associated sand extraction transform their river from a source of life into a threat to their very existence.

Every morning at 6 a.m., Farida leaves her home in Tompira village to collect small freshwater shellfish, which have sustained her family for decades. But the river she knew as a child no longer exists. More than one hundred sand pumps now line the river, operating day and night, extracting material for construction while literally sucking up the shellfish that families depend on for survival.[176] One Tompira woman, who has spent 22 years processing shellfish along the river's banks, explained how sand dredging, which is used in construction of industrial facilities, has changed the river system.

> Before, the river wasn't this wide. They suck from the bottom and the banks on both sides collapse.[177]

Residents say that the transformation began with the arrival of PT Gunbuster Nickel Industry and other nickel mines, whose operations upstream have fundamentally altered the river ecosystem. Murniati, a long-time shellfish collector said:

> When it rains, the water becomes red, from the mines upstream in Koromatantu. This contamination makes diving impossible, destroying livelihoods overnight.[178]

Faced with dwindling catches and dangerous conditions, fisherfolk in Tompira village have started diving for shellfish, which residents say is more dangerous due to the reliance on using hoses attached to air compressors and possible decompression sickness, a condition where gas bubbles can form in the body after diving and damage the spinal cord. The community has lost fisherfolk to this

[176] Climate Rights International interview with Nursam in Tompira on 20 August 2025; Climate Rights International with Farida, August 20, 2025, Tompira, Southeast Sulawesi.
[177] Climate Rights International interview with a group of women meti cleaner/processor in Tompira on 20 August 2025.
[178] Climate Rights International interview with Murniati in Tompira on 20 August 2025.

practice, including one man whose air hose detached underwater, leaving him unable to surface. Murniati explained:

> People can get paralyzed; the air is dirty; we inhale dirt from the water; the lungs can be affected.[179]

Nickel company infrastructure has also impacted local livelihoods. A bridge built by PT Gunbuster Nickel Industries effectively cuts the community in half, limiting fishing grounds and making even routine travel perilous.

The Mining Wage Trap

Even local residents who have found work in the mining operations sometimes struggle to survive. Some workers report wages between 2 and 2.6 million rupiah (USD 120 to 156) per month, below the legal minimum wage of 3,925,456 rupiah (USD 236) per month in North Morowali.[180] Some report jobs without contracts, benefits, or overtime pay. For example, Arif described his experience working for a nickel company:

> There was no BPJS [national health insurance]. Sometimes, my friends [who were operators with a mining company] were paid wages below the minimum.[181]

Workers say that the employment structure maximizes vulnerability. When weather prevents normal operations, wages can drop to nothing. Mass layoffs ripple through the community without warning, leaving families who had depended on mining wages suddenly without income.[182]

Intimidation and Harassment of Environmental Defenders

The relationship between mining companies and local police has evolved into what residents describe as a "shield" protecting corporate interests. According to Arif:

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[179] Ibid.
[180] SK UMK Morowali Utara 2025-1, https://www.scribd.com/document/812248206/SK-UMK-Morowali-Utara-2025-1.
[181] Climate Rights International interview with Arif in Towara on 18 August 2025.
[182] Participants of a group discussion with Climate Rights International, organized by Komiu, raised this point during the discussion held in Towara on 19 August 2025.

> [The police] dared to become the company's shield. They are in front, protecting the company to scare and weaken the people's movements.[183]

During some protests, uniformed officers arrive carrying long-barrelled weapons. When activists gather, plainclothes intelligence officers appear to monitor activities. Arif recalled a confrontation during a 2023 blockade:

> I was in the field, on the mountain, approached by police. They tried to intimidate us, told us not to block things, not to stop the company's activities. I asked them, “Are you security for the company or security for the community?”[184]

Multiple people interviewed said that organizing, particularly around water, land, or anti-mining protests, results in police intimidation and social and administrative retaliation, especially for women.

Those who dare to organize face consequences that extend beyond police intimidation. Women who participated in protests, some carrying empty pots through the streets, reported that the village government retaliated by threatening to remove them from the registry, effectively cutting them off from social aid or state support.[185]

Larger protests have been held in Palu, the provincial capital. But participation in larger demonstrations requires resources many do not have and raises fears of retaliation from the local government. Jurana's decision not to participate reflects an atmosphere of intimidation and social control reported by other women in Towara who participated in protests. Jurana said:

> I'm afraid. I don't want to get involved. I just see demonstrations on my phone.[186]

[183] Climate Rights International interview with Arif in Towara on 18-19 August 2025.
[184] Ibid.
[185] Women participating in an FGD held by Komiu in Towara on 19 August 2025.
[186] Climate Rights International interview with Jurana in Towara on 19 August 2025.

Environmental Harms

The environmental degradation of Towara can be seen in the disappearance of its wildlife. The Oriental Darter, a snake-necked cormorant that local communities have long used as an indicator of river health, tells a particularly stark story. Givent, an activist from Komiu, an environmental group focusing on forest and biodiversity explained that the waterbird species, once common, is now a rare sight:

> It used to be common. Last I saw was 2022. Only three individuals remained. And not here, upstream.[187]

The Tarsius, a tiny nocturnal primate with enormous eyes that can rotate 180 degrees, faces a similar fate. Listed as endangered, these creatures are extremely sensitive to habitat fragmentation and noise pollution. Their importance extends beyond biodiversity, as they serve as natural pest controllers. According to Givent:

> If Tarsius disappear, the locusts will destroy the crops [because the Tarsius is a pest controller].[188]

Perhaps most dramatically, crocodile behavior has changed entirely. Once rarely seen, they now appear frequently in waters near human settlements and have become a constant part of local risk calculations. Givent explained:

> GNI's [Gunbuster Nickel Industry] area had several [crocodile] nesting habitats. Now with reclamation, they've moved. A worker was fishing and got grabbed by the head. Lost his head.[189]

The contamination of river clams that have sustained local communities for generations represents both an ecological and cultural catastrophe. Residents of Towara told Climate Rights International:

> Shellfish are our main protein and economy. For centuries, [the gathering of shellfish was] passed down through generations.[190]

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[187] Climate Rights International interview with Givent in Towara on 20 August 2025.
[188] Ibid.
[189] Ibid.
[190] Residents raised this in a focus group discussion held in Towara on 19 August 2025.

Shellfish are bioaccumulators, concentrating toxics from their environment in their tissues. Many fear that the clams now carry nickel and other heavy metals from mining runoff. Attempts to test contamination levels have failed due to inadequate sampling protocols, leaving the communities without basic information to determine if their primary food source is poisoning their bodies.[191]

Disasters and Floods

The physical instability of the land mirrors the psychological instability of life in Towara. Jurana described a state of constant anxiety:

> I live with constant worry about landslides... If it rains heavily for one night, people in this area are already worried.[192]

Heavy rain triggers communal fear. Water carrying red mud flows through drainage systems into homes. Neighbors say they wake at 3 a.m. during storms to gather children and flee to safer ground. Some residents at the village's edge have already evacuated permanently, unwilling to wait for the disaster they see as inevitable. Others remain, caught between the danger of staying and the impossibility of leaving homes and land that represent their entire material wealth.[193]

The fear extends beyond immediate physical danger. Residents worry about building or improving homes that might be destroyed. They hesitate to plant crops that might never be harvested. They watch the mountain above them disappear, piece by piece, knowing that its absence will fundamentally alter water flows, wind patterns, and the stability of the earth beneath their feet.

Flooding in Molino

In the darkness just after midnight on August 19, 2025, Ribka clutched her child—the toddler she says she had waited sixteen years to have—as a wall of mud and debris crashed through Molino.[194] The catastrophic flooding that engulfed her community was no act of nature alone. It was the culmination of years of environmental degradation by nickel mining operations, regulatory failures, and a

[191] Climate Rights International interview with Givent of Komiu in Towara on 20 August 2025.
[192] Climate Rights International interview with Jurana in Towara on 19 August 2025.
[193] Ibid.
[194] Climate Rights International interview with Ribka in Molino on 20 August 2025.

cascade of ignored warnings that finally broke, quite literally, at the seams of an upstream mining dam.



Molino after a flash flood, August 2025. Credit: Riza Salman for CRI.

This section documents how mining activities transformed a manageable rainy season into a life-threatening disaster that destroyed homes, traumatized families, and exposed the deadly cost of Indonesia's nickel boom. Climate Rights International was in the area when the flash floods hit.

The Night the Dam Broke

Agus Salim, 62, still struggles to describe the moment his life nearly ended. The material transporter had experienced floods before in Molino village, but nothing had prepared him for the flash flood that swept away his home. As he fought to escape his mud-filled house in total darkness, a massive beam crashed through the wall, leaving just a small hole to escape:

> When I was awakened, suddenly wood exploded from behind. It hit the wall.

> Fortunately, [the beam] managed to break through. Otherwise, I would have died inside.[195]

Agus says the intensity of the flood was beyond belief. He likened the roar of the rushing water to the sound of gunfire. With no chance to escape on foot, he held on for dear life to his car's tire as the vehicle was pulled into swirling chaos. Hours later, rescuers discovered him perched on top of the stranded vehicle on what used to be the main road. He lost everything he owned to the flood.[196]

For Ribka, a 30-year-old mother who runs a small food stall (*warung*), the disaster marked her seventh flood in four years of living in Molino. But she told Climate Rights International that the August 2025 flood was the worst she had experienced. The evening began with the usual alerts about sporadic rain since the afternoon and a bit of water leaking into the kitchen around midnight. However, things took a turn for the worse at 12.30 a.m. Her husband's terrified shouts shattered the stillness of the night. "Get up! There's a big flood."[197]

What happened next was a harrowing escape. Ribka says she stumbled twice in the rushing, muddy water that had invaded their home, but she fought her way to a door that was being held shut by heavy logs, finally managing to force it open:

> If I had been two or three minutes late pulling that door [open], I might have been swept away with that house.[198]

The image that haunted her most was not her destroyed home or lost savings of over 3 million rupiah (USD 180), but the moment she held her two-year-old child above the churning water.

> I carried my child because that was the most important thing for me to save.[199]

[195] Climate Rights International with Agus Salim in Molino on 20 August 2025.
[196] Climate Rights International interview with Agus Salim in Molino on 20 August 2025.
[197] Climate Rights International interview with Ribka in Molino on 20 August 2025.
[198] Ibid.
[199] Ibid.

She likened the flood to a tsunami gradually receding to reveal a landscape of devastation.[200]

Years of Warning Fell on Deaf Ears

What happened in Molino was not an accident that surprised local residents. They say they had been sounding the alarm for years about the risk of a serious landslide from the mining areas.

When Arman Marunduh, local legislator, rushed to the flood site, he said that the flood was not just a natural disaster. It was something else entirely: companies cutting corners while regulators looked the other way. He explained:

> We've already warned them [companies] multiple times. They pretend they've addressed the issue, but this incident shows they haven't done anything.[201]

The cause of the incident was clear: a dam at an upstream mining site had collapsed in heavy rain. Arman, who personally inspected the area, confirmed there was a breach above the village at the company's location near the main bridge where water flows.[202] He believes this structural failure was merely the final link in a long chain of environmental degradation.

Multiple companies have mining concessions upstream from the village, including PT Bukit Makmur Istindo Nikeltama (Bumanik), ENERSTEEL, and SPM (Sumber Permata Mineral). According to local residents, nickel mining has systematically stripped the forests upstream from the village. When the heavy rains come, there are no trees left to slow the impact, no roots to absorb the water, and no canopy to break its fall.

By 2025, the destruction from upstream mining had reached the fishponds and oil palm farms that these rural communities depend on to survive. People filled complaint after complaint with provincial authorities, carefully documenting everything, but Arman said they were met with nothing but corporate shoulder-shrugging and officials who wouldn't, or couldn't, act.[203]

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[200] Climate Rights International interview with Ribka in Molino on 20 August 2025.
[201] Climate Rights International interview with Arman Marunduh in Molino on 20 August 2025.
[202] Ibid.
[203] Climate Rights International interview with Arman Marunduh in Molino on 20 August 2025. Residents' testimonies in an FGD organized by Komiu on 19 August also reflected this point.

Arman remembered the exhausting rounds they made.

> We've gone to the provincial capital to meet with the mining inspector at the Ministry of Energy and Mineral Resources, then to the Provincial Environmental Agency—same complaints.[204]

In November 2024, the Regional People's Representative Council (DPRD) of North Molowali Regency held an official hearing in response to community complaints about the destruction of clean water sources caused by nearby mining operations. A second hearing was held in early 2025, focusing on expanding environmental damage, including contamination of fishponds and farmland. Representatives from the provincial environmental agency, mining inspectorate, and the Governor of Central Sulawesi were involved in follow-up actions. According to Arman, as a follow up, the Provincial Environmental Agency visited Molino, visually inspected the area, including with drone surveillance, and declared there was no pollution and no environmental damage caused by the companies.[205] Arman said that the Agency did not take any water, air, or soil samples. Arman was so frustrated he went straight to the Governor:

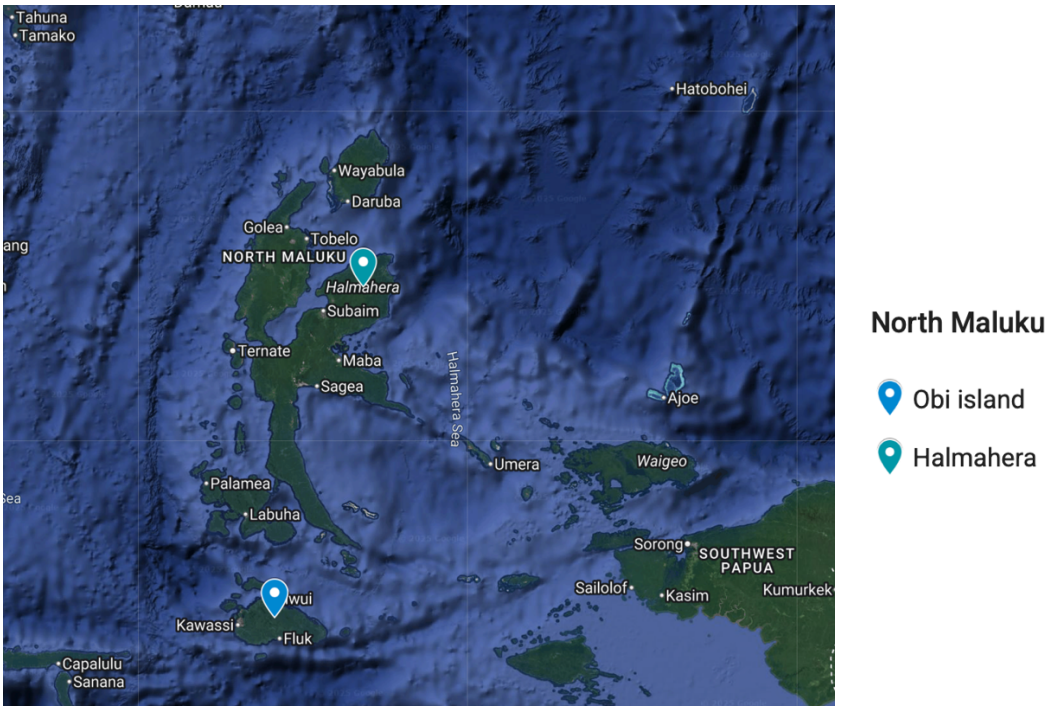
> I protested to the Governor, please reprimand the Head of the Environmental Agency because the reality on the ground is not like that.[206]

According to Arman, the Governor promised someone would come back and look again. They did—after the dam burst.[207] After homes were swept away. After families like Ribka's lost everything they'd built.

[204] Climate Rights International interview with Arman Marunduh in Molino on 20 August 2025.
[205] Arman Marunduh told Climate Rights International in an interview in Molino on 20 August 2025.
[206] Climate Rights International interview with Arman Marunduh in Molino on 20 August 2025.
[207] Resident who came to the flood site confirmed the Governor came there for a quick check.

IV. North Maluku

North Maluku is a remote province in Eastern Indonesia made up of many islands. Nicknamed the “Spice Islands,” these islands are home to nutmeg, mace, cloves, and other products that drove European colonial interest in the area starting in the 16th century. There are now two major nickel industry hubs in North Maluku, the Harita Nickel complex on Obi Island and the Indonesia Weda Bay Industrial Park on Halmahera Island.



Map of North Maluku. Credit: Krista Shennum using Google My Maps.

Obi Island

Obi Island is a remote island in North Maluku, located south of the island of Halmahera. Exploration for nickel on Obi Island started in 2007.[208] In 2010, Harita Group, also known as Harita Nickel, started nickel mining operations on Obi Island through its subsidiary PT Trimegah Bangun Persada. The company’s operations on the island later expanded to nickel smelting and processing facilities, including a

[208] Chin C. Kuo, ”The Mineral Industry of Indonesia,” 2007 Minerals Yearbook, United States Geological Survey, https://d9-wret.s3.us-west-2.amazonaws.com/assets/palladium/production/mineral-pubs/country/2007/myb3-2007-id.pdf.

high-pressure acid leach (HPAL) facility, where ore is processed into high-quality, battery-grade nickel.

Residents of Kawasi, a coastal community on Obi Island, report escalating land disputes, water contamination, collapsing fisheries and farms, unwanted and unviable relocation, and unequal access to public services as nickel mining and processing have expanded. Workers also describe occupational exposure to toxics and limited access to appropriate medical care. Community leaders say consultations have been absent or selective and security actors have intimidated residents.

Loss of Fishing and Farming Livelihoods

Sanusi, now 56, arrived in Kawasi in 1990, shortly after getting married. Back then, the ocean was abundant with fish. Sanusi would head out in his small boat each morning with basic fishing gear, and an hour later he'd be back with three huge basins overflowing with more than enough fish to feed everyone at home and make good money at the market. For almost twenty years, Sanusi fed his family from those waters.

> In the past, fish would even wash up on the beach by themselves. Now? The fish sold in the market come from outside Kawasi. Now, even after three days, you might not get one [basin of fish].[209]

By 2017, it was nearly impossible to catch fish using traditional methods. Now, Sanusi works construction, backbreaking manual work for a man who is almost 60.

Nurhayati remembers when sago palms grew thick along the waterways near the old village. Sago, a starch extracted from the sago palm's trunk, had been a dietary staple for generations.

> Sago is now gone because of [nickel]. The water sources [for the sago palm have] dried up.[210]

[209] Climate Rights International interview with Sanusi, September 27, 2025, Kawasi, Obi Island.
[210] Climate Rights International interview with Nurhayati, September 27, 2025, Kawasi, Obi Island.

The loss of sago is just one marker of a broader agricultural collapse. The crops that once grew easily in Kawasi's rich volcanic soil now die in contaminated, waterlogged mud. According to Nurhayat:

> Sweet potatoes die in the mud. Cassava dies in the mud. Families are forced to buy what they used to grow, including basic foods like bananas, cassava, sweet potatoes.[211]

Herman moved to Kawasi in 1981 and built a productive nutmeg and coconut farm over decades of careful cultivation. He estimates that the majority of his trees, which can take years to mature and produce, have been lost due to flooding and pollution:

> Coconut and nutmeg were our main crops. But now many trees are dying because their roots are flooded.[212]

Right to Water

For 28 years, Herman Marang drank from the springs that bubbled up from Obi Island's volcanic earth. Crystal clear and cold, the water was one of the simple blessings of life in Kawasi. His children grew up drinking it. His coconut and nutmeg trees thrived on it. Then, around 2018, the water began to change.

According to Sanusi:

> From 1990 to 2018, we used spring water. But now, it tastes salty and smells bad.[213]

The change in water quality coincided with the expansion of nickel processing on the island. Harita Group installed activated carbon filtration systems in the community's water supply, likely to absorb toxics in drinking water resources, but they did so without explanation or consultation with local communities. According to Herman:

[211] Ibid
[212] Climate Rights International interview with Herman, September 28, 2025, Kawasi, Obi Island.
[213] Climate Rights International interview with Sanusi, September 27, 2025, Kawasi, Obi Island.

> The company [Harita] suddenly placed activated carbon in the water without telling the villagers. Since that stuff was put in the water, children have been getting rashes, and the water no longer tastes fresh.[214]

As carbon filtration systems should hypothetically improve water quality, it is possible that there are pollutants in the water that are unaffected by the carbon filtration system that are causing residents to develop rashes, but the villagers have been left in the dark about possible contaminants in the water.

By 2020, families felt they had no choice but to abandon the water source that had sustained them for generations. They began buying bottled water every day. Nurhayati, a 38-year-old mother, says her household requires four to six gallons per day. For Nurhayati's family, the daily cost of water is roughly 55,000 rupiah (USD 3.32), which she describes as an unsustainable burden.

Residents say the water crisis goes deeper than cost. When the rains come, and they come often in this tropical climate, the rivers turn dark colors. According to Nurhayati:

> Now the water in Kawasi is green mixed with red.[215]

“Radif,” who worked inside the mining facilities until recently, said that tailings and other toxic waste from nickel processing is stored in massive artificial ponds.[216] When heavy rains overwhelm these ponds, he says he has witnessed tailings overflow into the surrounding area. Radif described how the water, contaminated with heavy metals, acids, and chemicals, flowed from the ponds down through valleys, eventually reaching the rivers and the sea. After the tailings spills, Radif would see stones covered in a viscous, unnatural coating, that looked like “burned rubber.”

> When it rains, tailings flow into the Taduku River. It's maroon in color, with a stronger smell than sulfur… It flows into the stream and then trickles into the ocean.[217]

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[214] Ibid.
[215] Climate Rights International interview with Nurhayati, September 27, 2025, Kawasi, Obi Island.
[216] “Radif” is a pseudonym used to protect the interviewee from potential retaliation.
[217] Climate Rights International interview with “Radif,” September 29, 2025, Obi Island.

Sanusi told Climate Rights International that the sea water now causes itching. Local residents say that the company never explained what was in the water or why it changed. No health warnings were issued. No water testing results were shared. The families of Kawasi simply had to watch as their primary resource became unusable. According to Radif:

> No one explained anything.[218]

Health Impacts

During the dry season, coal ash and other pollutants from the industrial operations settle on everything. Sanusi described the pollution:

> We used to have clean air. Now, there's dust everywhere. During the dry season, we bathe in dust. During the rainy season, we bathe in mud.[219]

The dust causes respiratory problems, particularly in children. The local clinic, which residents say is understaffed and under-resourced, sees a constant stream of patients with coughs and breathing difficulties. According to “Tama,” there is only one doctor serving the entire community, despite very common respiratory health problems in the village.[220]

Radif is one of the few people in Kawasi village who has seen the inside of the nickel processing facilities, having worked for years in production and smelting. At his peak as a skilled worker, Radif earned 36 million rupiah (USD 2,170) per month, more money than he ever imagined. The work was hard, the hours were long, but he said the pay checks made the hard work worthwhile.

In his job, Radif handled toxic chemicals, including flocculants (chemicals used for wastewater treatment) and mercury (used in battery production), and he was chronically exposed to dust. Then, his body began to fail. Radif developed a persistent cough that brought up blood and fevers that would not break. His visits to the health clinic became weekly, then more frequent. The company clinic treated acute problems like occupational injuries and emergencies, but it offered little for

[218] Ibid.
[219] Climate Rights International interview with Sanusi, September 27, 2025, Kawasi, Obi Island.
[220] “Tama” is a pseudonym used to protect the interviewee from potential retaliation.

chronic conditions resulting from long-term exposure. Eventually, Radif left his job in the nickel industry, not because he wanted to, but because his body could not take the toxic exposure and hazardous working conditions.



Mining waste near Kawasi, Obi Island. Credit: Rifki Anwar for CRI.

Failure to Adequately Compensate Communities

In 2010, Harita Nickel and the local government signed an agreement, brokered by a "Team of Nine" that included village leaders and was officially witnessed by the regent of South Halmahera. The terms were clear: every household would receive 1.3 million rupiah (USD 78) per month for five years, regardless of whether they worked for Harita.[221] It was called a “foster village” program, an initiative meant to share the prosperity of mining with the local community. The agreement covered 170 households. For the first time, residents of Kawasi believed that perhaps development and tradition could coexist.

The payments lasted three years. Then, in 2014, they stopped. Residents say that Harita claimed they had to stop paying residents because of a new policy by the Indonesian government to ban mineral ore exports, requiring companies to process ore domestically, which in turn required the construction of new smelting and

[221] Climate Rights International interview with Sanusi, September 27, 2025, Kawasi, Obi Island.

processing facilities. The cost of building these facilities, Harita claimed, made it impossible to continue supporting the village. According to Sanusi:

> They [Harita] said [they could no longer make payments to the local community] because the government banned raw exports and they had to build a factory. But that wasn't in the agreement... If they can break a written promise, how can we trust their sweet talk?[222]

Yoksan, the 61-year-old customary leader of Kawasi and an ethnic Tobelo-Galela man, remembers another promise from those early years. A company representative from a mining company operating in Obi Island visited the village with commitments to build a church and mosque. The buildings were partially constructed, but construction was abandoned when the company representative passed away.[223]

Herman, a farmer from Kawasi, believes that the company's Corporate Social Responsibility (CSR) programs were distributed unevenly. When support did come, he says it went to select families, including people with connections, those willing to cooperate, and the residents who did not ask difficult questions.

> Support is given only to certain people, not to the whole community.[224]

Land Rights: Unfair Sales and No Negotiations

Nurhayati, who was born in Kawasi, said she watched the village change from a quiet community where everyone knew their neighbors to a divided settlement where families eye each other with suspicion, wondering who has sold out to the company and who has not.

When the land sales began in the early 2000s, the payments—a flat 20 million rupiah (USD 1,206)—seemed generous. Twenty million rupiah was more money than most families had ever seen at once. Later, people realized the land was valued and sold at the same price regardless of the size of the plot. According to Nurhayati:

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[222] Ibid.
[223] Climate Rights International interview with Yoksan, September 27, 2025, Kawasi, Obi Island.
[224] Ibid.

> At the beginning…they would just pay 20 million rupiah [USD 1,206]…whether for 30 or 10 hectares of land. They just decided on 20 million, and that's what they gave to people.[225]

Nurhayati said that there was no transparent valuation process, independent appraisal, or real negotiation. Harita decided the price, and families, many of them with no formal education or understanding of land markets, accepted it.

> There were no receipts at all. They just wrote the amount and stamped it on a report.[226]

Without proper documentation or formal land transfer letters, families had no legal recourse when they later felt that they had been cheated.

The company also paid for crops and trees, but residents say the compensation was insultingly low. Mature jambu fruit trees, which can take years to grow and produce, were valued at 5,000 to 30,000 rupiah (USD 0.3 to 2) each. Some families held out, refusing to sell. Residents say that Harita responded with a patient but ruthless strategy: they bought the land around the holdouts, completely surrounding them. Without access to roads, without neighbors, isolated on all sides by company property, even the most stubborn resisters eventually gave in.

Sanusi owned 2.2 hectares of cultivated land and initially asked for 2.5 billion rupiah (about USD 150,000), which he believed was reasonable for prime coastal land with established crops. The company offered 250 million, just ten percent of his asking price. He told Climate Rights International that he did not want to sell his land, but by the time the company made the offer, his farmland was already flooded with industrial waste. He sold out of necessity, not choice.

> My land was 2.2 hectares. I asked for IDR 2.5 billion. They only paid IDR 250 million…I sold it out of necessity. My farmland was flooded with industrial waste.[227]

[225] Climate Rights International interview with Nurhayati, September 27, 2025, Kawasi, Obi Island.
[226] Ibid.
[227] Climate Rights International interview with Sanusi, September 27, 2025, Kawasi, Obi Island.

After accepting a fraction of what Sanusi believes his land was worth, he is still suspicious of the transaction because he was provided a receipt with no information about the price of the land sale. Without proper documentation, Sanusi has no proof of the actual terms of sale. If the company later claims he was paid more, or paid differently, he has no way to contest it.



Homes destroyed in Kawasi, Obi Island. Credit: Rifki Anwar for CRI.

Community members say that customary land ownership comes not from paper titles or deeds but from care, including planting, harvesting, burying the dead, and raising children. Some residents, lacking official documentation of their land, say these customary understandings carry no weight with Harita or with government agencies that had already granted their land to nickel companies. For example, when Tama tried to formalize his land ownership by paying for official surveying through Indonesia's National Land Agency, he was told his land fell within a "zoned area," a designation that made certification impossible.

Many residents tell the same story. They say they paid their fees, had their land measured, but still do not hold the land certificates. According to Herman:

> It's been over two years, and I still don't have my land certificate.[228]

Some community members say this pattern is deliberate. Without official paperwork, nickel companies can claim the land is abandoned or improperly held. While Indonesian law recognizes customary rights, bureaucratic roadblocks have made those rights difficult to secure.

Unwanted and Unviable Relocations

They call it "Ekofilis"—the EcoVillage. Built on elevated land that was once forested, residents say the EcoVillage is Harita's "solution" to pollution and land conflicts in Kawasi village. According to a statement on the Harita Nickel website:

> The relocation of Kawasi Village to the new settlement is a government-led process and strictly voluntary. Our role is supportive—helping ensure proper housing, facilities, and services—while welcoming independent observers to monitor transparency and fairness. In 2018 the original village was rated as Tertinggal, or 'Left Behind' (a metric used to determine quality of life). It is prone to frequent flooding, vulnerable to sea level rise and extreme weather events.[229]

Harita constructed rows of nearly identical houses. Residents of Kawasi say the company began by encouraging, and then pressuring, families to relocate to the EcoVillage.

The houses were built on company land. Residents who relocated say they have no title or ownership rights. According to Yoksan, the customary leader of Kawasi:

> The land up there isn't ours. Anytime they say move, we have to move.[230]

Residents say the houses appeared without community input. No meetings were held to discuss the layout, the location, or whether relocation was even desired. Families learned about the EcoVillage the same way they learned about everything

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[228] Climate Rights International interview with Herman, September 28, 2025, Kawasi, Obi Island.
[229] Harita Nickel, "Water, People, and Progress: Harita Nickel's Journey of Responsible Mining on Obi Island," September 11, 2025, https://tbpnickel.com/en/water-people-and-progress-harita-nickels-journey-of-responsible-mining-on-obi-island (accessed October 8, 2025).
[230] Climate Rights International interview with Yoksan, September 27, 2025, Kawasi, Obi Island.

else: through rumors and informal information shared between neighbors. According to Nurhayati:

> We were never consulted about relocation. Suddenly, houses were being built up there.[231]



Drone image of the EcoVillage. Credit: Rifki Anwar for CRI.

Yoksan, the customary leader of Kawasi, said:

> Until now, we don't even know where they're moving us. They [Harita] talk about it, but never actually do anything. No information is given.[232]

The EcoVillage sits on land that "Radif," the former mine worker, describes as fundamentally unstable. Building houses on unstable land filled with decomposing organic matter may lead to serious structural problems down the road. According to Radif:

> Up there it's all sago trees and mud… eventually it will decay.[233]

[231] Climate Rights International interview with Nurhayati, September 27, 2025, Kawasi, Obi Island.
[232] Climate Rights International interview with Yoksan, September 27, 2025, Kawasi, Obi Island.
[233] Climate Rights International interview with "Radif," September 29, 2025, Obi Island.

Residents report that the EcoVillage lacks the basic things that made life in Kawasi viable, including access to the sea, proximity to farmland, and connection to forest resources. Without fishing, farming, and the traditional livelihoods that sustained families for generations, relocated residents have no way to make a living. Locals say the infrastructure is inadequate. Herman, who has resisted relocation, describes how even basic water management was bungled:

> They built culverts higher than the water flow. So when it rains, the water doesn't flow into the culvert, it floods the fields.[234]

A school that was relocated to the EcoVillage was built dangerously close to a coal stockpile, exposing children to coal dust. Children attend classes while breathing coal dust and play on grounds contaminated with coal particles. According to Nurhayati:

> The new school is built just four meters away from the coal stockpile.[235]

Many who relocated to the EcoVillage have returned to Kawasi. Sanusi estimates only about thirty percent of relocated families remain in the EcoVillage, the rest having returned to Kawasi because life in the EcoVillage was so difficult. But returning to Kawasi means facing ongoing home demolitions by Harita. Residents say the demolitions are strategic and intimidating. A family might leave for a day or two, and when they return their house has been bulldozed. In other cases, residents say that Harita will erect a fence around a property, blocking access, and then claim the land was abandoned. Nurhayati reports:

> Now, homes are constantly being demolished [by Harita.] There is no explanation from the company.[236]

Herman, a farmer from Kawasi, told Climate Rights International that he found nickel company excavators working on his land without permission on two occasions.

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[234] Climate Rights International interview with Herman, September 28, 2025, Kawasi, Obi Island.
[235] Climate Rights International interview with Nurhayati, September 27, 2025, Kawasi, Obi Island.
[236] Ibid.

At times, electricity to Kawasi is cut short and only available from 6 p.m. to 6 a.m. In March 2025, Kawasi residents went more than two weeks without access to electricity after a fire at a nickel smelter allegedly caused a power outage.[237]

Families say they are caught between an unlivable EcoVillage and Kawasi, where houses are being demolished. Sanusi summarizes the transformation:

> From comfortable to uncomfortable. From affordable to expensive. From happiness to suffering.[238]

Cultural Rights

Yoksan has made his decision. He will not leave. When asked why, his answer is immediate and absolute:

> If I move, I die. My ancestors are buried here. Their bones are here.[239]

For Yoksan and many others in Kawasi, the connection to ancestral burial grounds is literal and unbreakable. The cemetery in Kawasi sits on *wakaf* land—land that was religiously endowed by previous generations specifically for burial purposes. Yoksan explains:

> All cemeteries are customary land. Endowed by our ancestors.[240]

These burial grounds contain five generations of Yoksan's family. His grandparents, his parents, siblings, and children who died young. The bones of everyone he has loved lie in this earth. The idea of abandoning them, or digging them up and moving them, is spiritually unthinkable.

Nurhayati, who is younger, echoes Yoksan's connection to the land:

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[237] Cermat, "Dua Pekan Listrik Padam, Warga Desa Kawasi Geruduk PT Harita Nickel," March 17, 2025 https://www.cermat.co.id/dua-pekan-listrik-padam-warga-desa-kawasi-geruduk-pt-harita-nickel/; Tempo Witness, "Warga Desa Kawasi Menanggung Puasa Tanpa Listrik,"March 17, 2025, https://witness.tempo.co/article/detail/10383/-warga-desa-kawasi-menanggung-puasa-tanpa-listrik.html (accessed March 21, 2025).
[238] Climate Rights International interview with Sanusi, September 27, 2025, Kawasi, Obi Island.
[239] Climate Rights International interview with Yoksan, September 27, 2025, Kawasi, Obi Island.
[240] Ibid.

> They want us to move, but what about the bones of our ancestors? We cannot take them.[241]

Some families who have relocated to the EcoVillage continue traditional practices by returning a deceased person's body to Kawasi. The journey from the EcoVillage down the mountain to the ancestral ground is both a practical necessity, given the location of the burial grounds, and important spiritually.

Kawasi's residents practice a syncretic blend of Islam, Christianity, and traditional Tobelo-Galela beliefs that give sacred significance to certain natural features like springs, caves, trees, and stone formations. These places are where the community has historically conducted rituals, offered prayers, and maintained connection with ancestors and the spiritual world.

Many of these sacred sites now lie within company-controlled zones, fenced off and guarded. Benteng Kawasi, the Kawasi fortress, is an ancestral site associated with the founding of the village. According to community tradition, this is where the original settlers first established their presence on Obi Island. The site carries both historical and spiritual weight. Now a fence surrounds Benteng Kawasi, and security guards turn away community members who try to visit. Similarly, Air Cermin—Mirror Water, a spring with crystalline clarity used in ceremonial purification—is now inaccessible.

Multiple residents confirmed that they are no longer able to access sacred sites like Benteng Kawasi.

> Sacred places are now forbidden [to enter] because they're within company areas.[242]

The prohibition on access severs the community's connection to its own spiritual traditions. Rituals that require water from specific springs cannot be performed. Ceremonies meant to be conducted at ancestral sites must be abbreviated or abandoned.

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[241] Climate Rights International interview with Nurhayati, September 27, 2025, Kawasi, Obi Island.
[242] Climate Rights International interview with Yoksan, September 27, 2025, Kawasi, Obi Island.

The cultural loss extends beyond physical space. Nurhayati notes that traditional practices and language are vanishing, especially among the younger generation who now speak Mandarin instead of the native Tobelo-Galela language. The shift reflects the changing demographics of Obi Island. As thousands of Chinese workers have arrived to staff the mining and processing facilities, Mandarin has become a language of economic opportunity. Children learn it in hopes of getting better jobs.

Community Demands

Residents interviewed by Climate Rights International articulated four core demands: stop the relocation of residents to the EcoVillage and respect Kawasi's status as a permanent village; restore clean water access, rebuild roads, drainage, bridges, schools, health facilities, and other infrastructure; and provide fair compensation and real empowerment.

Halmahera and the Indonesia Weda Bay Industrial Park

In 2018, construction began on the Indonesia Weda Bay Industrial Park (IWIP), a 5,000-hectare, multi-billion-dollar industrial complex located in Lelilef Village, Central Halmahera, North Maluku. IWIP was built at breakneck speed, beginning operations in 2020, less than two years after the project was announced. The mountainous area just north of the industrial park is rich with nickel deposits. (Climate Rights International has released two in-depth reports into the human rights, environmental, and climate impacts of IWIP and nearby nickel mines, published in January 2024 and June 2025.[243] In this report we include a short overview.)

Individuals interviewed by Climate Rights International reported that the process of land acquisition has been marred by land grabbing, little or no compensation, and unfair land sales. People living near IWIP have had their land taken, deforested, or excavated by nickel companies and developers without their consent. Some community members who refused to sell their land or contested the set land price offered experienced intimidation, received threats, and faced retaliation from company representatives, police officers, and members of the military. The arrival of the nickel industry has led to a growth in police and military presence in the villages

[243] Climate Rights International, “Nickel Unearthed: The Human and Climate Costs of Indonesia’s Nickel Industry,” January 2024, https://cri.org/reports/nickel-unearthed/.

near IWIP, including a Mobile Brigade for the Indonesian National Police and an Indonesian National Army outpost.

As the nickel industry transforms this region, both coastal and forest communities are experiencing existential threats to their livelihoods and traditional ways of life. For generations, communities living in Central and Eastern Halmahera have depended on natural resources to sustain themselves and their families as artisanal fisherfolks, farmers, sago-makers, and hunters. People interviewed by Climate Rights International reported that the nickel industry's destruction of forests, acquisition of farmland, degradation of freshwater resources, and harm to fisheries has made it difficult, if not impossible, to continue their traditional ways of life.

Rampant deforestation, air and water pollution, and habitat destruction from nickel mining and smelting activities are seriously harming the environment. Nickel mining and smelting operations are threatening local residents' right to safe, clean drinking water, as industrial activities and deforestation are polluting the waterways on which local communities depend for their basic needs. Community members are also concerned that increasingly common flooding events are linked to deforestation by nickel mining companies.

Residents in villages near IWIP also fear that newly developed health problems, including respiratory and skin problems, are related to pollution from the construction and operation of IWIP and its coal power plants. Although the public health studies needed to directly attribute the reported health problems to industrial nickel activities at IWIP are lacking, the types of health impacts reported are in line with what studies suggest may be expected with exposure to pollution from industrial sources and coal plants.

A lack of transparency or provision of basic information by companies and the Indonesian government is making the situation worse. Community members have difficulties accessing information about the consequences of industrial pollution on their health. Neither IWIP nor the government provides publicly available or accessible information on air and water quality to local residents.

Indigenous Peoples have the right to participate in decision-making in matters which would affect their rights. States should consult and cooperate in good faith in order to obtain their FPIC prior to the approval of any project affecting their land or

territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources. Yet, Indigenous Peoples interviewed by Climate Rights International in Central and East Halmahera repeatedly said that they were not told the purpose of land acquisition or any other details of the project by any nickel mining or smelting companies.

Companies Involved

Harms to local communities and the environment are being driven by the activities of the dozens of domestic and foreign-based companies engaged in nickel mining and refining in Central and East Halmahera, including at IWIP.

IWIP is a joint venture of three private companies headquartered in the People's Republic of China: Tsingshan Holding Group, Huayou Cobalt, and Zhenshi Holding Group. In addition to these three shareholders, a growing number of companies have announced plans to build industrial facilities within IWIP to produce nickel materials needed for EV batteries.

As of December 2022, there were 66 mining concessions in Central Halmahera, totaling 142,964 hectares, or roughly 60 percent of the total district.

PT Weda Bay Nickel (WBN), the largest nickel mining company operating on Halmahera and the second largest nickel concession in Indonesia, is a joint venture between Indonesian mining company PT Antam, which is majority owned by the Indonesian government, France-based Eramet, and China-based Tsingshan Holding Group. Tsingshan Holding Group is the majority shareholder.

V. International Legal Obligations

The Right to Water

The human right to water, enshrined under international law, entitles everyone to sufficient, safe, physically accessible, and affordable water for personal and domestic use.[244] Personal and domestic uses "ordinarily include drinking, personal sanitation, washing of clothes, food preparation, personal and household hygiene."[245] The costs and charges associated with securing water must not compromise or threaten the realization of other human rights,[246] including the right to an adequate standard of living, from which the right to water is derived.[247]

While the adequacy of water varies according to conditions, the UN Special Rapporteur on the Human Right to Water and Sanitation has stated that to "ensure the full realization of the right, States should aim for at least 50 to 100 liters per person per day."[248]

In addition to water for personal and domestic use, the UN Committee on Economic, Social and Cultural Rights has said that States should ensure that "there is adequate access to water for subsistence farming and for securing the livelihoods of indigenous peoples."[249]

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[244] UN Committee on Economic, Social and Cultural Rights, "General Comment No. 15: The Right to Water," https://www.refworld.org/pdfid/4538838d11.pdf, para. 2; UN General Assembly, The human rights to safe drinking water and sanitation, Resolution 70/169, U.N. Doc. A/RES/70/169, December 17, 2015, para 2, https://documents-dds-ny.un.org/doc/UNDOC/GEN/N15/442/72/PDF/N1544272.pdf?OpenElement (accessed October 3, 2023); Inter-American Court of Human Rights, Lhaka v. Argentina, Judgment of February 6, 2020, Inter-Am.Ct.H.R., paras. 222-30, https://www.corteidh.or.cr/docs/casos/articulos/seriec_400_ing.pdf (accessed October 3, 2023).

[245] UN CESCR, General Comment No. 15, para 12(a).

[246] Ibid., para. 12(c)(2).

[247] UN General Assembly, The human rights to safe drinking water and sanitation, preamble.

[248] UN Special Rapporteur on the Human Right to Safe Drinking Water and Sanitation, "Frequently Asked Questions," https://sr-watersanitation.ohchr.org/en/rightstowater_5.html (accessed July 12, 2023). A 2020 report by the World Health Organization (WHO) defined "optimal access" to water—which carries "low" levels of health concern—as having more than 100 liters per person per day, supplied to the home through multiple taps and continuously available. It defined "intermediate access"—with a "medium" level of health concern—as an average quantity of about 50 liters per person per day, supplied through one tap on the plot of land, or within 100 meters or 5 minutes total of collection time. It defined "basic access"—carrying "high" levels of health concern—as an average quantity unlikely to exceed 20 liters per person per day, with 100-1000 meters in distance or 5 to 30 minutes in collection time. Guy Howard et al., "Domestic water quantity, service level and health," World Health Organization, 2020 (second edition), https://www.globalwaters.org/resources/assets/domestic.

[249] UN CESCR, General Comment No. 15, para 7; Inter-American Court of Human Rights, Lhaka v. Argentina, Judgment of February 6, 2020, para. 228 (quoting UN CESCR, General Comment No. 15).

States have an obligation to protect the right to water, including by ensuring access to the minimum essential amount of water, "equitable distribution of all available water facilities and services," and facilitating "improved and sustainable access to water, particularly in rural and deprived urban areas."[250] States also must prevent third parties—such as individuals, groups, or corporations—from interfering with the enjoyment of the right to water, including by adopting necessary and effective measures to restrain third parties from "polluting and inequitably extracting from water resources."[251]

Individuals and groups also have a right "to participate in decision-making processes that may affect their right to water."[252] States must take reasonable steps to facilitate "active, free and meaningful" participation.[253]

A failure by the State to take necessary and feasible steps towards the realization of the right to water—including by failing to create and enforce laws against contamination of water supplies —constitutes a violation of the right.[254] Anyone denied their right to water must have access to effective judicial or other appropriate remedies.[255]

In addition to States' obligations to prevent third parties from impinging on the right to water, businesses also have independent human rights responsibilities to "exercise due diligence to avoid any action which would result in human rights abuses in the scope of their operations, including their supply chains," including on the human right to water.[256]

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[250] UN CESCR, General Comment No. 15, paras 26 and 37(e).
[251] Ibid., para. 23; UN Commission on Human Rights, Report of the Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque, Common violations of the human rights to water and sanitation, A/HRC/27/55, June 30, 2014, para. 29, https://documents-dds-ny.un.org/doc/UNDOC/GEN/G14/069/10/PDF/G1406910.pdf?OpenElement (accessed October 3, 2023).
[252] UN CESCR, General Comment No. 15, para. 48.
[253] UN Commission on Human Rights, Report of the Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque, Common violations of the human rights to water and sanitation, para. 68.
[254] UN CESCR, General Comment No. 15, para. 40.
[255] Ibid. para. 55.
[256] UN Commission on Human Rights, Report of the Special Rapporteur on the human right to safe drinking water and sanitation, Catarina de Albuquerque, Common violations of the human rights to water and sanitation, para. 32. See also Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework"; OECD, "OECD Guidelines for Multinational Enterprises on Responsible Business Conduct," 2023.

The Right to a Clean, Healthy and Sustainable Environment

The International Court of Justice recently found, in a landmark advisory opinion, that all people have the right to a clean, healthy and sustainable environment.[257]

The opinion confirms what was a growing consensus. In 2022, the UN General Assembly adopted a resolution declaring access to a clean, healthy, and sustainable environment to be a universal human right. The resolution highlighted the way in which a healthy environment is critical to the enjoyment of numerous other human rights.[258] Indonesia voted in favor of the resolution. The UN Human Rights Council has also called on all member states to take steps to "respect, protect, and fulfil" the right to a healthy environment.[259]

The right to a healthy environment is also protected under the Indonesian Constitution and the ASEAN Human Rights Declaration. Article 28H(1) of the Constitution provides that "[e]ach person has a right …to enjoy a good and healthy environment."[260] The ASEAN Human Rights Declaration includes the right to a "safe, clean, and sustainable environment" as part of the right to an adequate standard of living.[261]

The Right to an Adequate Standard of Living

Under the International Covenant on Economic, Social and Cultural Rights (ICESCR), to which Indonesia acceded in 2006, the government has the obligation to respect, protect, and fulfill the rights to an adequate standard of living, housing, food, water, health, and education in a non-discriminatory manner.[262] The International Covenant on Civil and Political Rights (ICCPR), to which Indonesia acceded at the same time,

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[257] International Court of Justice, Advisory Opinion of 23 July 2025, https://www.icj-cij.org/case/187, para. 373.
[258]UN General Assembly, The human right to a clean, healthy and sustainable environment, A/RES/76/300, adopted July 28, 2022, https://docs.un.org/en/A/RES/76/300.
[259] UN Human Rights Council, *The human right to a clean, healthy and sustainable environment,* A/HRC/RES/48/13, adopted Oct. 8, 2021, https://docs.un.org/A/HRC/Res/48/13.
[260] Constitution of Indonesia, Constitution of Indonesia, article 28H(1), http://www.humanrights.asia/indonesian-constitution-1945-consolidated/#section-15.
[261] ASEAN Human Rights Declaration, adopted Nov. 19, 2012, https://asean.org/asean-human-rights-declaration/, art. 28(f).
[262] International Covenant on Economic, Social and Cultural Rights, https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights, arts. 11, 12, 13. Indonesia acceded to the convention on February 3, 2006, https://tbinternet.ohchr.org/_layouts/15/TreatyBodyExternal/Treaty.aspx. See also UNDRIP, art. 20(2) ("Indigenous peoples deprived of their means of subsistence and development are entitled to just and fair redress").

states that “in no case may a people be deprived of its own means of subsistence.”[263]

The right to health obligates states to recognize and take steps to fulfill “the right of everyone to the enjoyment of the highest attainable standard of physical and mental health.”[264] It imposes on states the responsibility to ensure “an adequate supply of safe and potable water and basic sanitation; the prevention and reduction of the population’s exposure to harmful substances … or other detrimental environmental conditions that directly or indirectly impact human health.”[265]

The Right to be Protected from Foreseeable Environmental Harms to Human Rights

Governments have an international human rights obligation to protect populations from foreseeable environmental harms to their human rights, including those linked to climate change.

As the International Court of Justice stated in its recent advisory opinion:

> In order to guarantee the effective enjoyment of human rights, States must take measures to protect the climate system and other parts of the environment. These measures may include, inter alia, taking mitigation and adaptation measures, with due account given to the protection of human rights, the adoption of standards and legislation, and the regulation of the activities of private actors. Under international human rights law, States are required to take necessary measures in this regard.[266]

Focusing on climate change, the UN Committee on Economic, Social and Cultural Rights (CESCR) has warned that “a failure to prevent foreseeable human rights harms caused by climate change, or a failure to mobilize the maximum available resources in an effort to do so, could constitute a breach” of their human rights obligations.[267]

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[263] International Covenant on Civil and Political Rights, https://www.ohchr.org/en/instruments-mechanisms/instruments/international-covenant-civil-and-political-rights, art. 1(2).
[264] ICESCR, art. 12.
[265] UN Committee on Economic, Social and Cultural Rights, “General Comment No. 14, The Right to the Highest Attainable Standard of Health (Art. 12),” https://www.refworld.org/pdfid/4538838d0.pdf, para. 15.
[266] International Court of Justice, Advisory Opinion of 23 July 2025, https://www.icj-cij.org/case/187, para. 403.
[267] See, e.g., Committee on Economic, Social, and Cultural Rights, “Climate change and the International Covenant on Economic, Social, and Cultural Rights,” October 8, 2018, para 6,

A central element of the obligation is to prevent foreseeable harms to the right to life.[268] The U.N. Human Rights Committee has stated that:

> Environmental degradation, climate change and unsustainable development constitute some of the most pressing and serious threats to the ability of present and future generations to enjoy the right to life. … Implementation of the obligation to respect and ensure the right to life, and in particular life with dignity, depends, inter alia, on measures taken by States parties to preserve the environment and protect it against harm, pollution and climate change caused by public and private actors.[269]

Governments thus have a clear obligation to take legal, regulatory, or legislative steps to prevent foreseeable threats to human rights by businesses and other private actors, including threats due to deforestation, fossil fuel emissions, pollution, and other environmental harm.[270]

International Court of Justice Advisory Opinion

On July 23, 2025, the International Court of Justice issued an advisory opinion on the obligation of states with respect to climate change. The ICJ underscored states' legal obligation to protect the climate system and the rights of present and future generations. The opinion affirmed, among other things, that:

- States have a legally binding obligation to protect the climate system from harmful greenhouse gas emissions;

https://www.ohchr.org/en/NewsEvents/Pages/DisplayNews.aspx?NewsID=23691&LangID=E (accessed September 11, 2023).

[268] UN Human Rights Committee, General Comment No. 36, Article 6: right to life, U.N. Doc. CCPR/C/GC/36 (2019), para. 7 (accessed September 11, 2023) ("The obligation of States parties to respect and ensure the right to life extends to reasonably foreseeable threats and life-threatening situations that can result in loss of life.").

[269] Ibid. para 62.

[270] UN Human Rights Committee, Views adopted by the Committee under article 5 (4) of the Optional Protocol, concerning communication No. 3624/2019, CCPR/C/135/D/3624/2019, September 22, 2022, https://tbinternet.ohchr.org/_layouts/15/treatybodyexternal/Download.aspx?symbolno=CCPR%2fC%2f135%2fD%2f3624%2f2019&Lang=en at para. 8.3 (With respect to the State party's position that article 6 (1) of the Covenant does not obligate it to prevent foreseeable loss of life from climate change, the Committee recalls that the right to life cannot be properly understood if it is interpreted in a restrictive manner and that the protection of that right requires States parties to adopt positive measures to protect the right to life.); UN Human Rights Committee, Views adopted by the Committee under article 5(4) of the Optional Protocol, concerning communication No. 2751/2016, UN Doc. CCPR/C/126/D/2751/2016 (2019), para. 7.3-7.4).

- The 1.5 degree C target set forth in the Paris Agreement is legally binding and States must align all conduct, including emissions reductions, fossil fuel licensing, economic policy, and adaptation measures with the 1.5°C limit;
- States have an obligation to regulate non-state actors within their jurisdiction, especially fossil fuel companies whose activities drive climate breakdown. Failure to do so may constitute a wrongful act under international law.
- States have an obligation to mitigate their own greenhouse gas (GHG) emissions by adopting policies and regulations that set clear mitigation targets and monitor their implementation;
- States should adopt legislative and administrative frameworks that require business enterprises to identify, prevent, mitigate and account for climate-related human rights risks; and
- Under the Paris Agreement, parties incur binding obligations to provide financial assistance, technology transfer and capacity-building to vulnerable states.

Right to Participation and Access to Information

The right to participate in public affairs is protected by the International Covenant on Civil and Political Rights (ICCPR), article 25, which states:

> Every citizen shall have the right and the opportunity, … (a) To take part in the conduct of public affairs, directly or through freely chosen representatives.[271]

Guidelines issued by the Office of the High Commissioner for Human Rights stress that stakeholders should be able to participate before, during and after any decision-making process that may affect their rights.[272]

UN treaty bodies have repeatedly stressed that, in order to protect human rights from infringement through environmental harm, states should provide access to environmental information and ensure public participation. As the UN special rapporteur on toxic waste has noted, the right of information and the right of participation in decision-making are "both rights in themselves and essential tools

[271] ICCPR, art. 25.
[272] Office of the High Commissioner for Human Rights, "Guidelines for States on the effective implementation of the right to participate in public affairs," A/HRC/39/28, https://www.ohchr.org/sites/default/files/Documents/Issues/PublicAffairs/GuidelinesRightParticipatePublicAffairs_web.pdf.

for the exercise of other rights, such as the right to life, the right to the highest attainable standard of health, the right to adequate housing and others."[273]

The Committee on Economic, Social and Cultural Rights, in General Comment No. 15 on the right to water, stated:

> The right of individuals and groups to participate in decision-making processes that may affect their exercise of the right to water must be an integral part of any policy, programme or strategy concerning water. Individuals and groups should be given full and equal access to information concerning water, water services and the environment, held by public authorities or third parties.[274]

The 1992 Rio Declaration on the Environment and Development, signed by more than 175 countries, including Indonesia, states:

> Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities, including information on hazardous materials and activities in their communities, and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information widely available. Effective access to judicial and administrative proceedings, including redress and remedy, shall be provided.[275]

Protection of Environmental Defenders

Protecting environmental human rights defenders is crucial to the protection of the environment and the human rights that depend on it. The Declaration on Human

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[273] Human Rights Council, "Report of the Special Rapporteur on the adverse effects of the illicit movement and dumping of toxic and dangerous products and wastes on the enjoyment of human rights, Okechukwu Ibeanu," A/HRC/7/21, Feb. 18, 2008, https://documents-dds-ny.un.org/doc/UNDOC/GEN/G08/107/15/PDF/G0810715.pdf?OpenElement, para. 32.

[274] UN Committee on Economic, Social and Cultural Rights, "General Comment No. 15: The Right to Water (Arts. 11 and 12 of the Covenant)," January 20, 2003, contained in E/C.12/2002/11, https://www.refworld.org/pdfid/4538838d11.pdf, para. 48.

[275] Rio Declaration on Environment and Development," agreed at the United Nations Conference on Environment and Development, A/CONF.151/26 (Vol. 1), June 14, 1992, https://www.un.org/en/development/desa/population/migration/generalassembly/docs/globalcompact/A_CONF.151_26_Vol.I_Declaration.pdf, principle 10.

Rights Defenders, adopted by the UN General Assembly in 1999, makes clear that, "everyone is entitled, individually and in association with others, to be protected effectively under national law in reacting against or opposing, through peaceful means, activities and acts, including those by omission, attributable to States that result in violations of human rights and fundamental freedoms, as well as acts of violence perpetrated by groups or individuals that affect the enjoyment of human rights and fundamental freedoms."[276]

The UN defines environmental human rights defenders as "individuals and groups who, in their personal or professional capacity and in a peaceful manner, strive to protect and promote human rights relating to the environment, including water, air, land, flora and fauna."[277]

Rights of Indigenous Peoples

Indonesia is obligated under international human rights law to protect the rights of Indigenous people through its regulatory frameworks and ensure that victims of abuses have access to redress. This includes the rights of Indigenous people to maintain their cultural institutions and traditional livelihoods.

Rooted in fundamental rights enshrined by international human rights conventions, including the rights to self-determination and to be free from racial discrimination, the UN Declaration on the Rights of Indigenous Peoples (UNDRIP) has the support of all but nine countries, including Indonesia, and is increasingly treated as a mandatory minimum standard.[278]

While Indonesia voted in favor of the Declaration in 2007, the government has yet to pass the Indigenous Community bill, first submitted to the Indonesian parliament in 2012, to further embed the Declaration into domestic law.[279] The Indonesian

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[276] UN General Assembly, "Declaration on the Right and Responsibility of Individuals, Groups and Organs of Society to Promote and Protect Universally Recognized Human Rights and Fundamental Freedoms," resolution, A/RES/53/144, March 8, 1999, art. 12(3), https://www.ohchr.org/sites/default/files/Documents/Issues/Defenders/Declaration/declaration.pdf.

[277] Report of the special rapporteur on the situation of human rights defenders, "Situation of Human Rights Defenders," A/71/281, Aug. 3, 2016, para. 7, https://docs.un.org/A/71/281.

[278] UN Declaration on the Rights of Indigenous Peoples, https://social.desa.un.org/issues/indigenous-peoples/united-nations-declaration-on-the-rights-of-indigenous-peoples (accessed September 13, 2023).

[279] HN Jong, Mongabay, "For Indonesia MPs, Indigenous rights may be bad for business, report says," September 17, 2021, https://news.mongabay.com/2021/09/for-indonesian-member-parliament-indigenous-rights-may-be-bad-for-business-report-says/ (accessed October 23, 2023).

government has rejected claims for special rights from groups who self-identify as indigenous because it argues that almost all Indonesian people are indigenous.[280]

The UN Declaration recognizes Indigenous peoples' claims to land and resources that they possess based on "traditional ownership, traditional occupation or use, or which they have otherwise acquired."[281] States "shall provide effective mechanisms for prevention of, and redress for, any action which has the aim or effect of dispossessing [Indigenous peoples and individuals] of their land, territories or resources."[282]

Similarly, the UN Committee on Economic, Social and Cultural Rights, which provides authoritative interpretation of the ICESCR, has stated that governments should "take measures to recognize and protect the rights of indigenous people to own, develop, control and use their communal land, territories and resources."[283]

Free, Prior and Informed Consent

Indigenous Peoples have the right to participate in decision-making in matters which would affect their rights, and states should consult and cooperate in good faith in order to obtain their FPIC prior to the approval of any project affecting their land or territories and other resources, particularly in connection with the development, utilization or exploitation of mineral, water or other resources.[284]

Consent can only be "freely" given if the climate of the process is free from intimidation, coercion, manipulation, and harassment.[285] Indigenous peoples should have the freedom to be represented as traditionally required under their own laws, customs, and protocols, with attention to gender and representation of other sectors within indigenous communities. Indigenous peoples should determine how and which of their own institutions and leaders represent them.[286] Any free, prior, and

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[280] https://www.iwgia.org/en/indonesia/5120-iw-2023-indonesia.html (accessed October 3, 2023).
[281] UNDRIP, art. 26.
[282] UNDRIP, art. 8(2)(a).
[283] UN Committee on Economic, Social and Cultural Rights (CESCR), General Comment 21, Right of everyone to take part in cultural life, U.N. Doc, E/C.12/GC/21, Dec. 21, 2009, https://digitallibrary.un.org/record/679354.
[284] United Nations, "United Nations Declaration on the Rights of Indigenous Peoples," 2007, https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf (accessed September 13, 2023)
[285] Report of the UN Expert Mechanism on the Rights of Indigenous Peoples, "Free, prior and informed consent: a human-rights based approach," A/HRC/39/62, Aug. 10, 2018, https://www.ohchr.org/en/calls-for-input/free-prior-and-informed-consent-report, para. 20(a).
[286] Ibid, para. 20(c).

informed consent process must also be prior to any other decisions allowing a proposal to proceed and should begin as early as possible in the formulation of the proposal.[287]

The information should be presented in a manner and form understandable to the community, including translation into a language that they understand, and using culturally appropriate procedures. The substantive content of the information should include the nature, size, pace, reversibility and scope of any proposed project or activity; the reasons for the project; the areas to be affected; social, environmental, and cultural impact assessments; the kind of compensation or benefit-sharing schemes involved; and all the potential harm and impacts that could result from the proposed activity.[288]

Access to Redress and Justice

Where the land of Indigenous people has been "confiscated, taken [or] occupied," without their free, prior and informed consent, they have the right to redress.[289] Redress can take the form of restitution, or "when that is not possible, just, fair, and equitable compensation."[290] Compensation can take the form of "lands, territories and resources equal in quality, size and legal status or of monetary compensation or other appropriate redress."[291]

Cultural Rights

The International Covenant on Civil and Political Rights (ICCPR) recognizes the right to self-determination and rights of minorities to their own culture.[292] The right to culture has been interpreted to require legal protection for particular ways of life negatively impacted by changes to the natural environment, including such traditional activities as fishing or hunting.[293]

Under the UN Declaration on the Rights of Indigenous Peoples,

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[287] Ibid, para. 21.
[288] Ibid, para. 22(b).
[289] UNDRIP, art. 28(1).
[290] UNDRIP, art. 28(1).
[291] Ibid., art. 28(2).
[292] ICCPR, art. 1 and 27.
[293] Human Rights Committee, General Comment No. 23, Rights of Minorities, U.N. Doc. CCPR/C/21/Rev.1/Add.5 (1994), para. 7, https://www.refworld.org/docid/453883fc0.html.

> Indigenous peoples have the right to maintain and develop their political, economic social systems or institutions, to be secure in the enjoyment of their own means of subsistence and development, and to engage freely in all their traditional and other economic activities.[294]

States have the duty to provide effective mechanisms to prevent and provide redress for any actions that deprive Indigenous peoples of "their integrity as distinct peoples, or of their cultural values" or dispossess them of their "lands, territories or resources."[295]

Human Rights Responsibilities of Companies

The UN Guiding Principles on Business and Human Rights, unanimously endorsed by the UN Human Rights Council in 2011,[296] are the internationally-accepted framework for addressing the risk of human rights impacts by businesses. The Guiding Principles make clear that businesses have the responsibility to "[a]void causing or contributing to adverse human rights impacts through their own activities and address such impacts when they occur."[297] The obligation to avoid causing or contributing to human rights harms applies to acts such as deforestation, which adversely affects human life and health, ecosystems and biodiversity.[298]

Businesses must also "seek to prevent or mitigate" impacts that are "directly linked to their operations, products or services by their business relationships," including entities in their value chain, even if they have not contributed to those impacts.[299]

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[294] UNDRIP, art. 20(1).
[295] UNDRIP, art. 8.2.
[296] UN Human Rights Council, Resolution 17/4: Human Rights and transnational corporation and other business enterprises, A/HRC/RES/17/4, July 6, 2011, https://documents-dds-ny.un.org/doc/RESOLUTION/GEN/G11/144/71/PDF/G1114471.pdf?OpenElement.
[297] Special Representative of the Secretary-General on the issue of human rights and transnational corporations and other business enterprises, "Guiding Principles on Business and Human Rights: Implementing the United Nations 'Protect, Respect and Remedy' Framework," UN document A/HRC/17/31, March 21, 2011, https://www.ohchr.org/Documents/Issues/Business/A-HRC-17-31_AEV.pdf, principle 13(a) (accessed July 14, 2023).
[298] OHCHR, "Frequently Asked Questions on Human Rights and Climate Change, Fact Sheet, No. 38," 2021, https://www.ohchr.org/sites/default/files/2021-09/FSheet38_FAQ_HR_CC_EN_0.pdf. See also UN Human Rights Special Procedures, Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information Note on Climate Change and the Guiding Principles on Business and Human Rights," June, 2023, https://www.ohchr.org/sites/default/files/documents/issues/business/workinggroupbusiness/Information-Note-Climate-Change-and-UNGPs.pdf, para. 16 (The responsibilities of business enterprises under the Guiding Principles…include the responsibility to act in regard to actual and potential impacts related to climate change.")
[299] UN Guiding Principles on Business and Human Rights, principle 13(b).

To fulfill these responsibilities, companies should have in place due diligence processes that assess actual and potential impacts, act upon the findings, track responses and communicate how the impacts are addressed.[300] The human rights due diligence should cover environmental and climate-related harms that impact human rights, including the right to water and the right to a healthy environment.

When a business determines that it has caused or contributed to adverse impacts, it should provide for remediation.[301] When it identifies adverse impacts in its value chain, it should use whatever leverage it has to change the harmful practice. If it lacks sufficient leverage to prevent or mitigate the adverse impacts, it should consider ending the relationship.[302]

The OECD's Guidelines for Multinational Enterprises similarly provide that businesses should carry out risk-based due diligence to identify, prevent and mitigate actual and potential adverse impacts on human rights[303] and the environment, including deforestation.[304] While Indonesia is not a member of the OECD, it is considered a key partner.[305] An enterprise "causes" an adverse impact if its activities on their own are sufficient to result in the adverse impact; it "contributes" if "its activities, in combination with the activities of other entities cause the impact, or if the activities of the enterprise cause, facilitate or incentivize another entity to cause an adverse impact."[306] Just like in the UN Guiding Principles, even if the enterprise does not cause or contribute to the impact, it still has a responsibility to prevent and mitigate impacts directly linked to a "business relationship," including

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[300] Ibid, principle 17.
[301] Ibid, principle 22.
[302] Ibid, principle 19(b) commentary. See also UN Human Rights Special Procedures, Working Group on the issue of human rights and transnational corporations and other business enterprises, "Information Note on Climate Change and the Guiding Principles on Business and Human Rights," June, 2023, https://www.ohchr.org/sites/default/files/documents/issues/business/workinggroupbusiness/Information-Note-Climate-Change-and-UNGPs.pdf, ("The responsibilities of business enterprises under the Guiding Principles…include the responsibility to act in regard to actual and potential impacts related to climate change."), para. 17(g).
[303] OECD, "OECD Guidelines for Multinational Enterprises on Responsible Business Conduct," 2023, https://www.oecd-ilibrary.org/docserver/81f92357-en.pdf?expires=1692737412&id=id&accname=guest&checksum=A346CD0BBAF7F84311A1A0B63F62F09A, principle IV (accessed July 14, 2023).
[304] OECD Guidelines, principle VI.
[305] Indonesia has reportedly expressed interest in becoming a member of the OECD. John West, "Indonesia's quest to join the OECD and become a high-income country," East Asia Forum, Sept. 10, 2023, https://www.eastasiaforum.org/2023/09/10/indonesias-quest-to-join-the-oecd-and-become-a-high-income-country/.
[306] OECD Guidelines, para. 68, p. 36.

“entities in the supply chain which supply products or services that contribute to the enterprise’s own operations, products or services.”[307]

[307] Ibid, para. 17, p. 18.

VI. Recommendations

To the Government of Indonesia:

- Phase out all coal-fired and other fossil-fuel power plants by 2040, consistent with President Prabowo's statement to the G20, and stop permitting and construction of all new coal plants, including captive coal plants.
- Adopt and implement a national strategy to rapidly scale up renewable energy generation and infrastructure, aligned with Indonesia's climate obligations under the Paris Agreement and its just energy transition goals.
- Adopt, strengthen, and enforce national laws and regulations to prevent, minimize, and mitigate the environmental, climate and human rights harms of present and future generations caused by nickel mining, refining, and extractive waste on Indigenous Peoples and other affected communities, including:
    - Amend the environmental impact assessment process instituted by the Omnibus Law to allow the public, including civil society organizations and community members, the opportunity to participate in decision-making regarding proposed projects.
    - Amend the 2020 Mineral and Coal Mining Law article 162 to end the criminalization of peaceful expression, including protests, by activists and organizations.
    - Uphold and implement Law No. 32 of 2009 on the Protection and Management of Environment and impose penalties on companies in violation of that law.
    - Codify and protect the human right to a clean, healthy and sustainable environment, as recognized by the International Court of Justice in its Advisory Opinion of 23 July 2025 and in UN General Assembly resolution A/Res/76/30, which Indonesia supported.
    - Ensure legal reforms safeguard public participation, transparency, and accountability, and guarantee full respect for Indigenous Peoples' rights in line with international law and standards.
- Ratify ILO Convention 169, the Indigenous and Tribal Peoples Convention, fully implement the UN Declaration on the Rights of Indigenous Peoples and recognize Indigenous Peoples within Indonesia including by passing the Indigenous Peoples Rights Bill.

- Ensure that domestic and foreign companies are fully compliant with Indonesian laws and regulations and hold companies and company executives responsible for violations of environmental, climate, human rights, and other laws accountable, including through fines and cancellation of permits and licenses and criminal prosecutions.
- Fully implement the Guiding Principles on Critical Energy Transition Minerals established in the 2024 report by the UN Secretary-General's Panel on Critical Energy Transition Minerals, the development of which the Indonesian government participated in.
- Immediately stop the permitting of new nickel mining concessions and smelters until the sector has taken genuine steps in line with the best available science and technologies to minimize emissions, pollution, and other harms on nearby communities, the environment, and the climate system.
- Make data collected by the SIMBARA nickel tracking system publicly available, including by regularly posting data to a public website in Indonesian and relevant local languages.
- Ensure that mining and all related activities are consistent with Indonesia's NDC and the Paris Agreement goal to limit warming to 1.5°C warming.
- Positively engage in the open-ended intergovernmental working group (OEIGWG) process to negotiate an international legally binding instrument (LBI) on business and human rights that would include specific human rights, labor, environment and climate change provisions and instruments and complement and strengthen the current U.N. and Organization for Economic Co-operation and Development (OECD) frameworks.
- Sign and ratify the Aarhus Convention, formally known as the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, which grants the public rights regarding access to environmental and climate information, public participation, and justice in environmental and climate matters, and requires states to greater transparency and accountability in environmental and climate governance.
- Increase access to public transit and alternative methods of transport to decrease emissions from private vehicles.
- Mandate minimum levels of recycled content in EV batteries to decrease the demand for virgin raw minerals.

To the Indonesia Ministry of Energy and Mineral Resources:

- Assess, monitor, and conduct investigations into water, air, and soil pollution in and around nickel mining and smelting operations, and make the findings of such investigations publicly available and accessible, Including in local languages.
- Suspend, and in serious cases revoke, the permits of mining companies that violate environmental regulations.
    - In cases of suspension, do not allow resumption of activities until violations have stopped, plans are in place to avoid repetition of violations, environmental remediation has been carried out, and the company has fully compensated individuals and the community for any harms.
- Carry out public hearings as part of licensing procedures for mines of all sizes, including expansion projects, and:
    - Ensure those meetings are publicized in advance and accessible to all members of the public, particularly those in mining-impacted communities.
    - Fully implement FPIC in all mining projects that may impact Indigenous Peoples.

To the Indonesia Ministry of Environment:

- Conduct an in-depth, transparent investigation into environmental degradation at and around nickel mining and processing sites in Southeast Sulawesi, Central Sulawesi, and North Maluku, and make the results of such an investigation publicly available and accessible to local communities.
- Conduct an in-depth, transparent investigation into the human rights violations at and around nickel mining and processing sites and make the results of such an investigation publicly available and accessible to local communities.
- Conduct an independent assessment, based on the best available science, of the climate impact of greenhouse gas emissions resulting from the use of captive coal and other fossil fuels to power nickel processing operations, including their transboundary effects on the climate system and the resulting harm to the rights, lives, and livelihoods of present and future generations.
- Strengthen the review process for environmental impact assessments when granting mining licenses to require that mining companies meet global

environmental, social, and governance best practices in their mining operations.
    - Ensure that all environmental impact assessments are publicly available by promptly posting them after submission on a public website and sharing the documents with potentially impacted communities, in Indonesian and relevant local languages, in a culturally appropriate manner.
- Ensure that mining companies have environmentally and socially responsible operations that respect the environment and human rights, such as the practices detailed in the IRMA Standard for Responsible Mining.
- Uphold and implement Law No. 32 of 2009 on the Protection and Management of Environment and impose penalties on companies in violation of that law.
- Work with regional governments and all related agencies to ensure that mining companies are fully compliant with environmental laws and regulations.
- Make air and water quality information, including information provided to the Ministry by mining and smelting companies, publicly available and accessible in Indonesian and relevant local languages.

To the Indonesia Ministry of Forestry:

- Establish a moratorium on mining in protected forest areas, primary forests, high carbon stock forests, and high conservation value forests.
- Monitor the impacts of mining-related deforestation, including impacts on fresh and saltwater resources and, when necessary, fine or revoke the licenses of mining companies that fail to properly prevent serious impacts of mining-related deforestation on the environment, including fresh and groundwater pollution and erosion.

To the Ministry of Agrarian Affairs and Spatial Planning:

- Accelerate and simplify the process of granting legal recognition of customary land to protect Indigenous communities' land rights.
- Work with other government agencies, including the Ministry of Environment, the Ministry of Forestry, the Ministry of Energy and Mineral Resources, and

provincial governments, to minimize land conflicts between business actors and local communities.
- Enact a ministerial regulation to prevent the granting of mining concessions on customary lands, including customary lands that have not yet been legally recognized.
- Work with related ministries, including the Ministry of Energy and Mineral Resources, to ensure that mining permits do not violate land rights of local communities.
- Collect data regarding land conflicts between nickel mining and smelting companies and local communities and make that data publicly available and accessible.

To all nickel processing companies named in this report, and to all nickel companies with nickel processing operations in Indonesia:

- Ensure that all mining and industrial operations are carried out in accordance with Indonesian laws and regulations, as well as international environmental, climate and human rights standards.
- Fully and fairly compensate all community members with land conflicts with nickel processing companies, including Indigenous communities, including where insufficient compensation was previously provided.
- Take immediate steps to prevent, minimize and mitigate air, water, and soil pollution from industrial activities including by installing air pollution control mechanisms, properly disposing of industrial waste, tailings, and coal ash, and treating wastewater from industrial facilities and coal plants, based on the best available science and technologies.
    - Ensure that tailings ponds, check-dams, and other infrastructure for managing waste is adequately and frequently maintained and inspected for safety.
- Take immediate steps to remediate air, water, and soil pollution that has already occurred.
- Immediately stop the construction of all new coal plants at nickel industrial parks and announce a time-bound plan to urgently replace existing coal plants with renewable energy sources.
- Fully respect the rights of Indigenous Peoples living near nickel sites, including by ensuring all Indigenous Peoples are able to exercise their right to give Free,

Prior, and Informed Consent, their right to self-determination, and their right to a clean, healthy and sustainable environment.
- Share all information related to future expansion, deforestation, land acquisition, and industrial activities with the public, and make that information accessible to local communities, including by holding well-publicized public meetings and providing information in local languages.

To all nickel mining companies operating in Indonesia:

- Fully and fairly compensate all community members with land conflicts with nickel mining companies, including Indigenous communities, including where insufficient compensation was previously provided.
- Take steps to minimize deforestation in mining areas, including by avoiding mining in areas with young regenerating forests.
- Take immediate steps to prevent, minimize and mitigate air, water, and soil pollution from mining activities.
- Immediately stop all mining and other related activities in forests that have been historically designated as protected forests by the Indonesian government, primary forests, high carbon stock forests, and high conservation value forests.
- Fully respect the rights of Indigenous Peoples, including the right to exercise Free, Prior, and Informed Consent, their right to self-determination, and their right to a clean, healthy and sustainable environment.
- Immediately suspend all activities on the lands of Indigenous groups, including the O'Hongana Manyawa, that could threaten their physical and cultural survival or that impedes their enjoyment of their economic, social, and cultural rights.
- Refrain from mining near environmentally sensitive and/or biodiverse areas to protect the environment and key freshwater and groundwater resources.

To electric vehicle and battery manufacturing companies that source nickel from Indonesia:

- Leverage buying power to pressure mines and/or suppliers to change practices that cause severe damage to the climate system and environmental

or human rights harm, and if necessary, stop sourcing nickel from producers engaged in human rights and environmental violations.

- Leverage buying power to pressure mines and/or suppliers to provide publicly available information on water and air quality in the areas surrounding their operations, as well as an accurate account of greenhouse gas emissions resulting from the use of coal to power nickel processing operations.
- Require direct suppliers to disclose their full list of suppliers, as well as documentation that direct suppliers are implementing EV company policies on human rights, environmental and climate due diligence with their suppliers, and make that information about EV supply chains publicly available and accessible.
- Conduct regular, transparent, and genuinely independent audits of mines and facilities where nickel and other critical minerals are mined and refined to ensure that suppliers are following procedures that protect and respect human rights of present and future generations and Indigenous Peoples' rights, meet environmental standards, and don't contribute to climate change.
- Set explicit, time-bound targets to decarbonize transition mineral supply chains and ensure that suppliers are taking concrete steps to reach those targets.

To banks, insurers, and other financial institutions backing nickel mining and processing operations:

- Conduct enhanced human rights and environmental due diligence in line with the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises, and conduct full assessments of actual and potential climate, environmental, and human rights harms to present and future generations caused by investments in companies with nickel mining and/or processing operations in Indonesia.
- Suspend financing, underwriting, or insurance for companies or projects that are involved in land dispossession, pollution, deforestation, or violations of human rights, including Indigenous Peoples' rights, until meaningful mitigation measures and remedies are in place.
- Require full transparency from nickel companies about their human rights, environmental and climate impacts, supply chain practices, greenhouse gas emissions, and plans for remediation and climate mitigation.

- Publicly disclose the full list of projects, companies, and mining and processing facilities in Indonesia they finance, insure, or underwrite, particularly those related to nickel mining and coal-based power generation.
- Adopt and implement strict exclusion policies for investments in projects that rely on captive coal plants, contribute to deforestation, or fail to obtain Free, Prior, and Informed Consent from affected Indigenous Peoples and local communities.
- Align financing decisions with the Paris Agreement and international legal obligations, including the advisory opinions on states' obligations in relation to the climate crisis of the International Court of Justice (ICJ), the International Tribunal on the Law of the Sea, and the Inter-American Court of Human Rights, and the upcoming advisory opinion of the African Court on Human and Peoples' Rights, on states' obligations related to climate change and the rights of present and future generations.
- Support reparations and redress mechanisms for communities harmed by projects they have financed or insured, including by insisting on the establishment of dedicated community grievance mechanisms and engagement with independent civil society monitors.
- Collaborate with other responsible financial institutions to strengthen global standards for financing in high-risk sectors such as transition minerals and industrial energy projects, and actively participate in efforts to develop binding standards for responsible finance in alignment with climate, biodiversity, and human rights imperatives and law.

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Appendix: Correspondence with companies and ministries

Letters sent by CRI to ministries:

- Coordinating Ministry for Economic Affairs
- Ministry of Agrarian Affairs and Spatial Planning
- Ministry of Energy and Mineral Resources
- Ministry of Environment
- Ministry of Finance
- Ministry of Forestry
- Ministry of Health
- Ministry of Industry
- Ministry of Investment and Downstream Industry
- Ministry of Law and Human Rights
- Ministry of Marine Affairs and Fisheries
- Ministry of Primary and Secondary Education

Letters sent by CRI to companies:

- Bumanik
- Harita Nickel
- PT Antam Tbk
- PT Enersteel
- PT Gunbuster Nickel Industry
- PT Indonesia Morowali Industrial Park
- PT Obsidian Stainless Steel
- PT Virtue Dragon Nickel
- Sumber Permata Mineral

Responses:

- Ministry of Health
    - Bahasa Indonesia
    - English (unofficial translation)

Cover photo: A Bajau mother and her two children walking around the village, with a deforested mountain seen at a distance. Credit: Riza Salman for CRI.