

Workers Are Dying in the EV Industry's 'Tainted' City

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After daybreak, the village of Labota begins to shudder with the roar of motorbikes. Thousands of riders in canary yellow helmets and dust-stained workwear pack its ramshackle, pothole-ridden main road, in places six or seven lanes wide, as it runs along the coast of Indonesia's Banda Sea. The mass of traffic crawls toward the Indonesia Morowali Industrial Park, better known as IMIP, the world's epicenter for nickel production.

"This is a tainted city," says Sarida, a woman in her forties buying cough medicine at a roadside pharmacy. Only her eyes are visible; the rest wrapped in a face mask, hijab, and burqa. Behind her, a factory belches out brown plumes as thick as a skyscraper.

Sarida, who asked to not share her surname for privacy reasons, arrived in 2019 from Kalimantan, a region on the island of Borneo 800 kilometers to the west, after her husband got a job processing wastewater at a nickel company. "We will leave as soon as we can," she adds, mounting her red Honda moped. "Before we have to be carried out."

A decade ago, Labota was a fishing village; today it's been subsumed into a sprawling city centered around IMIP, a \$15 billion, 3,000-hectare industrial complex containing steelworks, coal power plants, and manganese processors, with its own airport and

seaport. Built as a joint venture between Chinese and Indonesian industrial companies, it is at the heart of Indonesia's push to supply the electric vehicle market with nickel, a core component of batteries.

Rocketing demand for electric vehicles, combined with supply disruptions caused by Russia's invasion of Ukraine, have made Indonesia—and IMIP—a critical link in the supply chains of EV manufacturers. That's especially true for Tesla, which has signed multibillion-dollar deals with companies at the site and is reportedly in talks to set up its own manufacturing facility in the Southeast Asian country.

Meeting this demand has come at a huge social and environmental cost. Workers claim that deaths and injuries are common at IMIP. Medical professionals and environmentalists say the polluted air and water are causing respiratory problems, sickness, and eye injuries and destroying forests and fisheries. The rush to expand production has pushed local communities and infrastructure to the brink of collapse.

“Labor exploitation, economic injustices, and environmental degradation are undermining the socio-ecological transformation promised by electric vehicles,” says Pius Ginting, coauthor of a report by the Rosa Luxemburg Foundation think tank on the industry. “The public needs to know the reality of what's happening.”

Indonesia is home to the largest nickel deposits in the world, much of it found on Sulawesi, an equatorial island east of Borneo. Historically, nickel ore was shipped unprocessed, but around a decade ago, in an attempt to attract investment in heavy industries, the Indonesian government banned its export. Shortly before the ban took effect, in a ceremony attended by Chinese president Xi Jinping and Indonesia's then president Susilo Bambang Yudhoyono, Chinese steel giant Tsingshan Holding Group, one of the world's largest producers of nickel, signed a deal with Indonesian miner Bintang Delapan Group to build IMIP. Yudhoyono's successor, Joko Widodo, has continued the industrialization drive, courting the EV industry in particular.

Nickel production in Indonesia more than doubled between 2020 and 2022, to 1.6 million tonnes, more than 48 percent of the world's entire output. In April 2022, a consortium led by LG Energy Solution, the world's second-largest EV battery manufacturer, signed a \$9 billion contract with mining company PT Aneka Tamban and the Indonesia Battery Corporation. In August of the same year, Tesla agreed to a \$5 billion deal with two Chinese companies working at IMIP, Zhejiang Huayou Cobalt and CNGR Advanced Material. Chinese companies have come to dominate the EV supply chain, buying up mines and processing facilities around the world.

As money poured in, IMIP grew. Today, the smog-shrouded coastline is a chaotic jumble of hulking loading cranes, giant industrial warehouses, rows of electricity pylons, clusters of tin huts, streams of traffic, and the odd patch of remaining forest.

“The face of this place has been utterly transformed,” says Imam Shofwan, head of research at the Indonesian nonprofit JATAM, who visited the region in September. “It's become unrecognizable. It's like a city was dropped in the middle of paradise.”

The local infrastructure was never intended to cope with such explosive growth. In Labota, shops, restaurants and homes are plagued by days-long electricity blackouts; phone networks and the internet often fail due to oversaturation. Workers live in grim, hastily-built boarding houses, several crammed into each room, with toilets that flow directly into open sewers.

“Everything goes to IMIP, and we have to live like dogs on scraps,” says the owner of one noodle restaurant that had been without electricity for two days, speaking on condition of anonymity. Back in 2015, she says, IMIP provided the local community with a share of its electricity. “Not anymore.”

Tens of thousands of people have migrated from other parts of the archipelago nation in search of a living. According to Indonesia’s Manpower Ministry, IMIP had 28,000 employees in 2019 and 43,000 in 2020. That number has now grown to around 66,000. There is no reliable data on the wider population, but locals estimate the number of internal migrants who have come to work in the service industry—from restaurants to phone shops and prostitution—is triple that number.

Yet, many who migrated here seeking a better life have instead found mediocre wages and sometimes deadly working conditions.

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WIRED spoke to dozens of workers at IMIP, including five employed by Tesla’s supplier, PT Huayue Nickel Cobalt (HNC). Many of the workers arrived less than six months ago, and they describe working for up to 15 hours a day, earning less than \$25—less than Indonesia’s median salary of around \$30 a month. Some have not had a day off in three months.

Several say they suffer from breathing difficulties. One 18-year-old employee of HNC, who arrived three months ago from the Toraja region of Sulawesi, says that he receives around \$15.75 a day. “Sometimes it’s hard to breathe,” he says. “I’m concerned, but I can’t do anything.”

These are not isolated cases. According to the Bahodopi Community Health Center, a regional clinic covering IMIP, 52 percent of patients last year came in suffering from acute respiratory infections. A number of nickel welders who spoke to WIRED reported eye pain, likely caused by particulates in the air, suggesting their safety gear was inadequate.

Vehicle crashes are common inside the complex, according to one employee of HNC who works in safety administration. An employee of Cahaya Smelter Indonesia (CSI), which refines nickel at the complex, says they witnessed a number of workers fall off buildings because their harnesses weren’t properly secured. While this story was being reported, one man working for the company PT Dexin Steel died after being electrocuted, according to a nurse at the IMIP health clinic. PT Dexin Steel didn’t respond to a request for comment.

Working conditions at IMIP are “dangerous and deadly,” according to Katsaing, regional head of the National Workers’ Union (SPN), which has 300 members across 11 companies at IMIP. “The health and safety regulations now are toothless,” says Katsaing, who like many Indonesians has only one name. “They are putting profits over people’s lives.”

In January 2022, a worker was killed after being struck on the head by an excavator while not wearing a helmet. In June, the operator of a bulldozer was swept into the sea by an avalanche while working a night shift without lighting.

Labor rights activists say that in its desire to bring investment into its nickel sector, the Indonesian government has weakened protections for workers. Last year, President Joko Widodo’s government pushed through a controversial “Omnibus Law on Job Creation,” after more than two years of constitutional and legal challenges, which relaxed environmental protections and workers’ rights. The government billed it as a way to attract foreign investment. Activists say that’s why the authorities are particularly keen to avoid a confrontation with Chinese companies, because of the billions of dollars they are pouring into Indonesia.

“The massive exploitation of workers, the environment, and residents is a grave crime against human rights,” says Aulia Hakim, head of advocacy and campaigns at WALHI Central Sulawesi, the regional branch of Indonesia’s largest green group. The government needs to look beyond the amount of money that IMIP is bringing in, and start to account for the social and environmental problems that it has caused, Hakim says.

The conditions at IMIP have led to protests by workers, but little has changed. On December 22, 2022, an explosion at a nickel smelter run by PT Gunbuster Nickel Industry (GNI) killed two workers—a 20-year-old crane operator named Nirwana Selle and her 20-year-old assistant, Made Defri Hari Jonathan—who burned alive. Video footage and photos obtained by WIRED show the flames from a distance as screams can be heard. Only bones remained of the corpses.

In the aftermath of the tragedy, the local branch of the SPN union set out eight demands, including that GNI provide protective equipment to all workers, rehire workers who were previously fired for striking, install air circulation in every warehouse, and give legally required compensation to Selle’s and Jonathan’s families, according to a list of demands seen by WIRED.

Hakim points out that the workers’ demands would have brought the company in line with previous government regulations, but the protections they were asking for were erased by the Omnibus Law.

After GNI rejected their demands, workers called a strike from January 11 to 14. On the last day, more than 500 security personnel were dispatched to the industrial park. Workers who were present during the strike say that security forces fired pellet guns at the crowd. “They fired pellets everywhere. It was chaos,” says one GNI worker.

According to official reports, two workers, one Chinese and one Indonesian, died, and 71 were arrested. A 100-room dormitory was burned down, and vehicles and machinery were destroyed.

Huayue Nickel-Cobalt, Gunbuster Nickel Industry, Indonesia Morowali Industrial Park, Tesla, and the Ministry of Energy and Mineral Resources did not respond to multiple requests for comment.

But a statement from GNI's general manager, Teh Cha Les, published on the company website on February 15, said there "are still things that are not optimal" regarding work safety. "We strongly request instructions and guidance in order to improve a better, healthier, safer and more comfortable work environment for the entire workforce," he added.

The labor issues at IMIP sit alongside severe concerns in Indonesia about the environmental impact of the nickel industry. According to a Brookings Institute report in September, Indonesia's nickel sector is "particularly carbon-intensive and environmentally damaging," due to its reliance on coal.

More than 8,700 hectares of rain forest have been destroyed in the North Morowali Regency, where IMIP is based, since 2000, according to an analysis by Greenpeace Indonesia carried out on behalf of WIRED, as trees have been cleared to make way for mines, smelters, and the infrastructure needed to support them.

The erosion of the landscape has made it prone to natural disasters. In June more than 500 houses in the area were hit by flash floods. Land clearance has made those an annual occurrence, leading to drownings and the destruction of homes, bridges, and government buildings. "The floods are now unavoidable due to massive land clearing that has occurred," says Kasmudin, an environmental activist.

At Kurisa, a village on the southeast edge of IMIP, indigenous Bugis Wajo people told WIRED that the pollution has destroyed their livelihoods. "There's no fish here anymore," says Jus Manondo, a 45-year-old fisherman sitting on the wooden decking of his stilted home. "The waste from IMIP has killed them."

In June 2021, a massive pile of coal fell into the hot water disposal of IMIP's steam power plant and flowed directly into the sea, turning the water black, according to Manondo. Dumping of waste is common too. WIRED observed polluted water flowing directly into the sea a few hundred meters from Manondo's home.

Manondo's hauls are now less than 20 percent of what they were a decade ago. The village's fishermen are now forced to travel farther offshore to find fish, but with the high cost of fuel, it is a case of diminishing returns. "Sometimes we catch only enough to feed ourselves," Manondo says. "Soon, we won't even have that."

However, despite the evidence that the rush for nickel, driven by the demand for EVs, has already pushed beyond the boundaries of social and environmental sustainability, the industry is still expanding in Indonesia.

Tesla chief executive Elon Musk set out the goal of selling 20 million EVs per year by 2030—an increase of more than 13 times its expected sales in 2022. The company’s competitors are also scaling up production of EVs. The automotive research consultancy Virta forecasts that there will be 140 million EVs on roads worldwide by 2030, up from 16 million in 2021.

According to analysis by research company Rystad Energy, demand for high-grade nickel will outstrip supply in 2024. The invasion of Ukraine by Russia, which makes 11 percent of the world’s nickel, has tightened the market further and sent prices on the London Metal Exchange to a 35-year high.

To take advantage of the coming squeeze, IMIP’s owners are doubling the size of the site and are in the middle of building a second park, Weda Bay Industrial Park (IWIP), on the neighboring Maluku Islands, which will eventually span 5,000 hectares.

“Whatever profits this brings in, it won’t be enough,” says WALHI’s Hakim. “We can’t save the planet by destroying it.”

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