

Factsheet 1: Indonesia

The human cost of clean transport: labour rights violations in the Indonesian nickel supply chain

About ElectroPower: The project *ElectroPower: Enhancing worker-driven approaches to prevent and remedy forced labour in electronics supply chains in Asia* is co-funded by the European Commission.¹ Its main objective is to strengthen the rights of workers in the electronics industry in Asia and combat forced labour through a human rights-based approach, with particular focus on women and migrant workers. Through trainings, monitoring tools, and grievance mechanisms we are enabling workers to identify abuses and collectively advocate for better working conditions. Through academic research and political advocacy, we are promoting multistakeholder dialogue, normative and regulatory development. Through financial support of trade unions and local organisations we are promoting rightsholders' empowerment and worker-driven processes to lead to structural change and remediation in electronics supply chains.

ElectroPower works in collaboration with trade unions, NGOs, public procurement bodies, and policymakers to strengthen workers in Indonesia, Malaysia, and Thailand.

About our work in Indonesia: Our work in Indonesia is developed by Inkrispena, IndustriAll Southeast Asia and Electronics Watch, with the support a local research team. We have conducted worker trainings, trade union and civil society engagement workshops, multistakeholder dialogues and field research on working conditions in the nickel supply chain, with special attention to the situation of women workers. Our field research, developed in July and November 2025, included interviews, focus groups discussions and direct observations of trainings, workshops and dialogues. It took place in Central Sulawesi and Jakarta, including around the IMIP industrial park in Morowali, and Bahodopi, where the significant number of Indonesian IMIP workers live. In total we interviewed 36 individuals from diverse backgrounds, capturing a broad range of labour experiences. Sixteen people were interviewed individually; 20 took part in four group interviews. Interviewees included local and migrant workers; men and women; permanent, short-term, and outsourced contract workers; labour union leaders; NGO activist, as well as local government officials and politicians. Access to Chinese workers was limited, despite their substantial presence, due to language barriers to restricted opportunities for engagement. Workers interviewed were employed at the three major relevant companies in IMIP, but further interviews were conducted with workers from other nickel processing companies producing different nickel products. This Factsheet presents the findings of our research. This Factsheet is authored by Wasi Gede Puraka, Hari Nugruho and Olga Martin-Ortega. The local research team also included Ruth Indiah Rahayu and Soraya Sultan. Further outputs of the ElectroPower project focus on assessing the violations documented as forced labour and presenting policy and regulatory recommendations for governments, industry and public buyers (see list of publications below).

Indonesia is the most relevant global player in the nickel market. It currently dominates both in mining and refinement of nickel, and will continue to do so, according to the predictions of the International Energy Agency.ⁱⁱ Indonesia is also the top producing country of the elements needed to process nickel sulphate, which is the form in which nickel can be used in EV batteries, and also poised to maintain its leading role in driving growth in this sector.ⁱⁱⁱ EV batteries are a key element of the European Union clean energy transition objectives. The European Union has established comprehensive goals under the Batteries Regulation (EU) 2023/1542 to ensure batteries are sustainable, circular, and safe throughout their entire lifecycle. Likewise, the current Comprehensive Economic Partnership Agreement (CEPA) between the EU and Indonesia establishes a social and environmental protection framework in the context of bilateral trade relations.

This Factsheet presents the labour conditions under which EV battery grade nickel is processed in Indonesia. Through desk research and on the ground fieldwork we have found multiple and consistent violations of labour rights in Indonesia Morowali Industrial Park (IMIP) smelters and nickel processing factories refining nickel for, among others, the production of EV batteries, which will end up in the European market. All the abuses documented constitute serious violations of international labour rights, and as such they demand pressing action from governments, both Indonesia and consumer countries, including the European Union, and companies in the whole supply chain. However, it is important to note that in some instances these violations could amount to forced labour, which requires a heightened response by all actors involved, triggering specific duties under current legislation and demanding urgent policy responses. The clean energy transition cannot be built on human rights violations, and the EU must lead in addressing such violations to ensure that a green future is also a just future for all.

Working hours, overtime and medical leave

Work in the IMIP industrial zone is divided into distinct work groups. Regular working hours consist of eight hours per day, organised into either two or three shifts, carried out by two to three teams. In practice, the eight-hour scheme is a combination of seven working hours plus one hour overtime. This arrangement effectively normalises overtime as part of the standard working day. What we found in our research is that:

- Management uses the one hour of **mandatory overtime as an instrument of labour discipline**. Workers are threatened with losing their standard overtime pay as a penalty for exceeding the allowed number of absences, even if they are due to illness.
- **Disciplinary threats are tied to attendance and performance**. Management treats sick-leave claims with suspicion, imposing **penalties** which disproportionately harm workers

who are genuinely ill, especially women who regularly experience menstrual-related pain.

- The maximisation of working time has become a managerial tactic to boost labour productivity while reducing non-work time as much as possible. This is evident, for instance, in the **allocation of rest periods**. One company provides only a 30-minutes break. Whilst legally, this arrangement does not violate labour regulation, in practice the duration is insufficient to allow adequate rest in physically demanding jobs that require physical and mental recovery.
- As production machines operate 24 hours a day, operators in core production units are usually allowed to take **breaks only in rotation**, for lunch and, for Muslim worker, for prayers. They typically **rest in areas only a few meters away from the production line**. This contrast with workers in other departments, such administration, HSE and logistics, who are not tied to core production processes and thus have more freedom to leave their workstations, for example to go to the company canteen. Significant differences also appear along hierarchical lines.
- The overtime situation can only worsen with the **new Indonesia Omnibus Law on Job Creation**, which one of the companies in our research is already implementing. The law prioritises industrial speed and output maximization by creating a permissive regulatory environment that overrides traditional labour protections in favour of rapid downstream industrialisation, allowing companies to maximise working times and ensure interrupted production. Under the previous Labour Law (No. 13/2003), a five-day work week with two days off was mandated. The Omnibus Law establishes a Work-Off Plan system, referred to as the 6+1 system – six consecutive working days followed by only one day off. This compresses workers time and restricts the ability to negotiate for rest. This law supports a regime where mandatory overtime is embedded into the standard workday, allowing management to use it as a disciplinary tool to ensure constant production.
- Those interviewed in our field research expressed significant concern over the effects of this system, highlighting how the change in mandatory rest risks bringing a **normalisation of exhaustion, systematically compressing workers' time for rest, sleep and recovery**; restriction of negotiation, leaving workers with **no power to negotiate** for an increase in rest days or a reduction in working days, as the schedule is strictly enforced by management to ensure uninterrupted 24 hour production, and economic compulsion, due to difficulty to meet inflated living costs in the settlements around IMIP with the base salary, which lead workers to not only not object to the lack of rest days but seek even more working hours. Our interviewees further referred to the **“theft of leisure time”** which the reduction of the number of rest days bring. This erosion of bodily autonomy ensures that workers time is almost entirely dedicated to the production process.

- Workers and trade unions expressed their concern regarding the 6+1 WOP system mostly in terms of the limited opportunities to increase their working hours, specifically through overtime. Workers have to routinely resort to overtime to increase their income. They have to pursue overtime because the **regular wages they receive are insufficient to meet a decent standard of living**. Whilst most IMIP workers earn above the regional minimum wage, they reveal these are barely adequate given the high cost of living in the area.
- Shift-based workers generally have more opportunities to take on overtime than regular, non-shift, workers. In several cases, workers push overtime to its extreme limits. Transport workers- particular dump-truck drivers transporting semi-processed commodities to the jetty or delivering raw materials into the factories, have opportunities to accumulate substantial overtime. Some work 12-16 hours per day or even more. Whilst their earning rise substantively, such work drains physical energy and is linked to **work-related accidents**, which occur frequently among these divers as a consequence of these excessive working hours.

Ultimately, the temporal organisation of labour in IMIP does more than regulate the hours of the working day: it structures a regime of vulnerability in which the pursuit of additional income intersects with managerial strategies to maximise productivity while minimising labour costs. The result is a labour regime that blurs the boundary between compliance and coercion, where exploitation is embedded not only in low wages or hazardous conditions but in the very rhythms of temporality of everyday work.

Working conditions and occupational health and safety

Workers in Morowali's electric vehicle (EV) battery material plants work under conditions which severely affect their labour rights and health.

- Inadequate safety gear and environmental pollution from coal-fired power, and exposure to lithium hydroxide dust, a significant by-product and residue of the manufacturing process, result in **significant health risks**, including:
 - Skin Irritation and damage: Lithium hydroxide powder is highly **corrosive**, to the point that it can damage workers' shoes. When this dust makes contact with the body - often penetrating thin, low-quality Personal Protective Equipment (PPE) that becomes porous due to sweat and high humidity - it causes significant **skin irritation**. In one reported instance, an explosion at a lithium-processing plant caused a worker to suffer **severe skin discoloration**.
 - Respiratory illnesses: There is a high risk of respiratory exposure because the masks provided to workers are frequently of **inadequate quality**. While specific long-term studies are not available, **acute respiratory infections** are the most commonly

diagnosed illnesses among the local population, the majority of whom are industrial workers.

- Chronic health impacts: Workers expressed significant fear regarding the **long-term health consequences** of chronic exposure to lithium dust within poorly maintained work environments. These fears are exacerbated by the fact that most companies do not conduct regular or comprehensive medical examinations, often relying on simple interviews rather than physical check-ups.
- **Managerial pressure** increases health risks and vulnerabilities. Workers are often instructed by supervisors to perform tasks manually or use malfunctioning equipment in areas where lithium powder is scattered across the production floor, making exposure nearly unavoidable.
- Workers reported harsh conditions which led to **exhaustion and exhaustion related accidents**. Chronic exhaustion is not merely a consequence of the 24-hour operational tempo, forced overtime and lack of adequate recovery time, but also, our fieldwork pointed at, used a tool of control.
- A further element increasing hazardous working conditions is related to the **language barriers** present at IMIP. Language barriers are a critical structural factor that contributes to unsafe working conditions by entrenching a rigid transnational hierarchy - between Chinese managers and Indonesian workers, and limiting the ability of workers to navigate technical hazards. According to our interviews, language barriers contribute to workplace danger in the following ways:
 - **Inaccessible safety and technical instructions:** A primary source of risk is the lack of accessible information regarding machinery and safety protocols.
 - **Mandarin-only documentation:** Work instructions and technology manuals are frequently written in Mandarin, making them inaccessible to the majority of Indonesian operators.
 - **Technological dependency:** This linguistic gap reinforces the perception that "technological mastery" resides solely with Chinese personnel, leading Indonesian workers to defer to Chinese co-workers even when a directive may be unsafe or technically unsound.
 - **Suppression of Safety Concerns by Interpreters:** The use of interpreters, or *jubir*, often functions as a barrier to safety rather than a bridge for communication.
 - **Managerial alignment:** Rather than acting as neutral intermediaries, *jubir* frequently align themselves with Chinese supervisors to protect their own job security.
 - **Disregarding worker input:** Indonesian operators report that *jubir* often disregard their suggestions - even when they are **technically sound or more reasonable** - in favour of encouraging total compliance with Chinese managerial directives. This

effectively silences workers who might identify a hazard before it leads to an accident.

- **Pressure to use malfunctioning equipment:** Language barriers and hierarchical dominance combine to create a "culture of compliance" where safety is secondary to production speed.
 - **Coerced use of unsafe tools:** Indonesian workers often feel pressured by Chinese foremen to use **equipment that is no longer fit for operation** or to perform manual tasks that should be mechanized.
 - **Diminished capacity to refuse:** Because communication is filtered through a hierarchy that prioritizes Chinese managerial standards over Indonesian safety regulations, workers have a **diminished capacity to negotiate, question, or refuse** dangerous orders.
- **Normalization of preventable harm:** The combination of linguistic isolation and transnational domination results in a "layered landscape of vulnerability".
 - **Limited agency:** The inability to communicate directly with upper management means that routine risks - such as exposure to corrosive lithium dust or chemical irritation - are often unaddressed, as workers cannot effectively advocate for better Personal Protective Equipment (PPE) or medical monitoring.
 - **Hazard as control:** In this environment, occupational hazards themselves become a tool of control; workers who cannot communicate their refusal of a dangerous task are forced to accept the risk as a condition of their continued employment.

Ultimately, these conditions not just cause misunderstandings; they facilitate a "**coercive labour ecosystem**" where safety protocols are subordinated to the imperatives of rapid production and transnational authority. The "politics of exhaustion" serve as a mode of governance; exhausted workers are less able to resist exploitative conditions, negotiate better terms or collectively mobilise.

Gender discrimination and sexual harassment

Although the workforce in IMIP is overwhelmingly male, women are employed in support sectors, such as administration, canteens, cleaning services, and chemical laboratories. Some are assigned in the production line, and we heard of some operating trucks, but they are only very few. Within these sectors, they frequently encounter violence, sexual harassment, discrimination, gender stereotyping and institutional barriers.

- Women workers report experiences **verbal abuse and intimidating behaviour** from male colleagues and supervisors. Many expressed feeling uncomfortable with the harsh reprimands issued by Chinese foremen who serve as their direct daily supervisors. Cases of sexual harassment and propositions for sexual relations by male supervisors have

been documented, albeit we could not find them in the three companies where the majority of our sample work on.

- Women face **discriminatory hiring and placement practices**. They reported being recruited for positions in mechanicals divisions, based on their educational qualifications, to be later reassigned to administrative roles after completing their three-months internship. The usual justification for this is the assumption that women are inherently unsuited for mechanical work.
- **Gender-based stereotyping**: departmental placements shaped by gender stereotypes directly affect women's earnings. Women workers are often assigned to divisions associated with minimal overtime opportunities. Additionally, "attractive" women are selectively placed in canteen roles as waitress and required to wear special uniforms to serve supervisor, managers and guests.
- **Barriers to menstrual and maternity leave**: Indonesia's law is significantly progressive, entitling women workers to have two days of paid leave during the first and second days of their menstrual cycle if they experience pain or discomfort (Law No. 13 of 2003 on Manpower). However, many women avoid taking menstrual leave because it is categorised as a "permit" which result in mandatory deductions from their overtime pay. Maternity leave is often granted only when women are very close to labour, particularly when given birth to a child which is not their first one.

Living conditions

Living conditions in the area surrounding IMIP pose severe health risks, directly affects social cohesion and family life and has important gendered impacts. The surrounding areas have become a rapidly expanding frontier city, yet one that has grown without adequate urban planning. Entire communities have sprung up around the industrial complex, but infrastructure development has not kept pace. Meanwhile, the service sectors -including cafes, billiard halls, retail shops, salons, massage parlours, and the sex industry- has expanded rapidly to accommodate the influx of workers which are recruited across the whole of Sulawesi. Field observations and testimonies reveal several critical issues:

- **Environmental pollution**: severe air pollution is generated by approximately 20 coal-fired power plants and uncontrolled emissions from furnaces. The sky in Bahopodi is frequently covered with industrial haze. Acute respiratory illness (ISPA) has become the most common ailment among residents, most of whom are workers and their families. Urban planning has failed to address this problem, for example, we observed one power plant inside the zone was constructed directly beside an existing elementary school.

Although our research did not include a systematic assessment, children at the school are likely exposed to heightened respiratory risks.

➤ **Lack of public services:**

- Bahopodi lacks a functional public transport system, forcing workers to purchase motorcycle, imposing additional financial burdens and contributing to high accident rates. The poor conditions of the interprovincial road cutting through Bahopodi produces heavy dust pollution, compounding the already severe air contamination from nickel-processing operations.
- Inadequate waste management contributes to environmental degradation and health risks. Uncollected garbage piles along the main provincial road and through the town expose residents to untreated waste and airborne contaminants
- Bahopodi only has one community health centre and a small clinic inside the industrial zone that also serves local residents. This limited health infrastructure is insufficient to meet the needs of a rapidly growing population and frequently fails to respond quickly to serious workplace accidents. Severely injured workers must be transported to the district hospital in Bungku, nearly two hours away. In extreme cases, some Chinese workers suffering fatal injuries have been transferred to Makassar in South Sulawesi, requiring more than six hours of overland travel.

➤ **High costs of living:** Food and housing inflation significantly strain workers' life. Standard room rentals are unaffordable for many entry-level workers. Most workers live in cramped, poorly ventilated 3x4 square meters rooms lacking beds and furnishing and shared with multiple people. Closer to the IMIP area, densely packed rental clusters form a sprawling workers' settlement where housing quality is extremely poor, without ventilation or adequate kitchen facilities. These conditions make it nearly impossible for workers to restore physically and mentally during their limited time off.

➤ **Impact on family life:** The inhabitants of IMIP surrounding area who composed workforce in IMIP are mostly young single men, men and women who have had to leave their children at the care of others or young families.

- While workers' children in Bahodop typically attend kindergarten, primarily or junior secondary school, limited school facilities, distance, lack of public transportation and worker's long shifts make daily commuting difficult. As a result, many parents prefer to send their children to Islamic boarding schools, or back to their hometown under the care of grandparents.
- The structures of traditional nuclear families have changed. Increasing number of women are leaving their children in the care of their parents who live in other cities. Meanwhile male workers entrust their children to their ex- or current

spouses, who also live elsewhere, obliging workers to cover the cost of maintaining two households: one in Bahodopi and another elsewhere. When children are raised by grandparents in their hometowns, these have to stop working and rely on monthly remittances.

- Domestic tasks and leisure time is highly gendered: Male workers typically rely on ready-meals, outsourced laundry and massage services. Women workers, by contrast tend to prepare meals and wash clothes themselves. Leisure practices - sleeping, playing futsal or billiards, online gambling, hanging out in cafes, Tik Tok performances, or participating in ethnic cockfights- provides moments of rests but also frequently lead to indebtedness. Many male workers fall into debt due to online gambling, placing additional burdens on their wives and families.

Conclusions:

All the abuses documented in this Factsheet constitute serious violations of international labour rights, and as such they demand pressing action from governments, both Indonesia and consumer countries, including the European Union, and companies in the whole supply chain. In some instances, these violations could amount to forced labour, which requires a heightened response by all actors involved, triggering specific duties under current legislation and demanding urgent policy responses. The clean energy transition cannot be built on human rights violations, and the EU must lead in addressing such violations to ensure that a green future is also a just future for all. Specific policy recommendations for Indonesian central government and local governments, industrial-estate authorities, companies, trade unions, and actors within transnational production networks, including international buyers, and consumer states, including the EU and EU Member States are formulated in ElectroPower Policy Briefs.

Notes

ⁱ Grant no. NDICI HR INTPA/2024/458-874 (January 2025-June 2028).

ⁱⁱ International Energy Agency, [Critical Minerals Outlook, 2024](#), 141-143.

ⁱⁱⁱ Ibid, 144.