

The Nickel Paradox: CSR Limitations and Social-Ecological Disruptions in Central Halmahera



Jurnal Analisa Sosiologi

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Received: 22 March 2025
Revised: 01 April 2025
Accepted: 24 April 2025

Edition:
April 2025, 14 (2): 352-
374

Abstract

Nickel downstream is considered a key step in boosting Indonesia's economic growth. However, nickel mining practices continue to pose significant challenges, particularly regarding their impact on local communities and the environment. Corporate Social Responsibility (CSR) initiatives, intended to balance economic growth with sustainability, are often perceived as insufficiently implemented. This qualitative study, employing a case study approach, examines the socio-ecological impacts of nickel mining at PT. IWIP in Central Halmahera, focusing on CSR's effects on local communities and the environment. Data were collected through in-depth interviews with local residents, government officials, and NGOs, supplemented by participatory observation. Thematic analysis, informed by the risk theories of society, political ecology, legitimacy, and social capital, was employed to identify key themes from participants' perspectives. The findings reveal that while PT. IWIP's CSR programs improved infrastructure and social access, the benefits were not equitably distributed, with marginalized groups receiving limited support. Additionally, ecological degradation resulting from mining activities heightened the vulnerability of local communities to natural disasters. This research contributes to the understanding of CSR within the resource extraction industry, emphasizing the need for more inclusive and sustainable CSR practices to mitigate socio-ecological risks. The study recommends that PT IWIP revise its CSR strategy to prioritize long-term sustainability and inclusive community development.

Keywords: Nickel Downstreaming, Corporate Social Responsibility, Central Halmahera

INTRODUCTION

Indonesia, particularly the Maluku region, has firmly established itself as a global leader in nickel production due to its abundant geological reserves. The demand for nickel continues to rise significantly, with an annual growth rate of 10%, increasing from 2.44 million tons in 2019 to 3.61 million tons in 2023 (Damanik, Octavia, and Hakam 2024). This surge in demand has driven industrial growth in Halmahera, which now holds over 60 mining permits and several smelting plants, making it a key driver of Indonesia's economic development (Amiruddin et al. 2024; Sangaji, Nahar, and Hamid 2024). However, this rapid industrial expansion has also led to significant environmental and social consequences, including severe air, soil, and water pollution and disruptions to local communities relying on traditional livelihoods such as agriculture and fishing (Nasution et al. 2024).

The growing demand for nickel, driven by the shift towards low-carbon technologies like electric vehicles (EVs), has intensified pressure on Indonesia's mining sector (Lo et al. 2024; Veza et al. 2022; Wijaya and Sinclair 2024). North Maluku, home to 30% of Indonesia's nickel reserves, has become a key mining hub (Camba 2021; Konewka, Bednarz, and Czuba 2021). The government's focus on downstream processing has solidified Halmahera's role in the global EV supply chain. While this brings economic growth, it has also worsened environmental degradation and social inequality, highlighting the need for sustainable development (Kumar et al. 2021).

Corporate Social Responsibility (CSR) is essential in addressing the socio-economic and environmental impacts of mining (Alputra Sudirman et al. 2021; Juniarti 2020). CSR focuses on integrating social and environmental concerns into business operations and aims to enhance societal well-being, including access to basic needs and economic opportunities (Nugroho et al. 2024; Saraswati, Sagitaputri, and Rahadian 2020). However, CSR's effectiveness in mining remains a concern. In Halmahera, mining has caused significant disruptions without delivering equitable benefits to local communities (Afiat, Tondi, and Bana 2018; Rela et al. 2020). A thorough evaluation of CSR practices is necessary to ensure they meet regulatory and community development needs (Pons et al. 2021; Prasetyo et al. 2021).

In Halmahera, large-scale mining operations, particularly in areas like Lelilef Sawai and Lelilef Waibulan, have significantly contributed to environmental damage and

natural disasters (Hudayana, Suharko, and Widyanta 2020). Companies such as PT. IWIP has played a key role in positioning Halmahera as a critical part of the global electric vehicle (EV) supply chain. While these developments have driven economic growth, they have also raised serious concerns about their impact on local communities, particularly regarding environmental degradation and the erosion of cultural practices (Rela et al. 2021).

The socio-economic transformation in Weda, Central Halmahera, has been profound. Local communities are grappling with socio-ecological challenges, including losing their vital livelihood resources. Environmental damage exacerbates their vulnerability, as the growing presence of nickel mining disrupts social norms and values (Genchi et al. 2020). The influx of migrant workers has increased economic inequality, with local populations now competing for jobs and resources (Hudayana et al. 2020). This has led to social unrest, highlighted by protests from local communities, NGOs, and student groups, who have raised concerns about inequality and environmental harm, such as deforestation, water contamination, and resource depletion (Tela and Yu 2025). Additionally, the shift towards industrial values has accelerated the erosion of traditional lifestyles.

Despite the significant economic growth generated by the nickel industry, CSR initiatives in the mining sector have been widely criticized for their symbolic nature and inadequacy (Palpacuer and Roussey 2023). Efforts by companies such as PT. IWIP have failed to address the complex social and environmental challenges faced by local communities (Prematuri et al. 2020). The shallow nature of CSR initiatives has hindered their potential to alleviate the negative impacts of mining and promote long-term community welfare.

The failure of companies to uphold sustainable CSR principles can result in tensions with local communities, as evidenced by Hudayana et al. (2020) in Halmahera, where communal violence became a strategy for negotiating compensation, with village activists playing a key role. Tarigan et al. (2020) found that sustainable CSR initiatives foster positive relationships among social groups, improving community ties and contributing to social and environmental resilience. Pons et al. (2021) highlighted the importance of long-term stakeholder relationships and the role of social media in facilitating company-stakeholder dialogue. Nugroho et al. (2024) showed that integrating ESG elements into corporate operations enhances CSR outcomes, emphasizing stakeholder engagement and environmental commitment.

While contributing to economic growth, mining activities also pose significant socio-ecological challenges. Kousar et al. (2023) noted that while green economic growth in ASEAN countries can exacerbate poverty and inequality, traditional GDP growth worsens environmental degradation. Lèbre et al. (2020) found that mining activities severely damage the environment and local communities, causing pollution, loss of wildlife, and failed job creation expectations. Similarly, Ofori et al. (2020) highlighted that mining improved vulnerable groups' socioeconomic status but posed environmental risks, jeopardizing family livelihoods.

This study addresses a significant gap in the existing literature by investigating the direct socio-ecological impacts of nickel mining in the Halmahera region, focusing on the effectiveness of Corporate Social Responsibility (CSR) initiatives. While previous research has explored the broader implications of mining on local communities and the environment, there remains a critical paucity of studies examining the role of CSR in mitigating these effects, especially within the context of Indonesia's nickel sector. Most prior works overlook the nuanced relationship between CSR practices and socio-ecological outcomes, particularly the insufficiently comprehensive and non-inclusive nature of current CSR initiatives in the region.

This study aims to fill this gap by providing a detailed evaluation of CSR practices tailored to the local socio-cultural and environmental context. Specifically, it will address the question: "How do these CSR practices contribute to the socio-ecological degradation surrounding mining operations and the local communities?" Furthermore, this research will explore the potential of CSR as a tool to alleviate the adverse impacts of nickel mining and promote inclusive prosperity, there by enhancing the understanding of sustainable development practices in mining regions.

This study analyzes PT. IWIP's CSR practices in Halmahera are analyzed through the lens of Ulrich Beck (1992) Risk Society theory explores how industrial growth, such as mining, generates new risks that marginalize vulnerable populations. It also applies Robbins (2012) Political Ecology theory to explain how power dynamics between corporations, local communities, and the government shape environmental impacts. Additionally, the Legitimation Theory of Suchman (1995) is used to understand how CSR serves as a tool for corporate image-building to gain social acceptance. Putnam (2000) social capital theory is also employed to evaluate how community networks and trust can enhance the sustainability and effectiveness of CSR initiatives. By integrating these

theories, this study examines how CSR can evolve better to address the long-term impacts of mining on local communities and contribute to more sustainable outcome.

METHODS

This study investigates the socio-ecological impacts of nickel mining in Central Halmahera Regency, North Maluku, focusing on Corporate Social Responsibility (CSR) initiatives. The research focuses on four villages—Lelilef Sawai, Lelilef Waibulan, Gemaf, and Sagea—directly affected by mining activities. A qualitative approach was adopted to gain an in-depth understanding of the local experiences and perspectives (Creswell and Creswell 2023). The case study methodology was employed to provide detailed insights into the real-world implications of nickel mining practices and CSR activities carried out by PT IWIP (Tasci, Wei, and Milman 2020). This single case study focuses on the mining practices and corporate social responsibility initiatives implemented by PT IWIP. The sample comprises 4 village heads, 2 local residents, and 2 NGO representatives from JATAM and WALHI. These participants were selected through purposive sampling, a method chosen due to its ability to target individuals with specific knowledge or experience relevant to the socio-ecological impacts of mining and CSR initiatives. This technique ensures that the data collected is relevant and comprehensive, providing deeper insights into the key issues under investigation.

No.	Name	Position	Gender	Code
1	Frileks Arbaben	Head of Village, Lelief Sawai	Male	FA
2	Arif Taib	Head of Village, Sagea	Male	AT
3	Faisal Djamil	Head of Village, Lelief Waibulan	Male	FD
4	Yoke Jinimaya	Head of Village, Gemaf	Male	YJ
5	Faizal Ratuela	Regional Director, WALHI	Male	FR

		North Maluku		
		Branch		
6	Adlun Fiqri	Program Manager, JATAM North Maluku	Male	AF
7	Anonymous	Local Resident, Sagea	Female	LRS
8	Anonymous	Local Resident, Lelief Sawai	Female	LRL

Table 1. List of Informants

Data collection involved in-depth interviews to gather personal narratives and participatory observations to examine the interactions between PT. IWIP, the local community, and CSR initiatives. Additionally, secondary data obtained from PT. IWIP's website and CSR reports were incorporated to examine the practices and impacts of CSR activities implemented by the company. Thematic analysis was applied to identify and interpret key themes emerging from the data, using an inductive approach (Wiltshire and Ronkainen 2021). Data triangulation was employed to ensure the validity and reliability of the findings (Creswell and Creswell 2023). This technique cross-references the data obtained from interviews, observations, and secondary sources, thereby enhancing the credibility of the research and providing a more robust understanding of the impacts of mining and CSR efforts

RESULTS AND DISCUSSION

Results

Challenges to Sustainability: PT. IWIP’s CSR Efforts and Their Impact on Local Communities

PT. IWIP is a leading global nickel producer, particularly in the battery production sector. In 2023, the company contributed significantly to Indonesia’s nickel output and economic growth, producing 1.72 million tons of nickel and generating approximately 688 million USD in revenue, with 30% directly impacting the national economy (Hasyim

et al. 2024). Indonesia's dominance in nickel production is driven by its rich natural resources and strategic investments to meet rising global demand, especially for electric vehicle (EV) batteries.

Under President Jokowi's administration, Indonesia launched an ambitious plan through Government Regulation No. 14/2015 to transform the industrial landscape, including the National Industrial Master Plan (RIPIN) 2015-2035. This plan focuses on developing the nickel industry with PT. IWIP plays a central role in producing ferronickel and EV batteries (Sangaji et al. 2024). RIPIN aligns with broader national goals, such as the National Medium-Term Development Plan (RPJMN) 2020-2024, aiming for industrial-driven growth, particularly in North Maluku, where nickel production has become a priority sector (Kasnar et al. 2024).

PT. IWIP's smelter operations are located in the coastal regions of Lelilef Sawai and Lelilef Waibulan in Central Halmahera, which are classified as "ring one" villages directly impacted by mining. Nearby "ring two" villages like Gemaf and Sagea, which rely on fishing and agriculture, also experience secondary effects, such as soil degradation, water contamination, and river pollution. As a National Strategic Project (PSN) under Presidential Regulation No. 109/2020, PT. IWIP must implement CSR strategies that align with national development goals, focusing on community welfare, sustainable infrastructure, and environmental protection.

A review of PT. IWIP's website reveals four key guiding principles for the company's CSR initiatives in 2024, focusing on education, infrastructure, and healthcare. These initiatives are designed to enhance community resilience and foster social cohesion, aligning with broader community objectives. However, there is a notable lack of transparency in managing these priorities, particularly regarding their alignment with the four principles outlined in table 2 below.

Main Pillars	Program and Initiative
Education	Providing assistance for elementary schools by building one classroom, two toilet units, and 30 study desks and chairs. Organising Guest Lectures for Vocational High Schools in the field of geology.
Local Community	<ul style="list-style-type: none"> Deploying an excavator unit to facilitate the process of backfilling road repairs.

Economic	<ul style="list-style-type: none"> • Conducting the Revitalisation of Kiya field.
Development	<ul style="list-style-type: none"> • Completing road and sewer repairs in Lelilef Waibulan Village. • Repair the road in Lukulamo Village. • Build a Guardrial at Tabalik Hill.
Health	<ul style="list-style-type: none"> • Provided assistance in the form of 10 gas cylinders for the Lelilef Inpatient Community Health Centre. • Helping to provide 73 Family Kits to Disaster Victims Rua.
Social-Cultural	<ul style="list-style-type: none"> • Provided assistance in the form of 5 three-wheeled motorbikes to the Land and Environment Office (DPLH).
Environmental	<ul style="list-style-type: none"> • Providing hundreds of food packages for people in Central Halmahera and East Halmahera. • Held mangrove planting and training in Kobe Village, Central Halmahera.

Table 2. IWIP's CSR Programs and Initiatives in 2024

Based on data from the company’s website, the table above illustrates PT. IWIP's CSR activities in 2024. However, the company’s CSR budget investments from 2019 to 2021 reveal significant increases: from Rp. 2,515,518,000 in 2019 to Rp. 5,727,576,000 in 2020, and then a substantial rise to Rp. 23,873,777,565 in 2021 (IWIP, 2024). Despite these considerable investments, detailed information on specific CSR budget allocations or community benefits is scarce on the website, raising concerns about the funds' impact and distribution. Additionally, the programs do not seem to highlight key aspects like local empowerment, which involves direct community participation to develop skills and knowledge tailored to their needs.

To gain a broader understanding of the Corporate Social Responsibility (CSR) efforts implemented by PT. IWIP, it is evident that these initiatives have been widely recognized for their positive impact on the local community’s welfare. Notable projects have brought significant benefits, enhancing mobility, streamlining the distribution of goods and services, and increasing access to social and economic resources, such as building roads that link distant villages. As the village head, Lelief Sawai noted:

“The most common program implemented is road infrastructure connecting our village access.” (FA, 2024).

This statement reflects PT. IWIP's commitment to addressing basic community needs through social projects, such as road construction, which helps strengthen the relationship between the company and the local community. Moreover, road infrastructure and recreational facilities, such as football fields, further demonstrate the company's role in empowering local communities and supporting social development. As mentioned by members of the local community:

“CSR in my village has contributed to road construction and a football field.” (LRL, 2024).

Beyond improving physical access, road development facilitates economic and social opportunities, while the football field promotes social skill development and leadership through sports—additionally, PT. IWIP has effectively addressed social welfare issues, particularly for vulnerable groups, by providing financial assistance of 500,000 IDR per month to seniors over 65 since January 2024. This initiative underscores the company's commitment to supporting the social well-being of local communities. Despite these commendable efforts, PT. IWIP's CSR programs face challenges, primarily due to bureaucratic processes in accessing assistance. Informants highlighted that CSR initiatives rely on community requests rather than being proactively offered by the company, and approval processes can be lengthy, leading to delays in addressing urgent community needs. As one community member emphasized:

“CSR depends on what we ask for, not something given directly by the company. They are willing to support infrastructure, education, or even sports, but we must make a request based on our needs... The approval process can take a long time, which becomes a problem for our community. However, this is not something provided automatically or regularly.” (FD, 2024).

This reflects a significant challenge: relying on community-driven assistance requests adds complexity to the CSR distribution process. Moreover, the lack of automatic and regular support diminishes the long-term impact of CSR efforts. Furthermore, issues of transparency and inequity in CSR reach have emerged, especially concerning marginalized groups, such as women. Informants expressed dissatisfaction with the CSR initiatives, particularly regarding the lack of transparency and the exclusion of certain groups. As one community member emphasized:

“I consider this CSR initiative to be non-transparent and far from reaching all segments of society, especially us women, to address the ongoing challenges in daily life, such as water shortages.” (LRS, 2024).

This statement underscores the importance of transparency to ensure that CSR benefits are clearly understood by all stakeholders. Additionally, the lack of inclusivity in addressing gender-specific challenges, such as water scarcity, highlights an area where PT. IWIP's CSR efforts can improve. Lastly, WALHI's firm stance against the company's investment serves as a critical reminder that CSR must align with long-term sustainability goals. As one informant from WALHI stated:

“WALHI has always rejected this company's investment. Whatever the company does, it cannot improve the welfare of the people. We are talking about sustainable and equitable welfare for future generations.” (FR, 2024).

This critique emphasizes the need for PT. IWIP will reassess its CSR approach, ensuring its investments align with sustainable development and long-term societal welfare. In conclusion, while PT. IWIP's CSR initiatives have yielded positive impacts. However, challenges such as bureaucratic inefficiencies, lack of transparency, and gender inclusivity must be addressed for the programs to be more effective, equitable, and sustainable. Streamlined processes, proactive support, and a stronger focus on environmental and gender considerations will foster a more lasting and meaningful contribution to community welfare.

Socio-Ecological Impacts of PT. IWIP's Nickel Mining on Local Communities

From a socio-ecological perspective, nickel mining operations have caused significant environmental degradation and raised serious concerns for the local community. In July 2024, severe flooding hit several villages in Central Halmahera, North Maluku, displacing thousands of residents. While the government attributes the disaster to extreme weather, mining and environmental activists argue that the incident is closely linked to nickel mining in the region.



Figure 1. The flood conditions of Central Halmahera

Source: <https://www.bbc.com/indonesia/articles/c51yr5v3104o>

This points to the failure of PT IWIP's Corporate Social Responsibility (CSR)

strategy, which has not sufficiently addressed both community and environmental needs. JATAM describes the socio-ecological impacts of PT IWIP's mining operations, which affect the environment and the people's livelihoods. As one informant from JATAM shared:

“The flood disaster in mid-2024 was largely caused by extensive nickel mining operations and the issuance of large mining concessions by the provincial and central governments without considering the environment's capacity, which led to severe ecological damage and harmed the local community.” (AF, 2024)

This statement emphasizes that poorly managed mining activities lead to severe ecological damage, harming local communities. The 2024 flood disaster is tangible evidence of the negative socio-ecological consequences of unregulated mining. The informant also highlighted that recurring floods affecting villages like Waibulan and Gemaf were primarily caused by excessive mining activities, which overwhelmed the environment's capacity. As the village head Gemaf noted:

“The recurring floods affecting our village and neighboring villages like Waibulan and Gemaf are the result of extensive mining activities that have exceeded the capacity of the environment. Factors such as reduced water absorption due to deforestation for mining activities, combined with changes in river flows such as damming and diversion of the Ake and Sagea Rivers, may disrupt the balance of the ecosystem.” (YJ, 2024).

This illustrates how deforestation and alterations in river flow due to mining disrupt the ecosystem, leading to worsening and recurring floods. The environmental damage harms nature and burdens local communities dependent on these resources. Additionally, the Sagea River has undergone significant colour changes more than five times since early 2024, signalling serious problems in the river's watershed. Contamination of river water has had severe consequences for the local community, which has long relied on it for their livelihoods. As the village head Sagea mentioned:

“Since early 2024, the residents of Sagea Village have increasingly relied on bottled and gallon water due to contamination of their local water supply, which has become murky and polluted. Since the company started operating and expanding its mining extraction, it has become challenging to get clean water.” (AT, 2024).

This statement shows that water contamination caused by mining activities is a significant socio-ecological impact. The reliance on bottled water adds an economic burden, especially for low-income families who once relied on local water supplies.

Furthermore, environmental damage has led to shifts in local occupations. Pollution has affected sea water, directly impacting traditional female fishers in the village. As one local community member shared:

“Some groups of women in our village are struggling to pursue their profession as fishers because the sea water in our village is heavily polluted, making it difficult to catch fish. This has led to a shift in profession, where some women have become scavengers to make a living.” (LRS, 2024).

This demonstrates how sea pollution directly affects women's livelihoods. The shift in profession worsens their socio-economic resilience and may exacerbate gender inequality, as these women are forced to take on less stable and less respected jobs in society. The socio-ecological impacts of PT IWIP's nickel mining operations have caused significant harm, including environmental degradation, water contamination, and the disruption of livelihoods. These issues underscore the urgent need for more sustainable and responsible mining practices prioritising ecological preservation and community welfare.

Discussion

Transforming Communities: Nickel Mining, Ecological Degradation, and the Rise of a Risk Society

Ulrich Beck (1992) argues that modern society has transitioned from focusing on wealth and power distribution to managing risks resulting from industrial and technological advancements. While these developments promise economic growth, Beck emphasizes addressing environmental risks, particularly those related to natural disasters (Chernilo 2021). This shift is evident in the nickel mining operations at PT IWIP in Central Halmahera, where local communities, once optimistic about the benefits of industrialization, now face long-term environmental degradation. Mining activities have severely impacted the region's ecological systems, leading to deforestation and altered river systems, heightening vulnerability to natural disasters. The 2024 flooding in Central Halmahera is a clear example of this, as it was not solely caused by extreme weather but by the inability to manage an already degraded ecosystem. This aligns with Beck's assertion that risks in a "Risk Society" are both social and individual, with mining creating social risks that disrupt ecosystems and negatively affect local socio-economic conditions (Han and Zhai 2022).

At the community level, the mining operations in Sagea Village have led to a

significant decline in water quality, resulting in a clean water crisis. The community, once reliant on river water, now depends on expensive bottled water, impacting both health and livelihoods, especially those based on agriculture and fishing. While PT IWIP has introduced Corporate Social Responsibility (CSR) programs, these tend to focus on short-term solutions, failing to address the long-term environmental damage caused by mining. Beck's concept of a Risk Society highlights the need for sustainability and resilience to disaster as integral to modern society. Effective ecological management and transparent, accountable CSR policies are crucial in reducing the uncertainties faced by local communities (Sovacool 2024). Without a fundamental shift in approach, mining operations will worsen both environmental destruction and the socio-economic vulnerabilities of the local population.

Beck identifies three types of risk—individual, social, and global—that are critical for understanding the long-term effects of poorly managed mining in Central Halmahera. Individual risk pertains to direct threats individuals or small groups face, such as health risks to workers and nearby communities exposed to mining waste (Han and Zhai 2022). In Sagea Village, water contamination from mining waste is causing health issues, such as gastrointestinal and skin diseases. Social risk involves broader impacts on communities, including exacerbating social inequalities. Environmental damage from mining disrupts livelihoods and deepens social inequalities, leaving marginalized groups, particularly women, more vulnerable. For instance, female fishermen in Sagea Village have been forced to shift to waste-picking due to ocean pollution, heightening gender inequality and socio-economic dependency. Finally, global risk refers to the widespread environmental impacts of mining, such as deforestation and water pollution, which contribute to climate change and biodiversity loss. These actions affect local ecosystems and global environmental stability, intensifying natural disasters like floods.

Furthermore, Robbins (2012) highlights how the exploitation of natural resources, once perceived as environmentally benign, has evolved into a destructive practice due to state and global market interventions disregarding local ecological limits. The growing global demand for nickel, combined with Indonesia's government-driven push for downstream in the nickel industry, has fueled large-scale resource extraction while neglecting long-term environmental consequences. A clear example is PT IWIP's designation as a National Strategic Project (PSN), which has allowed continued mining in Halmahera despite severe ecological harm. While downstream aimed to add value to nickel, it has exacerbated environmental degradation, including deforestation and water

contamination, profoundly impacting local communities. The power dynamics between the government, corporations, and local populations have resulted in an unequal distribution of CSR benefits, prioritizing short-term gains over long-term sustainability (Levenda, Behrsin, and Disano 2021). Nickel mining in Halmahera has caused significant socio-ecological damage, with restoration costs often surpassing those of the original exploitation. Mining-induced deforestation and altered river systems have increased vulnerability to natural disasters, such as the 2024 flood, which, though influenced by extreme weather, primarily resulted from neglecting the region's ecological limits. This degradation has worsened community vulnerability, particularly in Sagea Village, where mining waste contamination has triggered a clean water crisis.

The ecological damage is further exacerbated by inequalities in Corporate Social Responsibility (CSR) initiatives, which highlight the concentration of resource control in the hands of corporations and the state (Robbins 2012). This concentration disproportionately benefits a privileged few, while leaving marginalized communities sidelined. PT IWIP's CSR efforts, focused on short-term infrastructure projects, have been criticized for failing to address critical environmental issues, such as water contamination and ecosystem destruction. These initiatives are perceived as primarily focused on "image-building" rather than offering long-term solutions, further deepening social inequalities. Moreover, they emphasize how privatization and the concentration of resource control intensify these disparities. The prioritization of industrial growth over sustainable practices alienates local communities from the decision-making process (Levenda et al. 2021; Scheidel et al. 2020). CSR programs often focus on visible, short-term outcomes, neglecting long-term environmental health and equitable resource distribution. The result is a cycle of social unrest, as marginalized groups are forced into waste-picking due to polluted waters, exacerbating gender inequality and socio-economic marginalization, such as women in Sagea Village who once relied on fishing. This case exemplifies the need for more equitable resource management and sustainable development practices.

In conclusion, PT IWIP's nickel mining operations in Central Halmahera have led to significant socio-ecological degradation. This mirrors the situation in Turkey, where industrialization has created a striking gap between economic growth and environmental degradation. While industrialization has contributed to the country's economic development, its environmental impact has been profound. Rural communities bear the brunt of these consequences, facing eviction, loss of livelihood, and increased

vulnerability to climate change and pollution. Moreover, conflicts between industrial expansion and environmental protection efforts in Turkey are escalating, particularly in areas reliant on agriculture and natural resources. Although CSR initiatives have been implemented, PT IWIP's focus on short-term assistance has failed to address long-term environmental issues or engage marginalized groups, especially women, in decision-making processes. Often seen as symbolic, CSR programs overlook the root causes of ecological damage. This underscores the need for a more inclusive and sustainable CSR approach that empowers local communities, ensures fair resource distribution, and prioritizes long-term ecological restoration.

The Role of CSR in Legitimizing Resource Exploitation: Social Capital and Legitimacy Gaps in Halmahera

In Halmahera, PT IWIP's CSR programs, including infrastructure projects like road construction, sports facilities, and religious buildings, are framed as significant contributions to community development. While these initiatives appear beneficial at first glance, they tend to focus on visible, short-term improvements that are more about symbolic gestures than addressing the underlying social and environmental issues caused by mining activities. Crucial areas such as environmental protection and public health, which are deeply impacted by the mining operations, receive minimal attention in these programs. This creates a gap between what is presented as progress and the real, ongoing challenges the community faces, raising concerns about the true intent and impact of such CSR practices.

Suchman (1995) legitimacy theory offers a framework for understanding how PT IWIP uses these CSR programs to maintain and strengthen its social legitimacy. According to the theory, organizations seek societal approval by aligning their actions with public expectations and social norms (Loos and Spraul 2024; Suchman 1995). PT IWIP's CSR efforts, focusing on visible infrastructure and social aid, are strategic attempts to garner moral legitimacy—the perception that the company is socially responsible and contributes positively to local development. However, these efforts are more about legitimacy-seeking strategies than addressing the deeper, systemic issues of environmental degradation and social inequalities (Fernández-Vallejo 2022; Loos and Spraul 2024). By investing in visible projects, the company aims to craft a narrative that mining operations lead to broader community benefits, while avoiding the more contentious issues, such as the long-term ecological damage and health risks associated

with the industry.

This approach leads to a legitimacy gap, where the CSR actions of PT IWIP, while meeting immediate community demands, do not tackle the more critical long-term needs (Lin 2021; Suchman 1995). The focus on token projects like roads, sports facilities, and financial aid for the elderly distracts from the company's failure to address key environmental and health challenges. Over time, these symbolic CSR efforts risk undermining the company's sustained legitimacy, as the real issues affecting the community, such as the deterioration of natural resources and worsening health conditions remain unaddressed. Although these initiatives provide short-term relief, they do little to empower the community meaningfully and transformatively. The persistence of this gap between corporate image and actual impact calls for a more genuine approach to CSR—one that aligns corporate actions with the real needs of local communities and addresses the long-term consequences of resource exploitation (Loos and Spraul 2024).

Exploitation of natural resources, particularly in the mining industry, erodes social capital within local communities, as defined in the framework of social capital theory (Putnam 2000). Social capital, comprised of trust, social networks, and community norms, enables collective action and mutual benefit (Amiraslani et al. 2023). However, these foundational elements are eroded when mining companies engage in resource extraction without considering long-term social and environmental impacts. This damage weakens cooperation, exacerbates inequality, and heightens social tensions, particularly when CSR initiatives fail to address the core concerns of local communities. The disconnect between corporate actions and community needs fosters growing disillusionment and deepens the divide between the government, corporations, and local populations.

Trust, a cornerstone of social capital, is severely compromised when CSR efforts are perceived as transactional and inconsistent (Amiraslani et al. 2023; Putnam 2000). Communities often face delays and uncertainty in receiving support, as CSR initiatives are contingent upon the submission of proposals, which can take a long time for approval. This slow response reinforces the perception that companies are not genuinely invested in the community's well-being, but rather in maintaining a favorable image. As trust erodes, social networks within the community become strained. The unequal distribution of CSR benefits—particularly when marginalized groups such as women are excluded—weakens bridging social capital (Christensen, Hail, and Leuz 2021). The lack of inclusive engagement further isolates segments of society, resulting in fragmented networks that

hinder collective action and cooperation.

Moreover, CSR initiatives focusing on short-term, visible projects rather than addressing deeper, long-standing issues like environmental degradation disrupt norms of reciprocity. Communities, especially those impacted by water contamination and ecosystem destruction, expect meaningful, reciprocal support from corporations. When CSR efforts fail to meet these expectations, they are perceived as inadequate and self-serving, increasing scepticism and resentment. The breakdown of social capital, driven by the lack of genuine engagement from companies, exacerbates socioeconomic inequalities and fosters social unrest (Rudito, Famiola, and Anggahegari 2023). CSR practices that fail to meet the real needs of affected communities deepen divisions, making it more challenging to foster sustainable development and build trust. This ultimately undermines the potential for long-term, positive change.

In conclusion, while focusing on infrastructure and financial aid, PT IWIP's CSR initiatives in Halmahera fail to address the social and environmental issues caused by mining. This contrasts with CSR practices in Turkey, which show increasing corporate awareness but limited integration of sustainability principles, with a shift from philanthropic to strategic CSR. Unlike Indonesia, where CSR is legally mandated, these efforts are hampered by a weak regulatory framework. Both countries share issues with inconsistent transparency and a lack of meaningful connections between CSR narratives and tangible social or environmental change. PT IWIP's short-term initiatives erode its long-term social capital and legitimacy, highlighting the need for CSR practices to align with the community's long-term needs, effectively addressing environmental and socioeconomic challenges.

CONCLUSION

The study revealed that while PT. IWIP's CSR initiatives have improved local infrastructure and social access, but their benefits remain uneven, focusing more on symbolic actions than on addressing systemic socio-ecological issues. The ecological damage caused by nickel mining has increased local vulnerability to natural disasters and deepened socioeconomic disparities. Therefore, PT. IWIP requires substantial reform, emphasizing social justice, inclusivity, and long-term sustainability. The company must prioritize environmental restoration, engage local communities in decision-making, and adopt a more comprehensive CSR strategy. From a sociological perspective, this research contributes to CSR and political ecology theory by emphasizing the need for CSR to

address the root causes of socio-ecological degradation rather than offering short-term solutions. It underscores the importance of proactive and integrated strategies for sustainable development and equitable community empowerment, which is crucial for improving local conditions and ensuring resilience in the face of escalating industrial risks. This study acknowledges key limitations, notably its focus on socio-ecological impacts based on qualitative data from a limited sample. Future research should investigate the long-term effects of nickel mining and assess the impact of national government policies on CSR and environmental mitigation. Expanding the sample to include central government agencies, such as the Ministry of Energy and Mineral Resources (ESDM) and the Ministry of Environment and Forestry, would offer valuable insights into policy effectiveness and its alignment with local needs.

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