Journal of Government and Politics (JGOP) 7 (2) December 2025, 133-146
ISSN: 2774-728X (Print), ISSN: 2686-3391 (Online) https://journal.ummat.ac.id/index.php/JSIP/index

Social Impact Assessment in The Development of A Nickel Smelter in Morowali District

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Received 26 October 2025 ▯ Revised 10 December 2025 ▯ Accepted 20 December 2025

ABSTRACT

This research aims to evaluate the impact of nickel smelter development on the social welfare of the Morowali community. Its urgency lies in the need to understand the social consequences of rapid industrialization, so that mitigation policies and community participation can be formulated more inclusively and sustainably. This research uses a qualitative approach with a phenomenological design and Social Impact Assessment (SIA) to explore the social impacts of nickel smelter development in Morowali. Data were obtained thru interviews, documentation, and observation, and analyzed using Nvivo 12 Plus to identify key themes and develop mitigation recommendations based on the findings. This study shows that while industrialization drives rapid economic growth, it also leads to social impacts, including limited access to basic facilities such as clean water, sanitation, housing, education, and healthcare. Other impacts are seen in public health due to air pollution, increasing social tensions between local workers and foreign labor, and low public participation and protection of vulnerable groups' rights. Overall, the smelter development has not fully considered the principles of sustainable development, as the main focus is still on economic growth without ensuring social welfare, justice, and the protection of community rights. Future policy recommendations include strengthening collaboration between local governments, companies, and communities to improve access to basic facilities, healthcare services, education, and the protection of citizens' rights. Additionally, the sustainable and transparent implementation of the Social Impact Assessment mechanism needs to be carried out so that industrial growth aligns with social welfare and sustainable development.

Keywords : Social Impact; Nickel Smelter; Mining Development

INTRODUCTION

Amidst the increasing influx of foreign investment into Indonesia's extractive industry, the development of nickel processing facilities has become a national priority, particularly as part of the mineral downstreaming agenda. Morowali in Central Sulawesi has emerged as one of the largest nickel-industrial hubs in Indonesia, characterized by rapid investment growth and the continuous expansion of smelter facilities. These developments have generated substantial economic activity, yet they also introduce measurable changes to the social and economic structure of surrounding communities, warranting systematic and data-driven assessment.

The nickel smelter operated by PT Indonesia Morowali Industrial Park (IMIP) has contributed to national industrialization efforts. However, multiple studies report negative environmental and social consequences, including air and water pollution, increased health risks, and a high frequency of workplace accidents. Trend Asia and TuK Indonesia further identify environmental degradation and potential human-rights violations, especially related to labor conditions and industrial safety (Nurdifa, 2024). These findings indicate that industrial expansion in Morowali generates not only economic benefits but also identifiable social risks that require further empirical examination.

Comparable patterns are observable in other countries with large-scale smelter development. In Zambia, smelters in the Copperbelt region have produced severe air and water contamination and have led to community displacement without adequate compensation, contributing to social instability (Mihaljevič et al., 2011; Mwaanga et al., 2019). In Brazil, aluminum smelter operations in the Amazon have driven deforestation, disrupted indigenous livelihoods, and triggered conflict due to limited consultation and inequitable distribution of benefits (Baud et al., 2011; Ciccantell, 1999). These empirical cases reveal recurring tendencies of unequal resource access, environmental decline, and social pressure on local communities, patterns that also emerge in the development of smelter industries in Morowali.

The theoretical lens of social integration offers a relevant framework for analyzing these dynamics. The concept highlights the importance of equitable access to resources, social participation, and fair treatment across societal groups (Hayvon, 2024; Iorbo et al., 2024). Its application in this study provides a basis for assessing whether local communities in Morowali have comparable access to basic services, economic opportunities, and social protection relative to migrant workers and industrial actors. Social integration theory also elucidates mechanisms of marginalization illustrated in the Zambian and Brazilian cases, particularly regarding limitations in public participation and unequal distribution of industrial benefits (Bosák et al., 2024; Fonchingong Che, 2024; Xu et al., 2024). Through the social integration framework, this study evaluates how smelter expansion shapes local welfare structures in Morowali, including access to essential services, public health conditions, and levels of community security.

The urgency of this research arises from the rapid social, economic, and demographic transformations occurring in Morowali as a result of industrial activity. Although the smelter sector creates new employment opportunities, it also intensifies pressure on basic services such as clean water, sanitation, healthcare, and public safety. Existing scholarship on smelters in Indonesia primarily centers on economic and environmental impacts, while comprehensive investigations addressing social consequences at the community level remain limited.

This study seeks to address this research gap by analyzing the social impacts of nickel smelter development, focusing on access to basic facilities, public health, and security in Morowali Regency. Using a data-driven approach and grounded in the social integration framework, this study formulates policy recommendations that emphasize inclusivity, local welfare, and socially sustainable industrial development. The findings are expected to support the formulation of more

balanced industrial policies that consider both economic goals and long-term social sustainability.

Method

This study uses a qualitative research approach with a phenomenological design to explore the environmental impacts of smelter construction in Morowali. Specifically, this study adopts an interpretive phenomenology (Heideggerian), which focuses on understanding how actors interpret their lived experiences and social realities surrounding the smelter construction. Unlike descriptive or Husserlian phenomenology that emphasizes bracketing and the search for universal essences, interpretive phenomenology acknowledges the researcher's interpretive role in uncovering meanings embedded within social interactions and contextual conditions. This approach was chosen because it aligns with the study's objective of interpreting community experiences related to social welfare issues such as access to basic facilities (clean water, sanitation, electricity), public health, and security.

Furthermore, interpretive phenomenology and Social Impact Assessment (SIA) are positioned as complementary analytical lenses: phenomenology uncovers the subjective, lived experiences of affected communities, while SIA provides a structured framework to evaluate broader social changes and welfare outcomes produced by the industrial project. The integration of both approaches ensures that experiential data are interpreted not only at the personal level but also contextualized within systematic social impact categories defined by SIA.

The primary data sources in this study include interviews, documentation, and observation, each of which contributes to a comprehensive understanding of the phenomenon under study. Interviews were conducted with key informants, including local government officials, smelter managers, community leaders, and residents directly affected by the project. Informants also included relevant internal company staff and local media representatives, selected to represent diverse stakeholder perspectives. Government officials provided insights into regulatory frameworks and public policy processes; company representatives explained operational activities and corporate social responsibility programs; community leaders and local residents described lived experiences, concerns, and social changes encountered during the smelter development.

Documentation including previous research reports, regulatory documents, company publications, and policy data was collected to provide contextual depth and triangulate findings. Additional documentary sources included news archives, minutes of community consultation meetings, and environmental or social impact assessment documents issued by government agencies and non-governmental organizations. These materials helped situate the qualitative narratives within broader institutional and policy contexts.

Direct field observations were conducted to obtain a more grounded understanding of social conditions in the smelter area. Data collected from interviews, observations, and documentation were systematically transcribed to maintain accuracy. The data analysis employed an interpretive phenomenological procedure involving: (1) immersive reading to identify meaning units; (2) open and axial coding to categorize experiential themes; (3) interpretation of contextual meanings based on Heideggerian hermeneutics; and (4) alignment of emergent themes with SIA dimensions such as access to basic services, public health, security, community participation, and information transparency. NVivo 12 Plus software supported the coding process, pattern identification, theme development, and cross-source triangulation.

The integration of phenomenological interpretation and SIA categories enabled the analysis to move beyond descriptive accounts toward identifying structural social impacts,

regulatory gaps, and community coping strategies. This dual approach clarified how subjective experiences corresponded with measurable social welfare indicators.

In this study, the social impact of nickel smelter construction in Morowali is examined through the framework of Social Impact Assessment (SIA), which evaluates project-induced changes in community life. The SIA process includes identifying social impacts affecting access to basic facilities, public health, and security, as well as assessing community participation, availability of information, and compliance with human rights protections. SIA is a systematic method for evaluating and managing social consequences before, during, and after project implementation. This framework provides structured impact categories that serve as analytical anchors for interpreting phenomenological data (Esteves et al., 2012; Joyce & Macfarlane, 2001)

Social Impact Assessment (SIA) is a systematic method for evaluating and understanding the social impacts of a project or policy before, during, and after implementation. The primary objective of SIA is to identify, assess, and manage the effects on affected communities and individuals, both positive and negative. This process involves analyzing changes in social aspects such as community structure, social relationships, the economy, and quality of life. SIA also focuses on social welfare and aims to provide recommendations that can help mitigate negative impacts and maximize benefits for the communities involved (Esteves et al., 2012; Joyce & Macfarlane, 2001) .

Overall, this study explores the social impacts of smelter development using a qualitative approach grounded in interpretive phenomenology and complemented by SIA. This combination enables a deeper and more contextualized understanding of how smelter development affects social welfare particularly access to essential facilities, public health conditions, and local security dynamics. The approach is consistent with previous research employing qualitative and phenomenological strategies in industrial-impact studies (Fortin & Gagnon, 2006; Kurniawan et al., 2020). The study aims to produce comprehensive findings and propose mitigation measures that improve social welfare in affected communities.

Results And Discussion

The construction of a nickel smelter in Morowali Regency will not only bring economic changes but also have significant social impacts on the local community. Using a Social Impact Assessment (SIA) approach, this study analyzes these impacts by integrating sustainability frameworks such as the triple bottom line (TBL) which emphasizes the balance of economic, social, and environmental dimensions—and the Sustainable Development Goals (SDGs), particularly SDG 3 (health), SDG 6 (clean water and sanitation), SDG 11 (inclusive cities), and SDG 16 (institutional justice). The findings reveal that industrial growth in Morowali is not aligned with these sustainability principles, leading to significant gaps in basic services, public health, social security, and community participation.

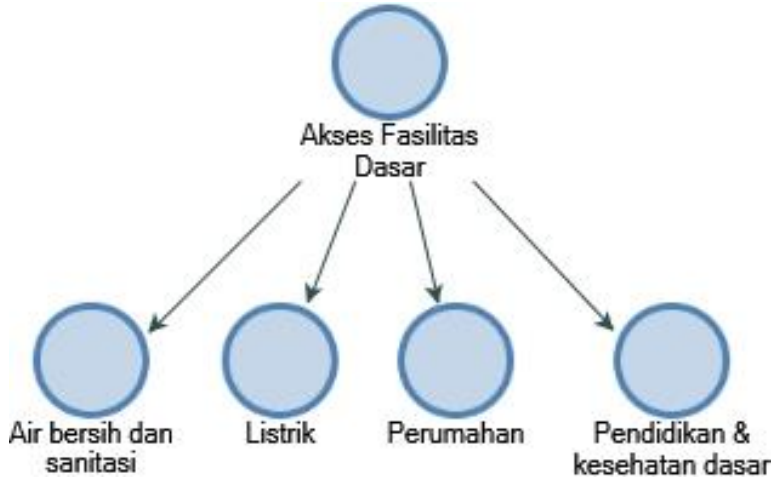

Figure 1. *Social Impact Assessment* on Nickel Smelter Construction in Morowali Regarding Access to Basic Facilities

Figure 1 illustrates the effects of rapid industrialization on access to essential services. Large-scale industrial operations have intensified pressure on water and sanitation systems. Groundwater sources and rivers, previously fulfilling household needs, now face quality degradation due to the expansion of mining and smelting activities.

Table 1. Percentage of Households with Access to Proper Sanitation by Regency/City 2024

Regency/City	Adequate Sanitation (%)
Banggai Islands	79.52
Banggai	83.18
Morowali	75.16
Poso	92.08
Donggala	65.14
Tolitoli	67.40
Buol	76.52
Parigi Moutong	69.14
Tojo Una-Una	71.02
Sigi	72.20
Banggai Sea	68.78
North Morowali	89.92
Palu City	89.49

Table 1 shows that Morowali's sanitation coverage (75.16%) remains below several other districts in Central Sulawesi. This gap indicates that infrastructure development has not kept pace with industrial growth, revealing a mismatch between economic expansion and social welfare provisioning contrary to the TBL's social sustainability pillar and SDG 6's clean water and sanitation targets.

Rapid population increases, driven by labor migration, have intensified pressure on sanitation and clean water services. Migrant workers living in temporary or semi-permanent housing, women-headed households, and low-income families are disproportionately affected, as they often lack the resources to access higher-cost private water sources or improved sanitation

On the other hand, although the electricity supply is relatively stable because industrial areas have their own power plants, distribution tends to prioritize the company's operational needs over the local community. This imbalance indicates an imbalance in priorities between the industry's economic interests and the community's basic needs. Another issue that arises is the condition of housing around mining areas. Residential settlements around the Morowali nickel industrial area are increasingly dense, but housing conditions are still worrying.

Figure 2. Condition of Residents' Houses in the Midst of the Nickel Industry in Morowali

Figure 2 highlights dense, substandard housing conditions near industrial zones. Data from PT IMIP (Table 2) show a workforce of 84,336 employees in 2024, the majority being migrant men. This demographic surge accelerates settlement expansion but is not accompanied by adequate spatial planning, creating risks of overcrowding, unsanitary conditions, and environmental degradation. These outcomes reflect weak local governance capacity and ineffective implementation of regional spatial plans (RTRW).

Table 2. Number of Employees of PT Indonesia Morowali Industrial Park (IMIP) in 2024

Employee	Number of people)
Male Employee	77,855
Female Employees	6,481
Total Hoist Crane Operators	23
Female Operator	10
Total Employees	84,336

The total workforce absorbed reached 84,336 people, consisting of 77,855 male employees and 6,481 female employees, with specific details such as 23 hoist crane operators, including 10 female operators. This very large workforce is a major driver of migration flows to Morowali, along with increasing economic activity in the mining sector and the nickel processing industry. This large workforce contribution has a direct impact on rapid residential growth, due to the increasing need for housing, social facilities, and basic infrastructure in areas around the mine and industrial areas. Thus, industrialization in Morowali not only drives the economy, but also triggers the development of new, increasingly dense residential areas. This situation has the

potential to cause socio-economic problems, public health problems, and environmental degradation in areas around the mine.

On the other hand, the availability of basic education and healthcare services has not kept pace with population growth around the smelter area, as local schools and healthcare facilities are overwhelmed by the surge. Empirical data, based on the number of schools, includes junior high schools, as follows:

Table 3. Number of Junior High Schools in Morowali Regency by District 2024

Subdistrict	Public Junior High School	Private Junior High School	Total Middle School
Menui Islands	7	-	7
South Bungku	5	-	5
Bahodopi	4	-	4
Coastal Bungku	2	-	2
Middle Bungku	4	-	4
East Bungku	4	-	4
West Bungku	2	1	3
Great Earth	3	1	4
Wita Ponda	4	-	4
Total	**35**	**2**	**37**

The availability of junior high school (SMP) education services in Morowali Regency, particularly in Bahodopi District, the center of activity in the IMIP smelter industrial area, shows significant limitations. Of the 37 SMPs in the entire regency, only four are in Bahodopi, even though this district is experiencing the fastest population growth due to the influx of migrant workers and their families (BPS, 2025b) . This mismatch between demand and educational infrastructure disrupts SDG 4 regarding inclusive and quality education. It also reveals that AMDAL documents and corporate social responsibility (CSR) programs have not sufficiently addressed social infrastructure needs.

Children of migrant workers and indigenous Morowali communities face higher risks of overcrowded classrooms, limited learning resources, and exclusion from formal schooling, reinforcing long-term social inequality.

Furthermore, the inadequate number of schools indicates weak spatial planning and social development in areas directly impacted by national strategic projects such as smelter development. The population surge not only puts pressure on the housing sector but also increases the burden on existing schools, potentially forcing school -age children to drop out of school or pursue education outside their home areas. If this situation persists, the goal of sustainable development in education—ensuring equitable, inclusive, and quality access for all children— will be difficult to achieve. Therefore, major investments such as IMIP should be accompanied by corporate social responsibility (CSR) initiatives focused on building new educational facilities, improving teacher quality, and fostering close collaboration between the local government, the private sector, and the community to ensure the fulfillment of the basic right to education for the younger generation in Morowali.

In terms of healthcare services, they are not keeping pace with population growth around the smelter area. This is evident from data from the Morowali Regency Central Statistics Agency, which shows that there are only a few healthcare facilities (BPS, 2025a) .

Table 4. Number of Employees of PT Indonesia Morowali Industrial Park (IMIP) in 2024

Subdistrict	General Hospital	Special Hospital	Inpatient Health Center	Non-Inpatient Health Center	Primary Clinic	Integrated Health Post
Sombori Islands	–	–	–	1	–	14
Menui Islands	–	–	1	–	–	14
South Bungku	1	–	–	1	–	22
Bahodopi	–	–	1	–	5	20
Coastal Bungku	–	–	1	–	–	13
Middle Bungku	1	–	1	1	8	21
East Bungku	–	–	1	–	1	11
West Bungku	–	–	1	–	–	14
Great Earth	–	–	1	–	1	13
Wita Ponda	–	–	1	–	2	14
Morowali	2	–	8	3	17	156

The availability of healthcare services in Morowali Regency remains limited and disproportionate to population growth, particularly around the smelter industrial area. Data from the Central Statistics Agency (BPS) shows that there are only two public hospitals, concentrated in Bungku Tengah and Morowali Districts, while most other districts only have basic facilities such as community health centers (Puskesmas), primary clinics, and integrated health posts (Posyandu). Even a district with dense industrial activity like Bahodopi has only one inpatient community health center, without any general or specialized hospitals, despite being the center of the PT IMIP industrial area. This situation highlights the gap between the rapid economic growth caused by industrial development and the availability of adequate healthcare infrastructure for the community.

This situation confirms that the nickel smelter development in Morowali has not fully addressed the principle of social justice in the provision of basic facilities. Therefore, more responsive and inclusive policies are needed to prevent further marginalization of local communities. The availability of healthcare facilities, housing, and access to clean water and education should be priorities alongside industrial expansion. Without community-focused policy interventions, the risk of increasing social inequality, declining quality of life, and even social conflict around industrial areas will increase. Therefore, synergy between local governments, companies, and communities is essential to ensure that industrial development not only drives economic growth but also creates equitable prosperity for all levels of society.

This study further maps the results of the Social Impact Assessment on the construction of a nickel smelter in Morowali related to public health.

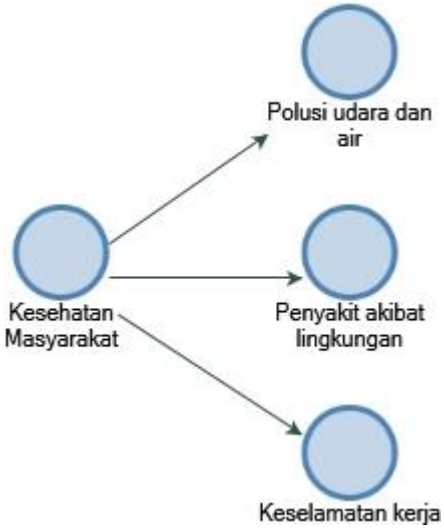

Figure 3. *Social Impact Assessment* of Nickel Smelter Construction in Morowali Regarding Public Health

Figure 3 shows that the industrial expansion correlates with increasing public health burdens. Acute Respiratory Infection (ARI) cases rose by 16.4% from 2023 to 2024, with Morowali contributing 57,190 cases—making it the highest contributor in Central Sulawesi. The increase aligns with the expansion of smelter operations, the use of coal-fired power plants, and particulate emissions from construction and production processes (Handayani, 2025) .

The surge in ARI cases from 262,160 in 2023 to 305,191 in 2024 represents a 16.4% increase. Morowali Regency contributed 57,190 cases, or approximately 18.7 % of the provincial total, making it the region with the highest ARI rate in Central Sulawesi. This demonstrates that the massive growth of the nickel industry in Morowali has not only impacted the economy but also placed significant pressure on public health due to air pollution from smokestacks and coal-fired power plants.

These findings indicate shortcomings in environmental monitoring systems, suggesting that AMDAL mitigation measures—such as emission controls, real-time air quality monitoring, and health risk assessments—are either insufficient or poorly enforced. The limited distribution of health facilities (Table 4) further undermines the community's resilience to pollution-related illnesses.

Infants, the elderly, pregnant women, and outdoor workers (e.g., transport laborers, market sellers) are disproportionately exposed to airborne pollutants, increasing the burden of disease in marginalized populations.

This situation demonstrates the contradiction between the narrative of the success of nickel downstreaming and the socio-ecological realities experienced by local residents. The government's inability to provide health mitigation measures, such as air quality monitoring, additional health facilities, or disease prevention programs, exacerbates the situation. With its high contribution to acute respiratory infections (ARI) cases, Morowali serves as a clear example that industrial development without strict pollution regulations poses a significant risk to the community, particularly vulnerable groups such as children and industrial workers. This situation is exacerbated by repeated workplace accidents in industrial areas, indicating low occupational safety standards and worker protection. This situation clearly has the potential to

reduce the quality of life of surrounding communities and create new social and economic burdens, both for individuals and for local governments, which must bear the costs of public health care.

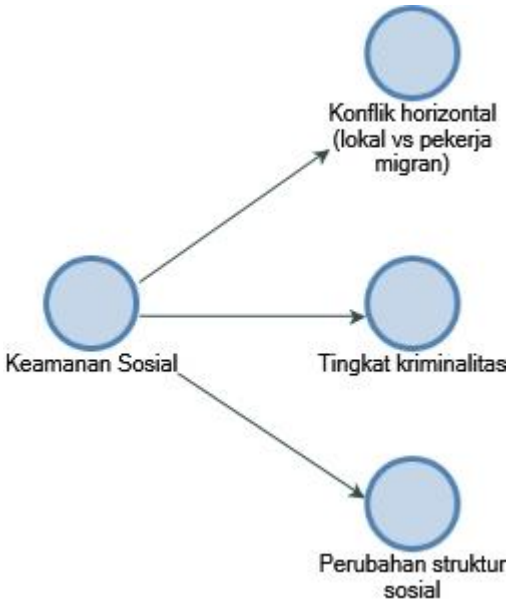

Figure 4. *Social Impact Assessment* on Nickel Smelter Construction in Morowali Regarding Social Security

An analysis of social security in Morowali shows that the presence of the nickel smelter not only has economic impacts but also creates quite complex social dynamics. Tensions between local workers and foreign workers (TKA) are often triggered by disparities in job opportunities, cultural differences, and perceived unfair wage issues, as in 2023 (CNN Indonesia, 2023) . These tensions reflect failures in social governance and policy coordination, as equitable labor arrangements are crucial components of SDG 8 (decent work) and SDG 16 (peaceful and inclusive societies).

Furthermore, changes in social structures, marked by a decline in traditional social solidarity, indicate that the industrialization process is not always in line with the preservation of local socio-cultural values. Local communities that previously relied on communal lifestyles are now beginning to experience disintegration due to economic pressures, lifestyle differences , and social competition. This phenomenon emphasizes that extractive-based industrial development must be balanced with inclusive social policies, including strengthening intergroup dialogue, increasing the capacity of local security forces, and implementing social integration programs for local and migrant workers. Without these policies, the risk of marginalization and social fragmentation will increase, ultimately undermining the sustainability of development itself. The disintegration of local social structures suggests that industrialization has proceeded without sufficient attention to social cohesion, community empowerment, and cultural preservation—key elements in human-centered development paradigms.

In terms of participation and rights, this study maps out several important points, as seen below:

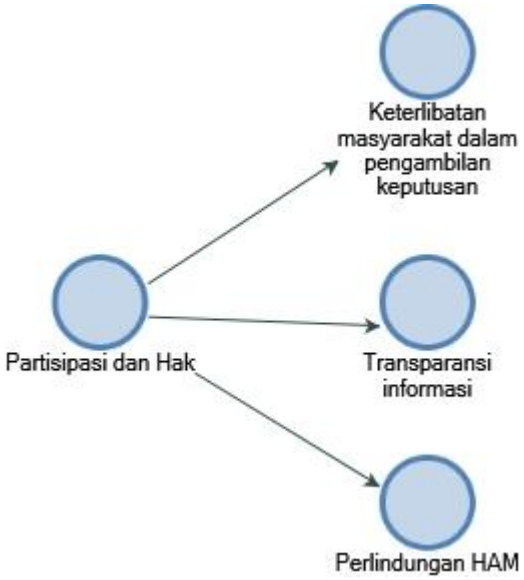

Figure 5. *Social Impact Assessment* on Nickel Smelter Development in Morowali Regarding Participation and Rights

Figure 5 demonstrates limited community participation in planning and decision-making related to smelter development. This lack of meaningful participation contradicts principles of participatory development and violates rights to information, consultation, and free, prior, informed consent (FPIC) especially for indigenous communities.

Reports from NGOs on alleged labor exploitation and intimidation reveal deeper structural governance issues. Weak public oversight and limited transparency undermine trust between communities, government institutions, and industries, showing that CSR programs have been predominantly philanthropic rather than transformative or rights-based (LBH, 2023) . This situation has the potential to worsen the image of industrial development in the eyes of the public and the international community. Therefore, strong oversight mechanisms, transparent policies, and communication forums between the government, companies, and communities are needed to ensure meaningful participation and the protection of citizens' basic rights.

The results of the Social Impact Assessment (SIA) on the construction of a nickel smelter in Morowali show that industrialization brings rapid economic growth, but is accompanied by serious social impacts such as limited access to basic facilities, increased health cases due to pollution, social tensions, and minimal community participation in decision-making. This situation reflects a gap between the logic of economic growth and the principles of sustainable development that emphasize aspects of inclusivity, social justice, and protection of human rights. Based on the triple bottom line concept (economic, social, environmental), development should not only be oriented towards capital accumulation, but also ensure social welfare and ecological sustainability (Chan et al., 2025; Mishra & Pandey, 2025) . Therefore, participatory and transparent governance and strengthening of corporate social responsibility (CSR) are needed so that industrialization in Morowali can become a driver of equitable and sustainable development.

Policy recommendations to support social welfare in Morowali can be seen in Norway's experience in managing the extractive sector. Norway successfully reduced the risk of social inequality by establishing a Sovereign Wealth Fund allocated not only for economic development but also for social security, education, and public health (Gao, 2024; Gasparini, 2023) . This model

demonstrates that profits from the mining and energy sectors can be reinvested in human development. For Morowali, a similar mechanism could be adopted through strengthening regional funds or fair-based revenue sharing , thereby mitigating the negative impacts of industrialization and ensuring the well-being of the surrounding community.

Furthermore, Canadian practices, particularly in mining industry management, can serve as a reference. The Canadian government requires mining companies to develop Impact Benefit Agreements (IBAs) with local communities, ensuring formal agreements regarding social rights, employment opportunities, training, and environmental compensation (Cameron & Levitan, 2014; Hitch et al., 2025) . The implementation of these IBAs has been shown to reduce social conflict and increase community participation in development. If Morowali adopts a similar approach, the nickel smelter company will be encouraged to build more equitable relationships with local communities, expand access to employment, and enhance community ownership of the industrialization process.

CONCLUSION

Social Impact Assessment (SIA) on the development of a nickel smelter in Morowali Regency shows that industrialization brings rapid economic growth, but is accompanied by significant social impacts. In terms of access to basic facilities, the community faces limited access to clean water, sanitation, and housing that is disproportionate to the population surge caused by labor migration. Data shows that access to proper sanitation in Morowali remains low (75.16 %) compared to other areas in Central Sulawesi, while dense and semi-permanent settlements are increasingly prevalent around industrial areas. At the same time , the capacity of public services such as schools and health facilities has proven unable to keep up with population growth, as indicated by the limited number of schools in the Bahodopi industrial district and the lack of hospitals in densely populated industrial areas. This condition creates a gap between economic growth and the fulfillment of the social needs of the local community.

Furthermore, other social impacts are evident in aspects of health, social security, and community participation. The high number of acute respiratory infections (ARI) cases in Morowali is a serious indication of air pollution caused by industrial activities, while limited health services exacerbate the problem. From a social perspective, tensions between local and foreign workers, as well as rising crime, demonstrate that large-scale migration without social planning poses a risk of conflict. Furthermore, local communities tend to be less involved in decision-making, resulting in weak public participation and information transparency. There have even been reports of alleged human rights violations related to working conditions and the protection of vulnerable groups. Overall, the SIA results confirm that the smelter development in Morowali is not in line with the principles of sustainable development, as it places greater emphasis on economic growth than on social welfare, justice, and the protection of community rights.

The results demonstrate that Morowali's nickel smelter development generates significant economic benefits but fails to achieve social and environmental sustainability. The imbalance across TBL dimensions and SDG indicators underscores the need for policy reform centered on justice, transparency, and community empowerment. Without systematic improvements in governance, participation, and social infrastructure, industrialization in Morowali will continue to deepen social inequalities and ecological risks rather than delivering equitable and sustainable prosperity.

REFERENSI

Baud, M., De Castro, F., & Hogenboom, B. (2011). Environmental governance in Latin America: Towards an integrative research agenda. In *European Review of Latin American and Caribbean Studies | Revista Europea de Estudios Latinoamericanos y del Caribe* (Vol. 0, Issue 90). https://doi.org/10.18352/erlacs.9749

Bosák, V., Slach, O., Ženková, K., Ženka, J., & Paszová, L. (2024). Developing social-ecological justice through a context-sensitive reuse of urban vacant spaces. *Environmental Science and Policy*, *159*, 103802. https://doi.org/10.1016/j.envsci.2024.103802

BPS. (2024). *Persentase Rumah Tangga yang Memiliki Akses Terhadap Layanan Sanitasi Layak*. Sulteng.Bps.Go.Id; Badan Pusat Statistik.

BPS. (2025a). *Jumlah Rumah Sakit Umum, Rumah Sakit Khusus, Puskesmas, Klinik Pratama, dan Posyandu Menurut Kecamatan di Kabupaten Morowali, 2025*. Morowalikab.Bps.Go.Id.

BPS. (2025b). Jumlah Sekolah, Guru, dan Murid Sekolah Menengah Pertama (SMP) di Bawah Kementerian Pendidikan, Kebudayaan, Riset, dan Teknologi Menurut Kecamatan di Kabupaten Morowali, 2024/2025. In *Badan Pusat Statistik*.

Cameron, E., & Levitan, T. (2014). Impact and benefit agreements and the neoliberalization of resource governance and indigenous - State relations in Northern Canada. *Studies in Political Economy*, *93*, 25–52. https://doi.org/10.1080/19187033.2014.11674963

Chan, T. J., Huam, H. T., Wong, S. Y., Samson, J., & Fadzilah, A. H. H. (2025). The impact of corporate social responsibility practices on customer purchase intention of clothing industry: An integration of triple bottom line and ISO26000. *Decision Science Letters*, *14*(1), 79–90. https://doi.org/10.5267/j.dsl.2024.11.001

Ciccantell, P. S. (1999). It's all about power: The political economy and ecology of redefining the Brazilian Amazon. *Sociological Quarterly*, *40*(2), 293–315. https://doi.org/10.1111/j.1533-8525.1999.tb00549.x

CNN Indonesia. (2023, January). Bentrok Maut Morowali Utara dan Bom Waktu Tenaga Kerja Asing di RI. *Cnnindonesia.Com*.

Esteves, A. M., Franks, D., & Vanclay, F. (2012). Social impact assessment: The state of the art. *Impact Assessment and Project Appraisal*, *30*(1), 34–42. https://doi.org/10.1080/14615517.2012.660356

Fonchingong Che, C. (2024). Reframing social justice through indigenous know-how: Implications for social development, policy and practice. *Global Social Policy*, *24*(1), 5–24. https://doi.org/10.1177/14680181231170532

Fortin, M. J., & Gagnon, C. (2006). Interpreting major industrial landscapes: Social follow-up on meanings, the case of two aluminium smelters, Alcan (Alma, Canada) and Pechiney (Dunkirk, France). *Environmental Impact Assessment Review*, *26*(8), 725–745. https://doi.org/10.1016/j.eiar.2006.06.002

Gao, X. (2024). The Norway Government Pension Fund Global: The World's Largest Sovereign Wealth Fund. In *The Palgrave Handbook of Sovereign Wealth Funds* (pp. 445–461). Springer International Publishing. https://doi.org/10.1007/978-3-031-50821-9_26

Gasparini, A. (2023). Norway's opportunities via the Sovereign Wealth Fund and the European Green Deal. *International Journal of Environmental Studies*, *80*(5), 1445–1455. https://doi.org/10.1080/00207233.2022.2037335

Handayani, L. (2025, January). Kasus ISPA di Morowali Meningkat Akibat Aktivitas Produksi Nikel yang Masif. *Media Nikel Indonesia*.

Hayvon, J. C. (2024). Action against inequalities: a synthesis of social justice & equity, diversity, inclusion frameworks. *International Journal for Equity in Health*, *23*(1), 12939.

https://doi.org/10.1186/s12939-024-02141-3

Hitch, M., Rodolaki, C., & Barakos, G. (2025). Power imbalances and sustainability challenges: a political ecology analysis of impact and benefit agreements in Canada's arctic mining sector. *Extractive Industries and Society*, *23*. https://doi.org/10.1016/j.exis.2025.101665

IMIP. (2024). *IMIP Terapkan Prinsip Anti-Diskriminasi Karyawan*. Imip.Co.Id.

Iorbo, R., Sahni, S. P., Bhatnagar, T., & Andzenge, D. T. (2024). Social Inclusion and Justice for the Internally Displaced by the Herdsmen-Farmers Conflict in Benue State, Nigeria. *Journal on Migration and Human Security*, *12*(2), 96–109. https://doi.org/10.1177/23315024241239585

Joyce, S. a, & Macfarlane, M. (2001). Social Impact Assessment in the Mining Industry: Current Situation and Future Directions. *Mining, Minerals, and Sustainable Development*, *46*, 28.

Kurniawan, A. R., Murayama, T., & Nishikizawa, S. (2020). A qualitative content analysis of environmental impact assessment in Indonesia: a case study of nickel smelter processing. *Impact Assessment and Project Appraisal*, *38*(3), 194–204. https://doi.org/10.1080/14615517.2019.1672452

LBH. (2023). *Darurat Audit Keselamatan Kerja dan Pelanggaran HAM di IMIP*. Lbhmakassar.Org.

Mihaljevič, M., Ettler, V., Šebek, O., Sracek, O., Kříbek, B., Kyncl, T., Majer, V., & Veselovský, F. (2011). Lead isotopic and metallic pollution record in tree rings from the copperbelt mining-smelting area, Zambia. *Water, Air, and Soil Pollution*, *216*(1–4), 657–668. https://doi.org/10.1007/s11270-010-0560-4

Mishra, P., & Pandey, V. K. (2025). Triple bottom line and environmental sustainability: evolution of global ESG research—a bibliometric analysis. *Environmental Sciences Europe*, *37*(1). https://doi.org/10.1186/s12302-025-01184-9

Mwaanga, P., Silondwa, M., Kasali, G., & Banda, P. M. (2019). Preliminary review of mine air pollution in Zambia. *Heliyon*, *5*(9), e02485. https://doi.org/10.1016/j.heliyon.2019.e02485

Njanike, K., & Mpofu, R. T. (2024). Factors Influencing Financial Inclusion for Social Inclusion in Selected African Countries. *Insight on Africa*, *16*(1), 93–112. https://doi.org/10.1177/09750878231194558

Nurdifa, A. R. (2024). Lagi-lagi Kebakaran Smelter di Morowali, Begini Kronologi Lengkapnya. In *Bisnis.com*.

Xu, M., Feng, Z., Yang, Y., Li, Q., & Ni, S. (2024). Ecological migration and social inclusion of the Yi minority in Southwestern China. *Cities*, *153*, 105291. https://doi.org/10.1016/j.cities.2024.105291