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Green Development Paradox: A Study of ESG at PT IMIP and the Potential for Ecotourism Development in Morowali

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ABSTRACT

This study examines the Green Development Paradox in the implementation of Environmental, Social, and Governance (ESG) practices at PT Indonesia Morowali Industrial Park (IMIP) and explores the potential for ecotourism development as a sustainable development strategy in Morowali Regency. Using a qualitative approach through in-depth interviews, field observations, and document analysis, the research finds that the implementation of ESG at PT IMIP still reveals a gap between sustainability policies and the ecological–social realities on the ground. Although the company has introduced various environmental and social programs, ecological pressures—such as declining air quality and the risk of coastal degradation—continue to be experienced by local communities, thereby generating a paradox within green development efforts. The analysis also indicates that Morowali possesses substantial ecotourism potential, particularly in coastal areas, mangrove ecosystems, and conservation zones; however, its utilization remains suboptimal due to limited policy integration between industry, local government, and community stakeholders. The study concludes that integrating ESG frameworks with community-based ecotourism development can serve as a strategy to mitigate the green development paradox while diversifying non-extractive local economic activities. This research contributes theoretically to sustainable development studies and offers practical recommendations for industry, policymakers, and future researchers to strengthen environmental governance and sustainable ecotourism within extractive industrial regions.

Keywords: Green development paradox, ESG, PT IMIP, ecotourism, sustainable development, Morowali.

1. INTRODUCTION

The intensification of the nickel downstream industry in the Morowali Industrial Park (IMIP) has been a major driver of national economic growth and has positioned Indonesia in the global battery value chain. However, this large investment has given rise to complex environmental and social challenges, such as pollution, hazardous waste management, occupational safety risks, and pressure on the traditional livelihoods of coastal communities.

Although companies in IMIP formally adopt Environmental, Social, and Governance (ESG) practices through sustainability reports, safety incidents, and environmental issues that arise indicate a tension between sustainability claims and operational practices in the field. This phenomenon is referred to as the "Green Development Paradox," in which projects that are claimed to be environmentally friendly actually produce significant negative externalities. (Makkar et al., 2025)

At the same time, Morowali has untapped potential for ecotourism (mangroves, marine life, coastal culture). Ecotourism is seen as an inclusive economic diversification strategy that strengthens local livelihoods and provides incentives for environmental conservation (Mosaix, 2025). The transformation towards this balanced development model requires an in-depth study of the interaction between corporate policies (ESG), local government regulations, and local ecological conditions.

Therefore, this study focuses on examining the paradox of green development in IMIP and the opportunities for developing ecotourism as a diversification strategy to address the negative externalities of industry, while evaluating the credibility and effectiveness of corporate ESG initiatives.

This study uses a framework that begins with Input (Downstreaming Policy and ESG Documents). The process analyzed is the implementation of ESG at IMIP and the potential for greenwashing (ESG paradox). The Output is the actual impact (environmental/social indicators, ecotourism status) (Lambaniga and Franklin, 2014). If there is a significant gap (paradox), the research will formulate an Outcome in the form of a governance strategy to bridge the gap and evaluate the feasibility of developing community-based ecotourism as an economic diversification that internalizes conservation values.

The purpose of this paper is to analyze the green development paradox phenomenon at PT IMIP and formulate opportunities and strategies for ecotourism development in Morowali

as an instrument of economic diversification and mitigation of environmental and social impacts.

The research identification was conducted to determine the extent of ESG implementation carried out by PT IMIP 2021 (Zhao et al., 2023), as well as the gap between ESG claims and practices. In addition, this study also identifies opportunities for ecotourism in Morowali amid extractive mining, as well as governance strategies that must be implemented to achieve harmony among the interests of companies, local governments, and communities in sustainable green development.

2. LITERATURE REVIEW

Sustainable development requires a balance between three dimensions (environmental, social, and economic). However, in practice, the "Green Development Paradox" often arises, which is a situation where initiatives that are claimed to be 'green' actually create substantial negative environmental and social externalities, or result in undisclosed trade-offs. This analysis requires a separation between sustainability rhetoric and actual practices in the field (Zhao et al., 2023).

ESG is an accountability mechanism for assessing corporate sustainability performance. E (Environment) focuses on emissions and waste; S (Social) on working conditions and community impact; G (Governance) on transparency and compliance. The literature warns of a potential decoupling between reported ESG scores and actual performance (ESG paradox, Makkar, 2025). Therefore, evaluations should include field verification and incident data.

The resource curse theory explains the vulnerability of regions that are heavily dependent on resource extraction. Economic diversification, particularly through conservation-based ecotourism, is seen as a strategy for mitigating economic and social risks (Sachs, 2006). Ecotourism can internalize ecological values in the local economy if it is managed in a participatory and equitable manner.

Sustainable ecotourism adheres to the principles of conservation, education, and equitable benefit sharing. The Community-Based Ecotourism (CBET) model emphasizes the involvement of local communities in planning and operations, which aims to reduce conflicts and increase compliance with ecosystem conservation (e.g., coastal and mangrove ecosystems).

3. RESEARCH METHOD

This study adopts a qualitative approach with an exploratory case study design to gain an in-depth understanding of the green development paradox phenomenon in the implementation of PT IMIP's ESG and the potential for ecotourism development in Morowali. The research location is centered in Morowali Regency, Central Sulawesi, including the IMIP area and potential ecotourism areas, and was conducted from February to July 2025.

The research type is descriptive-analytical, qualitative. Data is collected through triangulation of three main techniques: in-depth interviews with key informants (community, local government, PT IMIP, NGOs, ecotourism operators), field observations, and documentation studies (ESG reports, local government documents). Informants are selected using purposive and snowball sampling techniques until data saturation is achieved.

Data validity is ensured through triangulation of sources, techniques, and member checking. Data analysis uses an interactive model, including data condensation, presentation, and conclusion drawing to produce contextual and actionable findings to answer the research questions.

4. RESULTS

4.1. Overview of Research Location

Morowali Regency is the center of nickel-based industry growth in Indonesia, with the PT Indonesia Morowali Industrial Park (IMIP) industrial area as the main center of national mineral downstreaming production activities. Geographically, this region is dominated by coastlines, hills, and tropical forest areas rich in biodiversity, including karst formations and marine waters with high marine tourism potential, such as Sombori Island, Tanah Kuning, and the waters of Bahodopi.

Figure 1. Sombori island.

The presence of PT IMIP since 2013 has had a transformational impact in economic, social, and environmental terms. The company claims to apply Environmental, Social, and Governance (ESG) principles through waste management programs, the gradual use of renewable energy, the absorption of local labor, and the implementation of CSR. However, the increase in industrial intensity has also been accompanied by dynamics such as changes in land cover, deterioration in air and water quality in several areas, local power outages due to industrial supply, and changes in the economic structure of coastal communities.

In the context of ecotourism, Morowali has two main potential clusters:

a. Marine ecotourism, with attractions such as karst caves, clear seawater, waterfalls, and coral reef ecosystems.

Figure 2. Sombori Island, Vera Waterfall, and Diamond Cave.

b. Cultural ecotourism, such as local communities with traditional coastal and agricultural activities.

Figure 3. Sampela Art Studio and Konanami MSMEs in Unsongi Village.

This overview shows the overlap between industrial activity and ecotourism development opportunities, giving rise to the phenomenon of the green development paradox, a condition in which green development is claimed to be underway, but the actual impact on the ground raises critical questions about long-term sustainability.

The results of the study show that the green development paradox in the case of PT IMIP arises from an imbalance between economic growth, environmental protection, and social empowerment. These findings reinforce Martinez-Alier's (2021) idea of ecological distribution conflicts occurring in extractive industry areas.

The implementation of PT IMIP's ESG was found to be more administrative than ecological in nature. This is in line with Ritchie's (2023) research, which confirms that many industrial companies use ESG as a reputation strategy rather than a means of structural change. The same is true in the case of PT IMIP's ESG in Morowali district. In its ESG report, PT IMIP claims that the company has strictly identified pollution risks arising from all construction, production, and daily activities, such as liquid waste, alkali waste, and other toxic solvents, to prevent and manage water quality issues. PT IMIP implements the 2021 IPLC Factory Waste Discharge Standard as a form of compliance with regulations related to "liquid waste discharge permits to the sea."

Figure 4. Production liquid waste treatment system - ammonia evaporation system.

In addition, PT IMIP also claims that it has complied with national standards in terms of Exhaust Gas Emissions – Fixed Sources and regarding stationary source emission quality standards for thermal power plant operations and/or activities. PT IMIP has formulated and implemented an "air pollution prevention and environmental pollution control management system." IMIP's main waste gas emissions include sulfur dioxide and nitrogen oxides produced by organized pollution, and materials and particulates produced by unorganized pollution. IMIP effectively manages various emissions and takes measures such as controlling the formation of gas pollution to reduce dust and unorganized pollution. Load, comprehensively reducing exhaust emissions.

Figure 5. Hydrogen gas cleaning and desulfurization system.

What PT IMIP has reported in its ESG report is in stark contrast to the conditions in the area surrounding the mine. We can see this for ourselves, and it has even been reported in several articles about the conditions along the coast of Bete-bete Village in Bahodopi District. Bete-bete Village is one of the villages closest to the affected mining site. According to Syawal, a resident of Bete-bete Village:

> *"In the past, Bete-Bete Village was so beautiful and picturesque. Green hills stretched out, flanked by a stunning beach. Fertile soil and clear seawater provided for all the residents' needs. They never lacked anything. However, since the arrival of the mine in 2010, followed by the large number of barges docked at the port, our income as fishermen has decreased because we no longer dare to fish near the coast. Due to the extremely murky water, there are certainly not many fish left."*

A study conducted by Wahyudi (2025) revealed that PT IMIP has caused water pollution in rivers and the sea, as well as a decline in groundwater quality as a result of mining activities (Sangadji & Malau, 2025).

Figure 6. Seawater conditions at the coastline in the mining area of PT IMIP.

From the results obtained, we can see that there is a green development paradox between PT IMIP's ESG report and ecotourism development. This should be a concern for stakeholders, especially in terms of preserving several destinations around the mining area. For example, Sombori and Pantai Pasir Panjang are leading destinations in Morowali. In addition, there is also the Konanami MSME, which is also a driver of the community's economy that strongly upholds the concept of cultural preservation, one of which is making Morowali woven sarongs.

The efforts made by the government to market Morowali as a destination will certainly be a consideration for potential tourists to visit. Apart from water pollution and environmental damage, air quality is also a consideration. According to Gunarto (2024), the smelter production process produces fine dust emissions and sulfur dioxide (SO_2) gas, which cause significant air pollution. This pollution not only affects industrial areas but also extends to residential areas (Pesisir, 2024).

Figure 7. Emissions from the Morowali Nickel Mine.

According to data obtained from the Morowali Health Office in 2024, cases of respiratory diseases have increased to 339,305 cases. The subdistricts of Bahodopi and Bungku Pesisir and West Bungku as the highest mining industry area in Morowali Regency. Although there is a paradox of green development in Morowali Regency with the nickel mining case, it does not mean that the entire region is affected, but it shows that environmental management claims still leave structural problems.

Despite the pressures, the potential for ecotourism (especially in more isolated areas) remains strong. Ecotourism, if developed through community-based tourism with shared-value support from companies, can be a strategy for mitigating economic and social risks. This is in line with the theory that ecotourism can be a mitigation strategy in industrial areas if managed collaboratively (Boley & Green, 2022).

Overall, the results of the study show that the green development paradox in Morowali is rooted in the imbalance between industrial growth and environmental/social protection. Sustainable solutions require multi-stakeholder collaboration oriented towards creating shared value between corporations, local governments, and local communities through ecotourism instruments.

5. CONCLUSION

This study analyzes the Green Development Paradox phenomenon in the implementation of ESG at PT IMIP and the potential for ecotourism in Morowali. Four key findings form the basis of the conclusion: ESG Implementation is Compliance-Oriented, Not Transformative: PT IMIP has implemented ESG initiatives (documentation, CSR), but their implementation tends to be administrative and compliance-oriented, rather than structural change. This confirms the green development paradox because local environmental conditions (water quality, air quality, vegetation) still show significant pressure, causing public skepticism about the effectiveness of ESG.

Social-Ecological Impacts are Diverse: Industrial activities have a tangible environmental impact (declining river quality, air pollution) and complex social impacts, including changes in the economic identity of communities (from fishermen/farmers to industrial workers), which create social adaptation and potential value conflicts.

High Ecotourism Potential but Not Optimized: The Morowali area (Sombori, Tanah Kuning) has high marine and geomorphological ecotourism potential, making it an alternative

economic opportunity. However, this potential has not been fully utilized due to limited access, facilities, promotion, and ecological pressure from industry.

Ecotourism as a Way Out of the Paradox: Ecotourism has the potential to become a complementary development strategy and mitigate the impact of industry if it is developed through a community-based approach, tourism, supported by local government policies, and integrated with corporate ESG programs. Unfortunately, integrated collaboration between industry, local government, and the community is currently still weak.

Academically, this research contributes by empirically identifying the relationship between the nickel industry's ESG and ecotourism opportunities in the context of the green development paradox in Morowali.

Local Government: Urgently develop integrated policies (industry-tourism), improve environmental monitoring through the publication of open data, and formulate a master plan for sustainable ecotourism.

PT IMIP: Must integrate ESG with regional development strategies (CSR/CSV) that support ecotourism conservation, improve data-driven environmental transparency, and implement broader ecological rehabilitation as part of educational tourism attractions.

Local Communities: Encourage the development of community-based tourism models and economic diversification.

Further research is recommended to: (1) Expand variables (e.g., ecotourism economic analysis, GIS-based land cover analysis); (2) Use a mixed methods approach (qualitative and quantitative) for environmental impact precision; and (3) Conduct a longitudinal study to assess the effectiveness of ESG programs and long-term ecological changes.

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