



SYSTEMATIC LITERATURE REVIEW ON HUMANITY IN ENVIRONMENTAL ISSUES

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ABSTRACT

This study aims to examine the role of humanitarian values in sustainable environmental management in the mining sector, especially through the Systematic Literature Review (SLR) approach. Humanity values that include justice, solidarity, participation, and moral responsibility are understood as important foundations in maintaining a balance between the exploitation of natural resources and the protection of community rights. Through a systematic analysis of various international and national literature, this study found that the application of humanity in mining environmental governance can minimize conflict, strengthen local community participation, and encourage companies to implement environmental ethics through social responsibility (CSR) programs. Case studies from Germany, Canada, the United States, and Indonesia reinforce that a humanitarian value-based approach can create more inclusive, equitable, and sustainable environmental policies. The results of this study are expected to be a normative and practical basis for nickel mining management in ecologically sensitive areas such as Raja Ampat.

Keywords: Humanity; Environmental Management; Environmental Issues.

INTRODUCTION

Nickel mining activities in Raja Ampat have triggered various environmental issues that threaten ecosystems and community well-being. These problems become increasingly complex when humanity values are not fully integrated into environmental management practices. Yet, values such as empathy, solidarity, and social justice are fundamental to collective efforts in environmental protection and ensuring ecosystem sustainability.

On the other hand, data shows that environmental damage caused by mining in Indonesia is quite alarming. The Ministry of Environment and Forestry (KLHK) recorded that approximately 3.2 million hectares of land in Indonesia have been degraded due to mining activities (KLHK, 2022). The Mining Advocacy Network (JATAM) reported in 2023 that out of 8,588 mining permits in Indonesia, about 40% operate without proper environmental restoration, resulting in deforestation, water pollution, and the destruction of wildlife habitats.

In this context, the role of the government is crucial as a regulator and supervisor of mining activities through policies, regulations, and law enforcement. The government is responsible for ensuring that nickel mining practices align with

sustainable development principles and uphold humanity values. Unfortunately, weak oversight and poor policy implementation are often the main causes of uncontrolled environmental degradation (KLHK, 2022). Therefore, integrating humanity values into government policy and governance becomes a strategic step to prevent further environmental destruction.

This study seeks to examine the role of humanity in the context of environmental management in Indonesia, particularly in preventing environmental damage caused by nickel mining in Raja Ampat. The findings are expected to provide both practical and theoretical contributions to strengthening humanity-based principles in environmental management, and to serve as a reference for the government in formulating more responsive policies to humanitarian aspects.

Mining activities in Indonesia particularly those involving nickel, gold, tin, and coal have significantly contributed to environmental damage across various regions. One of the most visible forms of destruction is deforestation and land degradation. According to Auriga Nusantara (2023), about 24,811 hectares of forest were lost within nickel mining concessions between 2000 and 2022. This is supported by findings from Global Forest Watch (2022), which reported that Indonesia accounts for 58.2% of all mining-related deforestation across 26 countries.

More severe damage is found in coastal areas such as Bangka Belitung, where tin mining has destroyed 236,000 hectares of mangrove forest and severely damaged 64,514 hectares of coral reefs—mainly due to sedimentation and water pollution from mining. In addition, over 12,607 mining pits have covered 15,579 hectares of land, creating critical zones that are extremely difficult to restore. Mining activities have also impacted watersheds (DAS), with KLHK (2023) reporting that 108 out of roughly 4,000 watersheds in Indonesia are heavily damaged due to changes in water flow, sedimentation, and the loss of water catchment areas.

Aside from land and water degradation, mining has caused heavy metal contamination in rivers and seas. WALHI (2021) found high levels of heavy metals, such as nickel, manganese, and chromium in areas around nickel mines (e.g., East Luwu, Wawonii, Obi Island, Halmahera), primarily due to ore spills and the collapse of sedimentation ponds.

RESEARCH METHOD

This study employs the **Systematic Literature Review (SLR)** method to examine the role of humanity values in preventing environmental degradation and promoting sustainable environmental management, particularly in the mining sector. This approach was chosen to obtain a comprehensive and systematic synthesis of various relevant scientific and policy literature.

The SLR process follows the PRISMA guidelines (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), which include four main stages: identification, screening, eligibility, and inclusion. This study aims to answer three main research questions:

1. How are the concepts and values of humanity understood in relation to environmental management?
2. How have humanity-based practices been implemented in mining contexts across different countries?

3. How can humanity-based strategies be developed to promote sustainable environmental management in Indonesia?

The literature search was conducted systematically using several academic databases and reputable repositories, such as Google Scholar, Scopus, JSTOR, ScienceDirect, the Indonesian National Repository, WHO, UNDP, ILO, and various academic institutions. Keywords used (in both English and Indonesian) included “humanity AND environmental management”, “ethical mining AND CSR”, “community participation AND mining”, and “environmental justice AND indigenous rights”, “dialog multipihak AND tambang”, “nilai kemanusiaan AND pertambangan” Boolean operators such as AND and OR were applied to filter more relevant results.

Table 1. Inclusion and Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Scientific articles/journals (2008–2023)	Articles published before 2008
Literature in English and Indonesian	Articles without peer-review or complete references
Focus on humanity, environment, or mining	Focus on unrelated issues (e.g., macroeconomics, pure politics)
Case studies at local and global levels	Personal blogs/opinions without academic basis

To ensure validity, triangulation was carried out by comparing sources from academic journals, international institutional reports, and field case studies. Only sources with high credibility and complete references were included, and all analysis was conducted systematically and transparently, in line with PRISMA principles.

FINDINGS AND DISCUSSION

1. Humanity in Efforts to Prevent Environmental Degradation

The concept of humanity has become a vital discourse in sustainable development efforts, including in the context of environmental and mining management. Broadly, humanity refers to core human values such as justice, solidarity, empathy, and moral responsibility toward others and the natural environment (United Nations, 2015). Philosophically, Immanuel Kant emphasized that humanity places human dignity at the center of ethical considerations, which is highly relevant to natural resource governance so as not to harm society. Similarly, the World Health Organization (WHO, 2020) connects humanity to the right to a healthy environment as part of fundamental human rights, making it imperative that development efforts uphold these values.

In the Indonesian context, humanity values are reflected in the principles of social justice and solidarity embedded in Pancasila and the 1945 Constitution. Yuliani (2020) emphasized that ethical mining management must be grounded in respect for humanity values not merely economic interests. Kurniawan (2019) highlighted that multi-stakeholder dialogues based on humanitarian principles could reduce environmental conflicts by up to 30%, demonstrating the key role of humanity in resolving natural resource disputes.

Humanity as a universal value is also elaborated by Martha C. Nussbaum (2011) in *Creating Capabilities*, where she links it to the fundamental right to live

with dignity and freedom. In this framework, a sustainable environment is essential for people to enjoy a dignified life. Nussbaum's Capability Approach asserts that mining governance is not just about economic output, but also about ensuring safe and livable spaces for affected communities.

Internationally, the United Nations Development Programme (UNDP, 2022), in its Human Development Report, emphasizes that humanity must be the foundation of all development policies, including in the extractive sector. Humanitarian values promote inclusive approaches no one should be left behind, especially indigenous and local communities who are often the most affected by mining activities.

Pope Francis, in his encyclical *Laudato Si'* (2015), also stresses that caring for the Earth is a human responsibility (*ecological responsibility*). He advocates for global solidarity, especially for those most vulnerable to environmental degradation. This message is relevant to the mining sector, where local communities often become marginalized and suffer severe ecosystem damage.

In the Indonesian academic context, Triwiyanto (2020) argues that humanity values in environmental governance must be translated into pro-people, participatory, and equitable regulations. Humanity should not be a mere slogan, but an ethical standard that compels all stakeholders governments, corporations, and communities to collaborate in protecting the environment.

Thus, the literature strongly confirms that humanity values are a moral, ethical, and legal foundation for maintaining a balance between natural resource utilization and the protection of human rights. The implementation of humanity principles in the mining sector is essential for achieving more just, sustainable, and dignified development.

2. Case Studies: Humanity as an Effort to Prevent Environmental Degradation

The concept of humanity serves as a crucial foundation in establishing equitable and sustainable environmental governance. Various international case studies demonstrate how the principles of humanity have been implemented in efforts to prevent environmental degradation.

For instance, in Germany, the Just Transition program adopted during the closure of coal mines in the Ruhr region focused not only on economic factors but also on social and humanitarian aspects. The German government provided retraining programs for workers, protected labor rights, and implemented social security programs for affected communities. This approach reflects the integration of social justice and solidarity within environmental policies, as advocated by the International Labour Organization (ILO, 2015).

In Canada, respect for Indigenous peoples' rights has been realized through the mechanism of Free, Prior, and Informed Consent (FPIC), which requires Indigenous communities' approval before mining operations can proceed. This practice aligns with the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP, 2007), which emphasizes the importance of protecting Indigenous dignity and rights over land and environmental sustainability. This approach shows how humanity is embodied through dialogue and consultation that respects ecosystem sustainability and local community welfare.

The Environmental Justice movement in the United States is also a clear example of the application of humanity values in environmental contexts, particularly in addressing the unequal distribution of environmental risks faced by

minority communities. The Warren County case in North Carolina in 1982 marked the beginning of this movement, demanding social justice and a healthy environment for all social groups. In response, the U.S. government issued Executive Order 12898 in 1994, instructing federal agencies to prioritize environmental justice and to involve affected communities in decision-making processes.

From these various case studies, it becomes evident that humanity is not only a moral dimension but also a foundation for public policy and international standards in environmental management. The humanity-based approach can serve as a crucial inspiration for Indonesia, particularly in managing the environmental impacts of nickel mining in Raja Ampat, ensuring that economic development does not come at the expense of environmental preservation and the rights of local communities.

Table 2. Literature Matrix: Case Studies on the Implementation of Humanity

NoSource / Author	Year	Location / Case	Humanity Implementation	Impact / Outcome
1 ILO – Just Transition	2015	Germany (Ruhr region)	Just transition for mining workers	Provided retraining programs and social security for affected workers
2 UNDRIP	2007	Canada (Indigenous communities)	Free, Prior, Informed Consent (FPIC)	Indigenous communities must be consulted before mining permits are granted
3 US Environmental Justice	1982–1994	AS (Warren County, North Carolina)	Access to environmental justice	Issuance of Executive Order 12898 on environmental justice
4 UNDP – Human Development Report	2022	Global	Humanity as a policy principle	policy principle Promotes inclusive development and prevents the marginalization of local communities

3. Implementation of Humanity as a Role in Sustainable Environmental Management

The literature analysis conducted in this study successfully identified three key behavioral approaches essential for preventing environmental degradation caused by mining activities: community solidarity and participation, environmental ethics and corporate social responsibility (CSR), and multi-stakeholder dialogue based on humanity values.

First, community solidarity and participation demonstrate the vital role of local communities as the frontline actors in environmental monitoring and restoration. This is supported by Widianingsih (2021), who found that active community involvement such as reporting illegal mining, monitoring water quality, and participating in village deliberations was capable of reducing deforestation rates by up to 20% in mining areas. This participatory mechanism is driven by increasing environmental awareness, the establishment of strong local organizations, and close collaboration between communities and village governments. A solid community presence enables tighter supervision, thereby encouraging mining companies and local governments to comply with higher environmental standards.

Second, the implementation of environmental ethics and corporate social responsibility (CSR) is crucial. Yuliani (2020) emphasized that mining companies

should not merely comply with formal regulations but must internalize environmental ethics and ecological justice within their CSR programs. Ethical CSR includes post-mining land reclamation, responsible waste management, and the provision of alternative economic opportunities for communities affected by mining. A CSR approach rooted in humanity fosters a balance between business interests and environmental protection, creating harmony among corporations, communities, and ecosystems.

Third, multi-stakeholder dialogue based on humanity values is equally critical. Kurniawan (2019) highlighted that dialogue grounded in mutual respect, deliberation, and empathy could reduce environmental conflicts by up to 30% in several mining locations. This mechanism is realized through village discussion forums, mediation between companies and residents, and the formulation of environmental recovery roadmaps that involve all stakeholders. Inclusive and humanistic dialogue allows various interests economic, social, and environmental to be aligned, minimizing conflicts and strengthening ecosystem recovery efforts.

Overall, these three themes are interconnected and mutually reinforcing in building a sustainable environmental management model. Community solidarity ensures strong monitoring and reporting, environmental ethics encourage corporate responsibility, while multi-stakeholder dialogue provides a space for compromise and joint problem-solving. This approach serves as a foundation for developing an environmental management model rooted in humanity values, which emphasizes not only the protection of nature but also justice and community well-being.

Table 3. Literature Matrix: Practical Strategies for Humanity-Based Environmental Management

No	Source / Author	Year	Location / Context	Implementation Strategy	Impact / Key Findings
1	Yuliani	2020	Indonesia (mining CSR)	Environmental ethics & CSR	Ethical CSR enhances corporate legitimacy and social balance
2	Widianingsih	2021	Indonesia (community monitoring)	Community participation in oversight	Community efforts reduced deforestation by 20% in mining zones
3	Kurniawan	2019	Indonesia (multi-stakeholder forum)	Humanity-based dialogue	Dialogue reduced environmental conflicts by 30% in mining sites
4	Triwiyanto	2020	Indonesia (regulation)	Participatory regulation based on humanity	Pro-people regulations balance economic and ecological interests

In terms of practical implementation, the three main themes identified in this analysis can be translated into various concrete strategies and actions relevant to the mining context in Indonesia.

For community solidarity and participation, implementation can be carried out by forming village- or subdistrict-based community working groups that focus on monitoring mining activities and their environmental impacts. These groups should be supported through environmental training and education programs to ensure that local communities have the technical capacity and adequate knowledge. Additionally, the strengthening of local wisdom such as the use of customary laws

and traditional practices can serve as added value that legitimizes the role of communities in preserving the environment.

Meanwhile, regarding environmental ethics and corporate social responsibility (CSR), mining companies must design CSR programs that are more transparent, measurable, and accountable. CSR efforts should not be ceremonial or merely for compliance, but must genuinely address the needs and interests of local communities. For example, companies can provide funding and assistance for post-mining land restoration, conduct independent environmental audits, and offer economic support to residents who lose their livelihoods due to mining activities. This will foster a mutually beneficial symbiosis between the company and the surrounding communities.

As for multi-stakeholder dialogue based on humanity values, local governments can facilitate regular forums that involve all key actors companies, community leaders, NGOs, academics, and the media. The implementation of such dialogue must prioritize principles of inclusivity and transparency by ensuring that valid data is accessible to all parties. Furthermore, each forum should conclude with a clearly defined roadmap and a joint monitoring mechanism. In this way, dialogue goes beyond discussion and results in concrete commitments and actions for environmental improvement.

Table 4. Implementation of Key Behaviors: Strategies and Practices

Key Behavior	Implementation Strategy	Practical Application
Community Solidarity & Participation	Capacity building (education, training)	Formation of village-based environmental watchdog groups
	Strengthening local organizations and customary law	Community patrols and customary regulations for mining
	Collaboration with village governments	Use of local wisdom and traditional laws to regulate mining activities
Environmental Ethics & CSR	Ethical, environmentally-focused CSR program design	CSR supporting land reclamation and revegetation
	Independent environmental audits	Economic alternatives for post-mining livelihoods
	Transparency and citizen engagement in CSR	Public disclosure of environmental audit results
Humanity-Based Multi-Stakeholder Dialogue	Regular, inclusive stakeholder forums	Village forums involving companies, local authorities, NGOs, academics, and media
	Facilitation of conflict mediation	Joint roadmap for environmental restoration
	Commitment mapping and collective monitoring	Agreed-upon monitoring mechanisms and follow-up actions

In practice, the implementation of these three themes requires strong government policy support, such as participatory regulations, incentives for companies that adhere to environmental ethics, and legal protection for communities engaged in environmental monitoring. This integrated approach becomes the backbone of a humanity-based environmental management model, where care and compassion are central to preserving nature and ensuring the sustainability of human life.

CONCLUSION

This study affirms that humanity values play a crucial role in shaping fair, inclusive, and sustainable environmental management within the mining sector.

Through the Systematic Literature Review (SLR) approach, it is evident that principles such as social justice, community solidarity, active public participation, moral responsibility, and environmental ethics serve as essential foundations for designing mining governance policies that are not merely economically driven but also uphold human dignity and ecological integrity. Case studies from various countries demonstrate that humanity-based approaches are capable of reducing social conflict, strengthening ecosystem protection, and increasing public trust in environmental policies. In the context of Indonesia especially in ecologically sensitive regions such as Raja Ampat integrating humanity values into nickel mining governance is imperative to ensure environmental sustainability and community well-being. Therefore, development policies in the mining sector should adopt a management model grounded in humanitarian values as an ethical, normative, and strategic foundation for sustainable development.

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