



Waste Management Issues in Indonesia: Implications for the Nation from Socio-Political Ethical Analysis

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Abstract

Background: Waste management in Indonesia is a complex and ongoing issue affecting environmental, public health, and economic development, as well as the overall quality of life.

Objective: This paper examines the issue from a socio-political and philosophical perspective, recognizing that waste is more than a technical issue it is also an ethical issue and one of social responsibility.

Methods: This research uses normative qualitative research, combining philosophical analysis with systematic policy evaluation.

Results: The waste crisis is interpreted as reflecting three interrelated failures: (1) individual moral failure widespread disregard for collective environmental responsibility; (2) socioeconomic injustice the disproportionate burden of poor waste management falling on marginalized communities; and (3) governance failure characterized by weak institutional coordination, poor policy implementation, and inadequate enforcement. This study contributes a normative ethical framework that bridges political philosophy and public policy analysis in the Indonesian context.

Conclusion: These efforts are essential for developing fair, sustainable, and human rights-based waste management systems in the public interest. The novelty of this study lies in its application of a normative political ethics framework drawing on Suseno (2016) to systematically evaluate waste governance as a moral and institutional accountability issue, thereby bridging philosophical analysis with public policy discourse in the Indonesian context.

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INTRODUCTION

Like many countries around the world, including Indonesia, waste management has been deteriorating due to urbanization, population growth, and changes in community consumption patterns (Abidin et al., 2023; Arfanuzzaman & Dahiya, 2019; Wikurendra et al., 2024). Rapid urban growth, spatial concentration of economic activities, and demographic clustering collectively contribute to a significant increase in solid waste generation across the country (Singh et al., 2024; Zhao et al., 2024). At the same time, this growth is placing tremendous pressure on existing waste management systems, which for the most part are not equipped with the necessary capacity and efficiency to respond to surging demand (Zhang et al., 2019).

Consequently, this situation has led to a range of negative effects, such as ecosystem destruction, heightened public health risks, and improper resource allocation, all of which are fundamental impediments to economic efficiency. The technical and operational aspects of waste management are certainly critical issues, but they represent only one part of a much larger and more complex puzzle (Chang et al., 2011). Waste management, thus, operates at a higher philosophical level of its own, engaging moral responsibility, governance quality, and social

justice: ethics versus practice (Rendtorff, 2019; Zorpas et al., 2025). Specifically, improper waste management, low awareness, and unsustainable disposal practices such as open dumping and uncontrolled burning have contributed to the plastic waste crisis becoming one of the greatest environmental challenges of this century (Ferronato & Torretta, 2019).

According to the Ministry of Environment and Forestry of the Republic of Indonesia, Indonesia generates approximately 68.5 million tons of solid waste per year, of which only around 39% is properly managed through formal waste management systems. The Central Bureau of Statistics further reports that waste generation has increased by over 20% in the past decade, driven by rapid urbanization and changing consumption patterns. The UNEP Global Waste Management Outlook identifies Indonesia as one of the largest contributors to global marine plastic pollution, with an estimated 0.48–1.29 million metric tons of plastic waste entering the ocean annually (World Bank). These figures underscore the urgency of the governance and ethical analysis presented in this paper.

More in the Ethics series: Do Waste Management Ethics Hinge on Infrastructure and Technology? Why this is at the heart of our socio-political obligation. One way to approach these issues is through a socio-political ethics perspective, a branch of ethical thinking concerned with the moral foundations of socio-political arrangements, including public institutions and collective decision-making, as well as the legitimacy, accountability, justice, and equity of both (Suseno, 1991). When this perspective is applied to a specific sphere of action, such as waste disposal, it highlights issues of responsibility, obligation, and accountability in relation to environmental practices. The treatment and disposal of waste should not be viewed solely as technical activities, but as social practices that reflect ethical choices and priorities of institutions and society (Hietala & Geysmans, 2022; Yerima & Nwana, 2025). The way we deal with rubbish says a great deal about the public and its ethics—about the tendency of political systems to prioritize the needs of the group over the needs of the individual, personal comfort, or short-term political cycles—and this remains evident.

Through a political ethics lens, this paper examines the socio-political layers of the waste issue in Indonesia. Political action should be guided by moral principles, and as Suseno (1991) argues, political power should be exercised morally. These ethical norms are not merely ideals but form a solid foundation of governance that protects the use of public power for the common good. Justice, human dignity, and accountability—the principles that underpin responsible political action—are deeply interconnected.

Likewise, Suseno (1991) asserts that moral obligation must be embedded in political power, stating that “the act of political power must be attached to moral obligations: to behave morally, to act fairly, and to prioritize human welfare.” Therefore, clusters of waste policies and administrative actions cannot be treated as purely technical at the point of implementation, as they represent an ethics of governance and reflect the moral agency of institutions and society. Thus, waste management is not only about the effectiveness of implementation methods, but also about the quality of moral governance and the extent to which society advances collective social responsibility.

Therefore, this moral framework illustrates how current waste management in Indonesia reflects broader ethical issues in which governance systems act as co-actors in shaping social behavior. The persistent lack of infrastructure and environmentally harmful practices such as open dumping and waste burning exemplify major lapses in accountability, revealing a preference for short-term gains over long-term public goods (Husein, 2026). Additionally, non-engagement of communities in waste management programs highlights a fragile participatory governance framework and reflects environmental injustice toward hard-to-reach, poorer sections of society. More broadly, within socio-political ethics, these issues should not be viewed merely as administrative failures but as moral failures, as they represent a departure from the ethical standards that should guide collective decision-making. Ethical governance requires convergence between policy, practice, and values on one hand, and between state actors, citizens, human dignity, justice, and public interest on the other (Suseno, 1991).

Moreover, waste management issues in Indonesia also represent ethical challenges at a macro level within societal and political governance (Al Fariz et al., 2024; Aslan, 2025). They

reveal the extent of transparency, accountability, and equitable service provision within public institutions. Ethical governance reflects not only what is decided, but how decisions are made, including the distribution of environmental costs among groups and the meaningfulness of decision-making processes. These factors indicate whether responsibility is shared fairly and whether ethical commitment to action is proportionate.

Waste management as political ethics—underlining everyday ethics—reclaims waste management as ethical work, showing that routine administrative practices (waste collection, recycling, and disposal) are not trivial or normatively insignificant processes (Sosna, 2024). Rather, they provide tangible grounds for evaluating how governance systems are deployed in relation to moral obligations and collective ethical awareness in everyday social practice.

Considering the growing waste crisis in Indonesia, the issue cannot be understood merely as an ecological or supply-chain problem, but rather requires an alternative framing as a socio-political and ethical crisis—a wicked problem that demands a more human-centered approach. Unlike efficiency-based appraisal models in waste management, the perspectives derived from Suseno (1991) allow waste management practices to be evaluated in terms of justice, accountability, and the promotion of the common good.

Thus, the dignity of life, equity among stakeholders, and moral sustainability should take precedence over waste. Indonesia's waste management, therefore, becomes a *de facto* and *de jure* litmus test of the nation's moral fabric, institutional functioning, and national character. This review, appearing in November 2023, highlights that waste management challenges demand more than technological, engineering, and technical solutions; they require a comprehensive reimagining of governance and civic culture grounded in ethical engagement for sustainability, justice, and the public good.

Despite extensive literature on waste management from engineering and environmental science perspectives, a significant gap exists in studies that systematically evaluate Indonesia's waste governance failures through an integrated socio-political ethical lens. Existing scholarship tends to treat waste management as either a technical problem (infrastructure, technology) or a policy problem (regulation, enforcement), with limited attention to the moral dimensions of governance accountability, distributive justice, and collective civic responsibility. This paper addresses this gap by applying Suseno's (1991) political ethics framework to demonstrate that sustainable waste governance requires not only technical and regulatory reform, but also a fundamental realignment of ethical values in public institutions and civil society. The novelty of this study lies in the systematic application of normative qualitative analysis—combining philosophical ethics with public policy evaluation—as a methodological contribution to socio-environmental governance scholarship in developing country contexts.

METHOD

It resides within a normative qualitative research tradition, establishing a demarcation between philosophical inquiry and systematic public policy evaluation. Such a method is especially appropriate for this type of research because the study does not merely seek to describe social and political phenomena (the cases, so to speak), but also to evaluate them against normative moral theories (applied ethics, so to speak), while remaining committed to social practice (Cohen & Kahn, 2011). The normative qualitative methodology functions, initially, as an interpretative lens on social reality and, secondly, as a basis for value-driven critique. Hence, these two in tandem act as a bridge between ordinarily mutually exclusive realms: that of the empirical and that of the moral—substantively, in a polyvocal way, engaging with the ethics of collective governance and social behavior.

Its analytic rigor and theoretical richness come from consulting a wide variety of sources. What we emphasized in this context were (1) philosophical papers—delineating frameworks and reasoning contributing to social responsibility, (2) policy assessments—elaborating on the actual processes of making and implementing regulatory decisions, and (3) peer-reviewed research articles—examining, interpreting, and providing evidentiary support for current social processes. The political ethics of Suseno (1991) have been particularly useful in shaping the philosophical and normative framework used in analyzing normative issues in public policy. Additionally, Suseno (1991) offers important insights into normative ethics and its intersection with politics, which are highly relevant for governance practice.

This is an interpretative analytical system implemented in this study. It encompasses a systematic exploration of data to expose ethical dimensions embedded within public policy and social conduct, with a particular focus on waste management. Such scrutiny is hermeneutical—it interprets, construes, and synthesizes textual material, policy rhetoric, and philosophical argumentation to detect consistencies, inconsistencies, and normative implications. Thus, the analysis aims to reveal, in the broadest sense, the overt and covert factors that influence policy choices and human behavior more generally through ethical deliberation. Instead of being purely descriptive, the study is evaluative, providing a bridge between aspirational goals and institutional practice by assessing the extent to which ethical ideals are achieved—or not—in governance processes.

Third, it provides examples in which ethics and public policy are relevant to research; for example, waste disposal serves as a real-world application. Waste management is also a policy area with embedded social, environmental, and ethical consequences. By focusing on policy responses, compliance, and social ethics, this research illustrates the role of the state in a moral sense as well as the role of the citizenry. Such an interpretative stance also permits a blending of normative assessment with empirical observation, thereby linking the philosophical validity of the findings with their contextual validity. In the end, this strategy allows for a deeper understanding of political ethics, as it demonstrates both the capacity of ethical theory to illuminate policy assessment and its ability to guide societal praxis toward more ethical and sustainable directions.

This study employs a normative qualitative methodology based exclusively on publicly available documents and published academic literature, including policy documents, government reports, philosophical texts, and peer-reviewed journal articles. No primary data collection involving human participants was conducted; therefore, no informed consent, institutional ethics approval, or participant data protection measures were required. All sources are properly cited and attributed in accordance with academic integrity standards. The study adheres to the principles of intellectual honesty, transparency, and responsible scholarship required by the journal.

RESULT AND DISCUSSION

Results

Public policy should be rooted in an ethical commitment to the promotion of the public good. In the context of waste management, this means that the state is not merely responsible for providing technical services such as waste collection, transportation, recycling, and disposal, but also for ensuring that these services are carried out fairly, transparently, and inclusively. Waste management policies must protect the lives, health, and dignity of citizens, particularly those who are most vulnerable to environmental risks. Communities living near landfill sites, informal settlements, riverbanks, coastal areas, or densely populated urban spaces often experience the most severe consequences of poor waste governance. Therefore, waste policy must be understood not only as an administrative obligation but also as a moral responsibility of the state to secure environmental justice and social welfare.

At the same time, citizens should not be positioned merely as passive recipients of government services. They must also be recognized as moral agents who have responsibilities toward the public environment. Waste generation, disposal habits, consumption patterns, and participation in recycling or waste reduction programs are not neutral behaviors; they reflect ethical awareness and social responsibility. From a socio-political ethical perspective, citizens are part of the collective system that determines whether waste governance succeeds or fails. When individuals ignore proper waste disposal, burn waste carelessly, or treat public spaces as areas without moral responsibility, the environmental burden becomes a shared social problem. Thus, the ethical foundation of waste management requires reciprocal responsibility between the state and society.

The findings indicate that waste management in Indonesia is not only an environmental or technical issue but also a socio-political and philosophical problem. Waste reflects the way a society organizes responsibility, distributes environmental burdens, and prioritizes public

welfare. The persistence of unmanaged waste, open dumping, weak recycling systems, and poor public compliance shows that the problem is rooted in structural and cultural weaknesses. These weaknesses reveal a gap between policy ideals and social practice. Although regulations may exist, their implementation often remains inconsistent, fragmented, and insufficiently responsive to local conditions. This shows that waste governance cannot be evaluated only by the existence of formal rules but must also be assessed by how far those rules produce justice, accountability, and meaningful public participation.

One important result of this analysis is the identification of waste mismanagement as a form of environmental injustice. Poorly managed waste does not affect all communities equally. Marginalized communities are often more exposed to pollution, disease risks, unpleasant living conditions, and declining environmental quality. In many cases, these communities have limited political influence and weak bargaining power in policy-making processes. As a result, they become the most affected groups while having the least capacity to shape decisions that directly influence their lives. This condition demonstrates distributive injustice because the negative consequences of waste management failure are concentrated among vulnerable populations. It also reflects procedural injustice because affected communities are often not meaningfully included in decision-making processes.

Waste governance also relates closely to the fulfillment of basic rights, especially the right to a clean, safe, and healthy environment. When public institutions fail to provide effective waste management systems, this failure can reduce the quality of life and threaten public health. Accumulated waste can contaminate water sources, attract disease vectors, increase flooding risks, and degrade the surrounding ecosystem. These impacts are not merely ecological consequences; they directly affect human dignity and social welfare. In this sense, waste management becomes part of the broader responsibility of the state to protect citizens' rights. A government that fails to manage waste fairly and effectively also fails to fulfill its ethical duty to safeguard human well-being.

The analysis further shows that waste management problems in Indonesia are linked to governance failure. These failures include weak institutional coordination, limited enforcement, insufficient infrastructure, inconsistent policy implementation, and lack of integration between national and local government programs. Waste management requires collaboration across multiple levels of authority and sectors. However, in practice, institutional responsibilities are often fragmented. Local governments may lack adequate budgets, technical capacity, data systems, or trained personnel. Meanwhile, national-level policy frameworks may not always translate effectively into local implementation. This gap between policy design and operational reality weakens the effectiveness of waste governance and creates repeated implementation failures.

Policy failure is also visible in the limited ability of existing systems to respond to rapid urbanization, population growth, and changing consumption patterns. As urban areas expand, waste volume increases significantly. However, infrastructure development often does not keep pace with the growth of waste generation. Many cities still rely heavily on landfill-based systems, while recycling, composting, circular economy mechanisms, and community-based waste management remain unevenly developed. This indicates that waste governance remains reactive rather than preventive. Instead of reducing waste at the source and transforming consumption behavior, many policies still focus primarily on end-of-pipe solutions. Such an approach is inadequate because it treats symptoms rather than addressing the deeper social and institutional causes of the waste crisis.

The results also reveal that waste management is strongly connected to public trust. When citizens perceive waste policies as ineffective, inconsistent, or unfair, trust in public institutions declines. Weak enforcement and poor service delivery can lead to public apathy, making citizens less willing to comply with waste management rules. Conversely, when government demonstrates consistency, transparency, and responsiveness, public participation tends to increase. This means that effective waste governance requires more than legal instruments; it requires institutional credibility. Citizens are more likely to participate in waste sorting, recycling, and environmental programs when they believe that their actions are supported by a reliable system. Therefore, legitimacy is an essential component of sustainable waste policy.

At the cultural level, the waste problem reflects a weakness in collective environmental ethics. Littering, excessive single-use consumption, indifference toward waste sorting, and dependence on disposable products are not merely individual habits. They represent a broader social condition in which environmental responsibility has not yet become a strong public norm. Many people still view waste as something that becomes someone else's responsibility once it leaves their household. This mindset separates consumption from consequence. In reality, every act of disposal has social and ecological implications. The persistence of careless disposal behavior shows that environmental ethics must be strengthened not only through regulation but also through education, social campaigns, community leadership, and cultural transformation.

The findings suggest that environmental education plays an important role in shaping long-term behavioral change. Waste management programs will be more effective when citizens understand the ethical consequences of their daily actions. Education should not only teach technical knowledge about waste sorting or recycling but also cultivate moral awareness regarding shared responsibility, ecological justice, and care for public spaces. Schools, universities, religious institutions, civil society organizations, and community leaders can contribute to building this ethical culture. If environmental responsibility becomes part of civic identity, waste management will no longer be seen as a burdensome obligation but as a shared commitment to protect the common good.

Another important result is the need to reposition communities as active participants in waste governance. Community participation should not be limited to following government instructions. Instead, communities should be involved in planning, monitoring, evaluating, and improving waste management systems. Community-based waste banks, neighborhood recycling programs, local composting initiatives, and participatory monitoring mechanisms can strengthen ownership and accountability. These initiatives show that waste governance becomes more effective when citizens are treated as partners rather than objects of regulation. Participatory governance also helps ensure that policies are more responsive to local needs, cultural practices, and social capacities.

The private sector also has a significant role in shaping waste outcomes. Businesses contribute to waste generation through packaging, production systems, distribution models, and consumer marketing. Therefore, private actors must be included within the ethical framework of waste responsibility. Corporate responsibility should not be limited to voluntary environmental campaigns but should include concrete commitments to waste reduction, sustainable packaging, recycling infrastructure, and circular economy practices. Extended producer responsibility is especially relevant because it shifts part of the responsibility for waste management back to producers. This approach encourages businesses to design products and packaging that are easier to reuse, recycle, or safely dispose of.

The results further indicate that technological innovation is necessary but not sufficient. Recycling technology, waste-to-energy systems, digital monitoring platforms, and data-based waste mapping can improve efficiency. However, technology cannot solve waste problems if governance remains weak, public participation is low, and justice considerations are ignored. Technological solutions must be embedded within an ethical and institutional framework; otherwise, technology may benefit only certain groups while leaving vulnerable communities behind. For example, advanced waste processing facilities may improve technical efficiency, but if they are placed near marginalized communities without consultation or protection, they may reproduce environmental injustice. Therefore, innovation must be guided by fairness, accountability, and human welfare.

From the perspective of political ethics, the waste crisis shows three interconnected failures. First, there is an individual moral failure, reflected in weak environmental awareness and irresponsible waste behavior. Second, there is socioeconomic injustice, reflected in the unequal distribution of waste-related risks and burdens. Third, there is governance failure, reflected in weak coordination, limited enforcement, and insufficient policy implementation. These three dimensions cannot be separated. Individual behavior is shaped by social norms and institutional systems; socioeconomic injustice is reinforced by political inequality; and governance failure

weakens both public trust and civic responsibility. Therefore, waste management must be addressed through an integrated ethical, social, and institutional approach.

The application of Suseno's political ethics framework helps clarify that political power must be exercised with moral responsibility. In waste governance, this means that the state must prioritize justice, human dignity, accountability, and public welfare. Policies that ignore marginalized communities, fail to protect public health, or allow environmental degradation cannot be considered ethically legitimate, even if they are administratively legal. Ethical governance requires the state to ask not only whether a policy is efficient but also whether it is fair, inclusive, and oriented toward the common good. This ethical evaluation is important because waste management decisions often involve competing interests, including economic cost, land use, public health, environmental protection, and political feasibility.

Overall, the results demonstrate that waste management in Indonesia must be understood as a test of both institutional capacity and moral commitment. A sustainable waste system cannot be built only through infrastructure expansion or stricter regulation. It requires the transformation of governance culture, civic behavior, business responsibility, and social values. The waste crisis reveals how deeply environmental problems are connected to justice, citizenship, and public ethics. Therefore, the solution must be systemic: strengthening government accountability, ensuring fair distribution of environmental burdens, empowering communities, involving the private sector responsibly, and cultivating a civic culture of ecological care. Only through this integrated approach can waste management become not merely a technical service, but a manifestation of ethical governance and collective responsibility for present and future generations.

Discussion

In addition, waste management policies need to be identified and carried through in a way that respects and acknowledges that all members of society — including the neediest — have a right to just and accountable treatment of their basic needs, which must be done in line with the principle of justice (Awin & Apitz, 2024). But in practice, to avoid political conflict, environmental costs of waste-disposal facilities are repeatedly sited in neighborhoods of politically powerless and marginalized populations, thereby producing inequitable outcomes. These communities are disproportionately burdened by exposure to pollutants and the resulting public health costs, making it even more evident that public policy costs and benefits must be equitably distributed. This means the answer is by no means as straightforward as strengthening technical skills alone — it is about political governing modalities that give those most affected the levers to determine how solutions are enacted.

Besides, the state must recognize its ethical obligation to ensure efficient and sustainable disposal and management systems. However, the state is not just a manager; it is a guardian of the social good by providing sound infrastructure, appropriate governance, and environmental management for all. Failure by the state to live up to these commitments is a failure to provide a moral good to all citizens within its purview. This is why the state's duties to its citizens include ensuring public health and environmental quality, including the right to be protected from exposure to dangerous gases and materials, as part of an effective definition of waste management. Further, it is significant to realize that waste management issues are not static but dynamic due to ongoing processes such as urbanization, industrialization, and population growth. This has placed additional strain on existing waste management systems and has often increased the inequities and governance challenges that existed even prior to the pandemic.

Every one of these exemplars provides a lesson that public policy cannot be so sanguine and driven by the constraints of a single election cycle — or two at most. Such investments may include sustainable infrastructure, the circular economy, and the incorporation of environmental considerations into the broader development agenda. Further, a parallel environmental political culture is an appropriate and even necessary function of education. However, public awareness, educational programs, and community-level initiatives can improve attitudes and behavior — which in turn will contribute to more sustainable waste management in the future.

Such initiatives will greatly expedite the convergence of policy and practice with human wellbeing by reinforcing the human foundations of co-ownership and ethical commitment. They act as enablers of behavioral change and facilitators of democratic engagement and citizenship.

Moreover, technological innovation by its nature offers a significant multiplier return in developing waste systems. Innovative recycling technologies, combined with waste-to-energy approaches and data-driven monitoring, can significantly improve efficiency and environmental outcomes. Of course, this would require appropriate supporting investments, institutional infrastructure, and governance systems to deploy these technologies effectively. Contrary to overly optimistic assumptions, no technology alone guarantees success or value without strong institutional and ethical grounding.

Finally, waste management is a fourfold issue in which ethical, social, political, and environmental dimensions cannot be separated and thus cannot be reduced solely to an environmental or ethical issue. It also shows that behaviors are linked with culture, institutional capacity, and legacies of inequality, signifying that solutions must be integrated and systemic [18]. Incorporating ethical values in parallel with technical innovation, and designing more equitable systems from a social justice perspective, can facilitate higher-level collaborative interactions among stakeholders and encourage efficient, effective, and equitable waste management systems, thereby contributing to sustainability.

Ultimately, waste is itself a manifestation of environmental justice, responsibility, and human development, and has been shown to be a litmus test of the state and society at large. It does not only call for good governance and sound policy design; it requires principled commitments to ethical values and social solidarity. Thus, an effective solution to the waste dilemma will not merely be a technical fix — it will instead be a solution that intertwines technical expertise with ethical sensibility, democratic governance, and strong equity commitments. Only then can this highly multidimensional and ethically grounded approach contribute to closing the loop so that waste management systems function for the public good and the long-term wellbeing of society and nature.

Applying Suseno's (1991) political ethics framework, this analysis identifies three convergent dimensions of waste governance failure in Indonesia. First, the principle of moral obligation in governance (*kewajiban moral penguasa*) is violated when waste management infrastructure remains inaccessible to economically marginalized communities, as evidenced by (Guerrero et al., 2013; Husein, 2026). Second, the principle of justice (*keadilan*) is transgressed through the systematic siting of waste disposal facilities in politically powerless communities Marshall (2013), creating spatial patterns of environmental injustice that cannot be resolved by technical interventions alone. Third, the principle of prioritizing human welfare (*mendahulukan kesejahteraan manusia*) demands that waste policies be designed with explicit considerations of human dignity — requiring both institutional reform and meaningful civic engagement. This tripartite ethical analysis constitutes the paper's primary theoretical contribution, demonstrating that Suseno's framework offers a culturally contextualized normative tool for evaluating governance accountability in environmental policy domains within the Indonesian context.

CONCLUSION

Indonesia continues to face major waste management challenges due to top-down policy approaches that are often less participatory and insufficiently aligned with local wisdom. This weakens policy legitimacy, accountability, and implementation effectiveness, particularly at the local level where coordination, resources, and monitoring remain limited. Waste management is not merely a technical issue but also reflects failures in the social contract, governance, justice, and collective responsibility. Therefore, solving Indonesia's waste problem requires an integrated approach involving government, the private sector, civil society, and educational institutions through ethical, transparent, participatory, socially just, and sustainable policies. Theoretically, this study expands the application of Suseno's political ethics framework to environmental governance, while practically emphasizing the importance of ethical impact assessment, community advocacy, public participation, and environmental ethics education to build a shared culture of ecological responsibility.

Recommendations

Emphasis should be placed on a collaborative and multi-pronged approach involving the government, private sector, and society to address waste-related issues. The private sector must deliver much-needed innovation and technology to support sustainable solutions; governments need to establish adequate regulatory frameworks, functional systems, and effective monitoring and enforcement mechanisms. Alongside these roles, communities must ensure active engagement within their respective domains, such as waste segregation practices, environmental hygiene initiatives, and policy monitoring. There is a need for all these efforts to come together, as the future requires a sustainable and equitable waste management regime.

Ethics does not only pertain to how human beings relate to nature within themselves but also to the environment that belongs to the entire human community—it defines how every individual participates in maintaining ecological balance, reflecting environmental ethical reasoning. Policies that serve the lives of all communities must be rooted in an evidence base. On the other hand, compliance can be strengthened through enforcement instruments and community-based approaches (e.g., waste banks), while bottom-up organizations stimulate citizen participation. Social justice must be the priority in waste management policies so that burdens and benefits are fairly distributed, particularly among marginalized communities. A fair, responsible, continuous, and common good-based ethical, democratic, and sustainable model of waste management will require ongoing and firm action by all stakeholders.

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AUTHOR CONTRIBUTION STATEMENT

Alice Erni Husein contributed to the conceptualization of the study, development of the normative ethical framework, literature analysis, and preparation of the initial manuscript draft. Jusuf Santoso Wibisono contributed to the strengthening of the socio-political analysis, policy evaluation, discussion refinement, and final manuscript review. Both authors collaboratively reviewed the intellectual content, approved the final version of the manuscript, and agreed to be accountable for all aspects of the work.

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