

Realising a Clean Denpasar: Waste Management Based on *Good Governance* and the Principles of *Tri Hita Karana*

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Abstract: Waste is a complex problem in Denpasar City, and the Denpasar City Government has introduced various regulatory measures to address this issue, including Denpasar Mayoral Regulation Number 15 of 2023 concerning Culture-Based Waste Management. Despite the existence of this regulation, a significant gap remains between the waste management policies established by the local government and their implementation by communities at the local level. Community participation in waste sorting, reduction, and environmentally responsible disposal practices has not yet been fully aligned with the objectives of the regulation, indicating that the policy has not been implemented effectively in practice. This gap demonstrates that the integration of good governance principles and the local wisdom values of *Tri Hita Karana* has not yet been optimally translated into community behavior and institutional practices. This article examines waste management in Denpasar City from the perspective of good governance and the implementation of *Tri Hita Karana* values. This study employs normative legal research to analyze the normative gap within Denpasar Mayoral Regulation Number 15 of 2023, particularly the absence of clear legal provisions that strengthen the implementation of good governance principles and *Tri Hita Karana* values to bridge the gap between policy and community practices. The research applies statutory, conceptual, and case approaches. The findings reveal that the principal obstacle to effective waste management is not merely limited community awareness but the absence of explicit legal provisions governing community participation, institutional coordination, accountability, and supervision within the existing regulatory framework. The study further finds that the values of *Parahyangan*, *Pawongan*, and *Palemahan* can function as legal-cultural principles that strengthen environmental governance by fostering moral responsibility, collective participation, and environmental stewardship. The novelty of this research lies in the development of a normative legal framework that integrates enforceable good governance principles with the culturally embedded values of *Tri Hita Karana* to bridge the gap between regulatory policy and community practice. This integrated framework provides a legal basis for improving regulatory implementation and offers a model for sustainable, participatory, and culturally responsive waste governance in Indonesia.

Keywords: Waste Management, *Good Governance*, *Tri Hita Karana*

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1. Introduction

Waste is a critical issue in major cities across Indonesia. The waste problem stems from various factors, one of which is the increasingly massive trend of urbanisation, which results in uncontrolled waste production. Population growth leads to high levels of waste production, compounded by a lack of public awareness regarding the prudent management of waste. In major cities such as Jakarta and Denpasar, around 60–70% of waste is dominated by household waste, caused by a lack of infrastructure, excessive consumption by the public, and minimal source separation, resulting in the waste problem becoming increasingly uncontrollable (Gavrila, 2026). The ever-increasing and uncontrolled generation of waste is causing various new problems, both for the environment and for the community itself.

The impact of waste on the environment is significant, primarily in terms of pollution and disruption to ecosystems. Toxic chemicals released by inorganic waste are absorbed into the soil, contaminating rivers and land, thereby damaging the habitats of aquatic animals and surrounding vegetation. The incineration of waste can produce CO₂, methane gas, and dioxin-like pollutants, causing air pollution, exacerbating the greenhouse effect, and triggering acid rain. Ecosystem damage caused by the accumulation of waste includes blockages in river channels leading to flooding, the ingestion of microplastics which can kill wildlife, and adverse effects on natural beauty.

The adverse impacts of waste on society are also significant and complex, including effects on declining health, economic quality, and quality of life as a result of poor waste management. Regarding health, waste can become a breeding ground for disease vectors such as rats and mosquitoes, triggering diseases such as diarrhoea, respiratory infections, cholera, typhoid, and skin infections. Exposure to microplastics can also disrupt the nervous and endocrine systems. The adverse economic impacts caused by waste include a decline in community productivity due to the illnesses it causes, which incur costs to manage. Furthermore, the blockage of rivers by piles of waste severely damages infrastructure, which serves as a key facility for daily mobility.

The waste problem in the city of Denpasar has now reached a critical point. This is due to the fact that 1,000 tonnes of waste are generated daily, leading to the Suwung Landfill the city's existing waste disposal site operating at overcapacity. Waste generated in Denpasar consists predominantly of 60% organic waste, and the height of the waste pile reaches 15–25 metres (Antara Bali, 2026). This high pile poses a risk of mangrove forest pollution and landslides, given that the height of the pile threatens public safety. The problem of waste accumulation in Denpasar stems from households and tourists, with the volume of waste generated reaching 360,000 tonnes per year. This figure has increased by 30% since 2000, driven by population growth leading to higher population density, increased tourist visits, and the community's consumerist lifestyle involving the use of single-use plastics (Hasjanah & Simanjuntak, 2025). Although the residents of Denpasar have begun to sort their waste, there remains a bad habit among some members of the community of disposing of waste indiscriminately, coupled with a lack of supervision regarding waste disposal in rivers. This is what has caused the surge in waste generation at the Suwung Landfill.

The Denpasar City Government has undertaken various efforts to tackle the waste problem. These efforts include a focus on reducing waste generation, source-based waste management, and various other initiatives. Regulatory measures have also been implemented by the Denpasar City Government through the issuance of Denpasar Mayor's Regulation No. 15 of 2023 on Culture-Based Waste Management (hereinafter referred to as Perwali 2023), which aims to accelerate source-separated waste management and enhance on-site supervision to promote environmental cleanliness. Perwali 2023 requires all local government bodies, village administrations, sub-district offices and the general public to carry out waste sorting and management processes starting from their own homes. Strengthening of waste management, as stipulated in the Municipal Regulation on Waste Management, is carried out through the optimisation of Integrated Waste Processing Facilities (TPST) and the implementation of supervision in the hospitality sector, including hotels, cafes, restaurants, and similar establishments. The enforcement of the Waste Management Regulation involves the imposition of minor criminal penalties (tipiring) on those who breach waste-related regulations.

The issuance of the 2023 Municipal Regulation must be grounded in the principles of *good governance* to ensure that policies are implemented effectively, transparently, and accountably, as mandated by Law No. 23 of 2014 on Regional Government. The regulation must fulfil the principles of transparency (openness regarding information), accountability (clarity regarding responsibility), participation (community involvement in the governance process), the rule of law (based on higher-level regulations), and

effective and efficient implementation (Bauky & al., 2024). The *Tri Hita Karana* philosophy also serves as a crucial foundation for regional management, aiming to achieve harmony between *Parahyangan* (relationship with God), *Pawongan* (relationship with humanity), and *Palemahan* (relationship with nature). In relation to waste management in the city of Denpasar, the values contained within *Tri Hita Karana* provide a foundation for achieving this harmony, with the aim of creating a clean Denpasar free from waste. Therefore, this article will discuss waste management in the city of Denpasar based on *good governance*, and the implementation of *Tri Hita Karana* values in waste management in the city of Denpasar.

Although Denpasar Mayor Regulation Number 15 of 2023 has established a legal framework for culture-based waste management, its implementation has not yet effectively bridged the gap between regulatory objectives and community waste management practices at the local level. The regulation primarily emphasizes administrative obligations and technical waste management procedures but does not provide comprehensive legal mechanisms governing community participation, institutional coordination, accountability, supervision, and the integration of local cultural values as enforceable governance instruments. Consequently, waste segregation, reduction, and environmentally responsible disposal remain inconsistent despite the existence of the regulation. This condition raises an important legal issue concerning the adequacy of the current regulatory framework in ensuring effective implementation of waste management policies.

Previous studies have predominantly examined waste management from environmental, public policy, or socio-cultural perspectives, focusing on community participation, waste reduction strategies, or the philosophical values of *Tri Hita Karana*. However, limited attention has been given to the normative legal dimension, particularly the integration of good governance principles and *Tri Hita Karana* values into an enforceable legal framework capable of addressing the implementation gap between policy and community practice. Accordingly, a significant research gap remains regarding how legal norms can strengthen the effectiveness of culture-based waste management regulations.

This study therefore seeks to answer two research questions: (1) How are the principles of good governance implemented within the legal framework of waste management in Denpasar City? (2) How can the values of *Tri Hita Karana* be integrated into the legal framework to strengthen the implementation of waste management policies at the community level? The novelty of this research lies in developing a normative legal framework that integrates enforceable good governance principles with the local wisdom values of *Tri Hita Karana* to bridge the gap between regulatory policy and community practice. This study is expected to contribute to the development of environmental law by providing a culturally responsive governance model that strengthens the implementation of regional waste management regulations in Indonesia.

2. Materials and Methods

This study employs normative legal research, which examines legal issues through the analysis of legal norms contained in legislation, legal doctrines, judicial decisions, and other relevant legal materials to construct legal arguments and formulate normative legal solutions (Soekanto & Mamuji, 2013). The research is based on the ambiguity of legal norms in Denpasar Mayoral Regulation Number 15 of 2023 concerning Culture-Based Waste Management, particularly the absence of explicit provisions integrating the principles of good governance and the local wisdom values of *Tri Hita Karana* into the implementation of waste management policies.

This study adopts three approaches: the statutory approach, which examines legislation governing environmental protection and management, regional government,

and waste management; the conceptual approach, which analyzes legal doctrines and the principles of good governance, environmental law, and *Tri Hita Karana*; and the case approach, which examines the implementation of waste management policies in Denpasar City to identify legal issues arising from their application. The legal materials consist of primary and secondary legal sources. Primary legal materials include the 1945 Constitution of the Republic of Indonesia, Law Number 18 of 2008 concerning Waste Management, Law Number 32 of 2009 concerning Environmental Protection and Management, Law Number 23 of 2014 concerning Regional Government, Denpasar Mayoral Regulation Number 15 of 2023, and other legislation relevant to waste management. Secondary legal materials were selected based on the criteria of relevance, authority, and academic credibility, including books, peer-reviewed journal articles, legal commentaries, and official government publications concerning environmental law, good governance, and *Tri Hita Karana*.

Legal materials were collected through a systematic library research process and analyzed using qualitative legal analysis. The analysis employed grammatical, systematic, and teleological methods of legal interpretation to assess the consistency, coherence, and objectives of the applicable legal norms. Subsequently, legal arguments were developed through deductive legal reasoning by comparing statutory provisions, legal doctrines, and relevant legal principles to evaluate the adequacy of the existing regulatory framework and to formulate recommendations for strengthening culture-based waste management in Denpasar City.

3. Results and Discussion

a. *Waste Management in Denpasar City is Based on Good Governance*

Good governance, or commonly referred to as sound governance, is a concept of public management that emphasises participation, transparency, accountability, and the rule of law in the decision-making process and policy implementation (Sari, 2023). The concept of good governance aims to create an effective, responsive, clean government that is oriented towards quality public service, as defined by the United Nations Development Programme (UNDP) and the World Bank. Elinor Ostrom's Social-Ecological Systems (SES) framework provides a complementary theoretical perspective to the concept of good governance. Ostrom emphasizes that effective governance of shared resources is achieved through polycentric institutional arrangements, where decision-making authority is distributed across multiple levels of government and non-government actors. The framework highlights the importance of collective action, institutional diversity, and local participation in ensuring sustainable governance outcomes. In the context of public management, this approach strengthens the principles of participation, accountability, and rule of law by demonstrating that governance effectiveness depends not only on formal state institutions but also on the interaction between community actors and institutional rules within a socio-ecological system (Elinor Ostrom, 2009). The concept of *good governance* first emerged in the late 1980s to early 1990s as a response to the failure of international development aid programmes by institutions such as the IMF and the World Bank in developing countries, where these programmes often proved ineffective due to corruption and weak public management. Initially, the concept of *good governance* was popularised by the UNDP and the World Bank around 1989–1992 to emphasise transparent, participatory and clean governance as a condition for the provision of loans (Tjokroamidjojo, 2000). This concept subsequently developed in the wake of the global wave of democratisation in Latin America and Asia (such as South Korea), which demanded accountability and the rule of law.

The development of the concept of *good governance* in Indonesia emerged in the post-reform era of 1998 as a reaction to the New Order government, which was rife with corruption, collusion and nepotism (KKN), was centralised, and saw minimal public

participation. The transition from President Suharto to Habibie, Abdurachman Wahid, Megawati Soekarnoputri, and finally Susilo Bambang Yudhoyono (spanning the period 1998–2014) resulted in a commitment manifested through the establishment of the KPK, bureaucratic reform, and the Regional Autonomy Act. A key milestone in the development of the principles of *good governance* in Indonesia was the enactment of Government Regulation No. 101 of 2000 on *Good Governance*. The principles of *good governance* emphasised in this Regulation are transparency, accountability, and professionalism in the processes of government and public service. In 2004, the National Development Planning Agency (Bappenas) adopted the principles of responsibility, participation, and visionary leadership. Subsequently, following 2014, *good governance* was implemented within *e-government* and oversight of state finances to strengthen Pancasila democracy.

Local governments in Indonesia implement the concept of *good governance* based on regional autonomy as set out in the Local Government Act. Its implementation involves bureaucratic reform, *e-government*, and oversight carried out by the Agency for Civil Service, Education and Training (BPKP) to prevent corruption, collusion and nepotism and improve public services. The main mechanism for implementing the concept of *good governance* is ensuring that information is handled transparently at the regency/city level, through Law No. 14 of 2008 on Public Information Disclosure. Regarding the Government Internal Control System (SPIP) in the efficient management of the regional budget, it is mandatory for the process to achieve Level 3 (excellent). Regarding bureaucratic reform, training is provided for civil servants, *e-government initiatives* are implemented, there is participation by the Regional People's Representative Council (DPRD) as a representative body, and public participation in policy-making (Selamat, 2013).

Optimising the concept of *good governance* in waste management in the city of Denpasar is a necessity to create a clean Denpasar free from waste. The concept of *good governance* is integrated and collaborated with multiple *stakeholders* to address the high volume of waste resulting from population density and the massive scale of tourism in the city of Denpasar.

a. Professionalism in waste management in the city of Denpasar

Professionalism in waste management in the city of Denpasar can be seen in the systematic approach taken by the Department of Environment and Sanitation (DLHK), which integrates technology, staff training, and national standards to ensure operational efficiency in waste management. This includes source-separated waste collection, the optimisation of Integrated Waste Processing Sites (TPST) and *Integrated Waste Management Sites for Reduce-Reuse-Recycle* (TPS3R), as well as collaboration with traditional *banjar* communities. This is set out in Mayor's Instruction No. 1 of 2024 on the Optimisation of Waste Management.

The professional strategy for waste management in Denpasar City involves the use of technology and data. The Internet of Things (IoT) is utilised for real-time monitoring, the implementation of digital reporting, and a centralised composting process aimed at reducing the burden of waste accumulation at the Suwung Landfill. Staff training programmes are conducted to enhance professionalism, including BNSP certification schemes for officers, which have specific requirements such as a minimum educational level of a D3 qualification plus field experience, and regular roll calls to improve officers' competencies. Other professional mechanisms include operational standards in the form of technical guidelines issued by the DLHK regarding waste collection, 3R processing, public education on waste management, and various forms of recognition for TPST management by the President (Cipta Karya PUPR Bulletin, 2023).

These professional strategies are not merely administrative policies but are also grounded in a normative framework explicitly established under the Mayor of

Denpasar's Instruction Number 1 of 2024. Mayor's Instruction No. 1 of 2024 not only regulates the enhancement of institutional capacity in waste management but also mandates the Environmental Agency (Dinas Lingkungan Hidup dan Kebersihan/DLHK) to implement technology-based waste management systems, source-based waste segregation, and the optimisation of Integrated Waste Processing Facilities (TPST) and Reduce–Reuse–Recycle Waste Management Facilities (TPS3R). These provisions reflect the application of the principle of professionalism within the framework of *good governance*, as the local government is required to deliver public services based on measurable operational standards. Furthermore, the Instruction constitutes an implementation of the local government's statutory authority as provided under Law Number 18 of 2008 concerning Waste Management and Law Number 23 of 2014 concerning Regional Government, which assign local governments the responsibility to organise sustainable and integrated waste management in accordance with the principles of efficiency, accountability, and environmental sustainability.

The issue regarding professionalism in waste management in the city of Denpasar relates to human resources that are not yet optimal. This can be seen in the lack of skills and certification, resulting from the minimal training provided to staff by the National Certification Body (BNSP) on an ongoing basis, which leads to inefficiencies in the sorting and processing processes. Synergy between the Environmental Agency (DLH), the private sector, and the *banjar* (local community units) is also not yet optimal, meaning that communication is not fully integrated. The capacity of the TPS3R is not yet fully adequate; this can be seen from the limited land available, which hinders the processing of organic waste and results in high levels of waste accumulation at both the TPS and the TPA (Gunawan, 2021). Addressing infrastructure constraints in waste management in the city of Denpasar must focus on accelerating development, including integrated facilities, establishing partnerships with both public and private sectors, and integrating technology to reduce reliance on the Suwung Landfill. The Denpasar City Government should expedite the construction of TPST and TPS3R facilities in every sub-district, as well as optimise source-separated waste collection. Optimising market sounding by involving third parties for waste processing, alongside collaboration with the Bali Provincial Government and the private sector such as automated waste processing technology and IoT-based monitoring is essential.

b. Participation in waste management in the city of Denpasar

The principle of participation in government emphasises the active involvement of the community in decision-making mechanisms, implementation, and oversight of government policies. This principle is one of the main pillars of *good governance* in Indonesia, aligning with the implementation of regional autonomy based on the Regional Government Law and the 1945 Constitution. The principle of participation means that the public has the right and opportunity to participate voluntarily, either directly or through representatives, in the administration of local government. This participation encompasses two-way interaction between the public and the government that influences policy, such as development planning consultations, budget planning, and the formulation of local regulations (Dondokambey, 2023). Public participation also encompasses the public's role in the implementation of government programmes. Regarding government programmes for waste management in the city of Denpasar, the implementation of public participation is carried out through public awareness campaigns, source-separated waste collection, and collaborative programmes between the community and the city government. The latest policy introduced is a ban on the disposal of organic waste at the Suwung Landfill, which encourages the community to process and sort their waste independently.

Article 7 of the Mayor of Denpasar Regulation Number 15 of 2023 requires every household to separate organic and inorganic waste at the source. This provision

constitutes a concrete implementation of Article 12 of Law Number 18 of 2008 on Waste Management, which obliges every person to undertake waste reduction and waste handling. Accordingly, the Mayor Regulation does not merely restate the statutory norm but operationalises this obligation through technical mechanisms that are capable of being effectively implemented at the community level.

The implementation of public participation in waste management in Denpasar is reflected in the existence of community-led initiatives. *These* community-led initiatives include the *pilot project 'Improvement of Solid Waste Management to Support Regional and Metropolitan Cities'* (ISWMP), a national programme aimed at enhancing integrated urban waste management through improvements to infrastructure, systems, and cultural practices. The implementation of this programme involves active community participation in sorting organic waste into animal feed, and in recycling inorganic waste through village-owned enterprises (BUMDes). Other community-led initiatives include the establishment of waste banks and 3R waste collection points in several *banjars*, collaboration between youth groups (*Karang Taruna*) and the village government in waste management, and the provision of training to the PKK on composting mechanisms to reduce the waste burden at the Suwung Landfill.

Community-led waste management initiatives will be maximised if infrastructure facilities such as waste banks, 3R waste collection points, and similar facilities are built in large numbers at the banjar level, accompanied by incentives such as increased purchase prices for inorganic waste, and if collaboration between the community and the village government is further enhanced regarding composting, *refuse-derived fuel* (RDF), and the optimisation of maggot composting. Furthermore, there is a need for economic empowerment programmes, such as the development of '*green community*' initiatives to recycle waste into marketable products (such as fertiliser and animal feed), carried out through training and partnerships with village-owned enterprises (BUMDes). Regular and sustained community cooperation should be implemented, with monitoring and evaluation serving as indicators of success in waste management.

c. Transparency in waste management in the city of Denpasar

Transparency in governance refers to the openness of information to the public so that citizens can monitor decision-making, budgeting and policies issued by the government (Trisakti, 2021). The principle of transparency in Indonesia serves as the foundation for the implementation of Pancasila democracy, with the aim of preventing corruption and enhancing accountability in government. The legal basis for implementing transparency is Law No. 14 of 2008 on Public Information Disclosure (hereinafter referred to as the Public Information Disclosure Law). This Law regulates transparency as an obligation of public bodies, emphasising the principles of transparency, participation and accountability. This Act requires that public information be disclosed periodically, immediately, or be readily available at all times, except for information relating to private rights or national security. The benefits of implementing transparency include building public trust in the government, minimising the *abuse of power*, and encouraging ethical decision-making and policy formulation. Transparency can also enhance public participation in oversight and political stability. The mechanism for implementing transparency involves public bodies providing access to information through the Information and Documentation Management Officer (PPID), including the proactive publication of performance and financial reports. Strategies to support the implementation of transparency include staff training, digitalisation processes, and oversight by the Information Commission.

The obligation of the local government to provide information on waste generation data through the Denpasar Open Data Portal and the Public Information and Documentation Officer (PPID) constitutes an implementation of Articles 7 and 9 of Law Number 14 of 2008 on Public Information Disclosure. From the perspective of good

governance, this mechanism reinforces the principle of transparency by providing the public with access to information concerning the implementation of waste management policies, thereby enabling public oversight of the performance of the local government

Transparency in the waste management process in the city of Denpasar encompasses data openness, decision-making processes, and public awareness campaigns regarding government policies through public platforms such as *open data* and the PPID. Regional Regulation No. 8 of 2023 on Waste Management (hereinafter referred to as the Waste Management Regulation) serves as the legal basis for transparency in waste management, mandating the provision of information regarding strategies and public participation in waste management in the city of Denpasar. Information is provided transparently by the Environmental Agency (DLHK), whereby the public has the right to access accurate data regarding waste collection points (TPS), integrated waste management facilities (TPST), 3R waste management facilities (TPS 3R), and the process of reducing organic waste. The Denpasar City Government's initiative to implement transparency involves publishing waste management data via the Denpasar Open Data website and the Public Information Disclosure Office (PPID), with annual publication schedules that also include updates on the reduction in waste volume. Transparency is also achieved through public awareness campaigns on the policy prohibiting the disposal of organic waste at the Suwung Landfill, the promotion of household composting, and innovative collaboration between the government and the private sector.

Transparency in waste management in the city of Denpasar can be enhanced through concrete steps to ensure public participation, accountability, and concrete data as stipulated in the Freedom of Information Act. Regarding data digitalisation, *the Denpasar Smart Waste system* should be further optimised to monitor waste volumes, the efficiency of 3R waste transfer stations, and *real-time* residual waste data, which is published as open data and via the PPID, by integrating this through a public dashboard accessible via a mobile app, enabling the public to track contributions from the village level down to the *banjar*.

Transparency constitutes one of the fundamental principles of good governance, requiring public authorities to ensure that information relating to public services and policy implementation is accurate, accessible, and accountable. In the context of waste management, transparency is not merely a legal obligation under Law Number 14 of 2008 concerning Public Information Disclosure but also serves as an instrument for improving public participation and institutional accountability. These principles are further reflected in Denpasar Regional Regulation Number 8 of 2023 concerning Waste Management and Denpasar Mayoral Regulation Number 15 of 2023, which require local government agencies to provide information on waste management programs and encourage community involvement in source-based waste management.

The findings of this study indicate that the implementation of transparency in Denpasar City's waste management has increasingly relied on data digitization through Open Data Denpasar, the Information and Documentation Management Officer (PPID), and the Smart Waste information system. These digital platforms provide integrated information on waste generation, waste collection points (TPS), Integrated Waste Processing Facilities (TPST), TPS 3R performance, and the progress of waste reduction programs. From a legal perspective, the digitalization of waste management data strengthens the implementation of the principles of transparency and accountability by ensuring that government information is publicly accessible and can be monitored continuously. The benefits of data digitization extend beyond information disclosure. First, Open Data Denpasar enables the public, researchers, and policymakers to access reliable waste management data, thereby improving evidence-based policy formulation and independent public oversight. Second, PPID facilitates the fulfilment of citizens' constitutional right to obtain public information while strengthening government

accountability through timely disclosure of waste management policies, budgets, and performance reports. Third, the Smart Waste system supports real-time monitoring of waste generation, transportation, and processing activities, allowing local governments to identify operational inefficiencies, evaluate the effectiveness of TPS 3R facilities, and allocate resources more accurately.

These findings demonstrate that data digitization contributes not only to administrative efficiency but also to strengthening collaborative environmental governance. The integration of Open Data, PPID, and Smart Waste creates a transparent digital governance ecosystem in which government, communities, and private stakeholders can jointly monitor policy implementation, improve community compliance, and evaluate waste reduction targets. Nevertheless, this study also finds that Denpasar Mayoral Regulation Number 15 of 2023 has not yet explicitly regulated standards for digital data integration, public access mechanisms, or institutional responsibilities regarding digital waste information management. Consequently, strengthening these legal provisions is necessary to ensure that digital transparency functions not merely as an administrative innovation but as an enforceable governance mechanism that enhances accountability and supports sustainable waste management.

d. Accountability in waste management in Denpasar City

Accountability in government means that every public official has a duty to be accountable for their performance, budget and policies to the public through a clear reporting process, the validity and legitimacy of which can be verified (Sawir, 2017). This principle is linked to transparency to achieve *good governance* based on Pancasila democracy in Indonesia. Accountability encompasses the government's accountability to the legislature or superiors (vertical), between agencies (horizontal), and accountability to the public (social). Accountability serves to prevent corrupt practices, enhance public trust in the government, and encourage participation grounded in democracy. Accountability also serves as a measure of success, achieved through reporting mechanisms that ensure public service objectives are met.

Accountability in the waste management process in the city of Denpasar refers to the government's accountability, through the DLHK, regarding the budget, performance, and outcomes of programme implementation, such as the optimisation of the construction of TPST and 3R waste collection points for the community. As stipulated in the Denpasar City Waste Management Regulation, the DLHK has a duty to provide guidance, oversee the performance of private waste management operators, and conduct periodic evaluations to ensure a gradual reduction in waste. The mechanism for implementing accountability involves the preparation of the annual Government Agency Performance Accountability Report (LAKIP), reporting on the volume of waste processed through third-party TPSTs, and the use of the SiDarling application to evaluate waste banks within the Denpasar city area. The forms of supervision carried out include monitoring of 3R waste transfer stations (8 units) and waste banks (68 units), as well as the imposition of sanctions for violations (Putra, 2025). Although the Mayor Regulation has established reporting and evaluation mechanisms, it has not yet set measurable performance indicators or legal consequences in the event that waste reduction targets are not achieved. This normative gap has the potential to weaken the effectiveness of the principle of accountability, as evaluation remains merely administrative in nature and has not yet served as a basis for imposing sanctions or providing incentives for policy implementers. This accountability mechanism represents a step by the Denpasar city government to ensure accountability in waste management both vertically, horizontally, and towards the community. Although there has been progress in community-managed waste, the evaluation indicates inefficiencies caused by unmet funding targets, a community response deemed insufficient, and suboptimal infrastructure such as 3R waste collection points. Therefore, budget implementation for

community-led waste management and the effectiveness of 3R waste transfer station development are required. Furthermore, a waste accountability team involving various *stakeholders* such as traditional *banjar* communities, academics, and NGOs must be established, alongside the imposition of strict sanctions against those who violate waste management regulations.

e. Supremacy of law in waste management in the city of Denpasar

Supremacy of law is a fundamental principle of a constitutional state that places the law as the highest authority above all powers, including the government and the public. The concept of the rule of law in Indonesia is enshrined in Article 1, Paragraph (3) of the 1945 Constitution, which states that Indonesia is a state governed by the rule of law. Supremacy of law means that the law is the supreme authority in state affairs, ensuring that all actions must be subject to fair regulations without any interference.

The main principle of supremacy of law is that the law is placed as the highest authority, binding on all parties, including state officials. There are checks on power to prevent the abuse of authority (Sugiono & Husni, 2000). Law enforcement is carried out fairly, non-discriminatorily, and independently. Furthermore, the protection of the public is ensured through an independent judiciary, with the Constitution serving as its foundation. In the context of Pancasila democracy, the rule of law supports the process of political stability and social justice, where there are checks and balances between the executive, legislative, and judicial branches. Key elements of the rule of law include the guarantee of fundamental rights and a clear separation of powers (Manika & Citrawati, 2024).

Supremacy of law in government means that the exercise of state power must be based entirely on the law, and not on the power or will of specific individuals or groups. This means that the government has a duty to exercise its authority and functions transparently, in accordance with the law, and in a manner that is accountable under applicable legislation. Supremacy of law is a principle signifying that the law holds the highest position, binding all citizens without exception, including the government and state officials (Karyudi & Firdausiah, 2024).

Supremacy of law in relation to waste management in the city of Denpasar means that all programmes, policies and actions of the city government in managing waste must be based on applicable law, both at national and regional levels, and must be accountable under the law. Consequently, the government cannot act arbitrarily but must comply with regulations, uphold justice and be consistent in its handling of waste.

The legal basis for waste management in the city of Denpasar is Denpasar City Regulation No. 3 of 2015 on Waste Management, which has subsequently been implemented through various Mayoral Regulations (Perwali), including Perwali No. 36 of 2018 on Plastic Waste Management, and Perwali No. 15 of 2023 on Culture-Based Waste Management. The most recent regulation concerning waste management in the city of Denpasar is the Mayor's Instruction (Inwali) No. 100.3.4.3/1/HK regarding the Supervision and Monitoring of Waste Management, in order to follow up on Denpasar City Regulation No. 8 of 2023 on the Implementation of Waste Management. This legal framework for waste management is consistent with and operates in tandem with Law No. 18 of 2008 on Waste Management and Law No. 32 of 2009 on Environmental Protection and Management; this signifies that the Denpasar City Government exercises its authority to manage waste in accordance with the overarching legislation. Mayor Regulation of Denpasar Number 15 of 2023 demonstrates vertical synchronization with Law Number 18 of 2008, as it provides more detailed provisions on waste reduction at the source, the establishment of TPS3R facilities, and community participation. However, this study finds that the regulation has not explicitly governed digital monitoring mechanisms, performance evaluation standards, or inter-agency

coordination. Consequently, there remains room for normative strengthening to enhance legal certainty in the implementation of waste management policies.

The manifestation of supremacy of law in waste management in the city of Denpasar is the establishment of procedures for the collection, transport, processing and disposal of waste as set out in Local Regulations and Mayoral Regulations, which are not based on ad-hoc policies. There are provisions for both administrative and criminal sanctions against offenders, whereby these violations are not merely theoretical but are actually enforced. Another manifestation of the rule of law is the encouragement of villages, traditional villages and the community to formulate traditional rules (such as *awig-awig* and *perarem*), which regulate rights and obligations in waste management, so that customary law and formal law can reinforce one another. The rule of law is also reflected in enforcement and monitoring mechanisms, where the DLHK and Civil Service Police Unit play a role in monitoring, guidance, and the prosecution of violations (Mahadewi, 2024). Although various regulations have been enacted, there are numerous challenges in their implementation, ranging from delays in implementation, a weak on-the-ground monitoring system, and the fact that the public has not yet fully developed an awareness of the applicable rules. This results in legal provisions being applied only formally but having minimal practical impact. The weak enforcement of waste management regulations is evident in the public's habit of littering, the continued widespread use of single-use plastics, and the lack of source-separated waste collection activities (Adianggara & Saraswati, 2021). This phenomenon demonstrates that the implementation of legal norms regarding waste management has not yet fully become part of the public's daily behaviour.

3.2 Waste Management through the Implementation of the Tri Hita Karana Values

Tri Hita Karana is a philosophy of life for the people of Bali, derived from Sanskrit: 'Tri' meaning three, 'Hita' meaning happiness, and 'Karana' meaning cause; thus, the literal meaning of *Tri Hita Karana* is 'the three causes of happiness' (Wijayanti, 2025). This philosophy emphasises three essential relationships: *Parahyangan*, the relationship between humans and God; *Pawongan*, the relationship between humans and their fellow humans; and *Palemahan*, the relationship between humans and the environment (Astiti et al., 2024). *Parahyangan* encompasses rituals, worship, and spiritual reverence to maintain balance between humans and the Creator. *Pawongan* is realised by upholding tolerance, mutual cooperation, and harmonious social relations within communities such as banjars or other groups. Meanwhile, the focus of *Palemahan* is on environmental conservation, such as eco-friendly practices, waste management, and the *subak* system. The values inherent in *Tri Hita Karana* promote spiritual, social, and ecological balance to address social conflict, consumerism, and individualism amidst modernity. In the Balinese context, this philosophy is implemented in daily community life, sustainable tourism, and UNESCO's recognition of the *subak* system (Hadat, 2020).

From a socio-legal perspective, the implementation of *Tri Hita Karana* can be understood through the concept of Living Law Theory, which argues that law is not merely a formal state regulation, but also grows and develops within society based on values, norms, and living cultural practices (Brian Z. Tamanha, 2002). In this sense, *Tri Hita Karana* functions as a form of living law in Balinese society, as its values are continuously internalised, obeyed, and practiced in everyday life even without formal coercive legal enforcement. This aligns with Eugen Ehrlich's notion of the "living law" as the law that governs social life more effectively than statutory law. The implementation of the *Tri Hita Karana* philosophy in Bali aims to create a harmonious, ethical, and sustainable system of governance. The Bali Provincial Government has integrated the three values of *Tri Hita Karana* into the Regional Medium Term Development Plan (RPJMD) for the period 20, as outlined in the "*Nangun Sat Kerti Loka Bali*" programme, which means preserving the sanctity and harmony of Bali's natural

environment and its contents to realise a happy and prosperous life for the community in both the physical and spiritual realms. *Parahyangan* emphasises moral ethics in public service and leadership. *Pawongan* encourages community participation through banjars and transparency in bureaucratic processes. Meanwhile, *Palemahan* is reflected in the priority given to environmental management.

The implementation of the *Tri Hita Karana* values in Badung and Buleleng Regencies is reflected in the leadership principles of Pancasila and during pandemic management, where the focus is on spiritual, social, and ecological balance to achieve inclusive development. *Tri Hita Karana* also supports the process of *good governance* through improved performance of the Regional Work Units (SKPD) (Badung Regency Secretariat, 2024). Given the importance of the balance between spiritual, social, and ecological values, as embodied in the *Tri Hita Karana* philosophy, waste management in the city of Denpasar should also prioritise these values to achieve a clean and harmonious environment.

a. The *Parahyangan* Value in Waste Management

The *Parahyangan* value within the *Tri Hita Karana* philosophy is crucial to instil in the waste management process, as this value fosters spiritual awareness where maintaining environmental cleanliness is a form of worship and reverence towards God; consequently, waste that is not managed properly can disrupt spiritual balance. *Parahyangan* plays a role in transforming waste management into a sacred offering or *Yadnya*, where polluting nature constitutes a spiritual transgression that damages the harmonious relationship with '*Sang Hyang*'; as per Balinese Hindu cosmology, nature is a manifestation of God. The *Parahyangan* value fosters awareness through the concept of *Tri Kaya Parisudha* (good thoughts, words and deeds) in the waste sorting process. This value also incorporates *the principle of pralina* (the cycle of destruction and creation), such as the process of composting organic waste which is returned to nature. It further integrates the concept of eco-theology or ecological spirituality, which fosters the awareness that waste constitutes a sinful and immoral act if allowed to pollute the environment.

b. The *Pawongan* Value in Waste Management

The *Pawongan* value in the waste management process emphasises that there is harmony among fellow human beings through social responsibility, harmony, and communal participation in the village or *banjar*. The social role of the *Pawongan* value is to transform waste management into a collective activity that can strengthen social bonds among the community. Every member of the community has a social responsibility for shared cleanliness to safeguard the health and comfort of the community. Social activities are carried out by encouraging the establishment of *banjar*-based waste banks, where waste is managed collaboratively with *banjar* members and transformed into items of economic value such as handicrafts, fertiliser, and others. The *Pawongan* value enhances collective awareness, reduces the potential for social conflict arising from pollution, and supports *the 'reduce, reuse, recycle' process* through education within *the banjar community*.

c. The *Palemahan* value in waste management

Palemahan is a value within *Tri Hita Karana* that emphasises the harmonious relationship between humans and nature or the environment (*Bhuwana alit*), where the *Palemahan* value regards nature as a home whose balance and sanctity must be preserved. In Balinese culture, *Palemahan* derives from the word "*lemah*" (earth), symbolising a region, settlement, or the ecosystem as a whole, and encourages environmentally friendly behaviour such as caring for the environment by not littering,

thereby preserving the cycle of “*pralina*”. The core principles of *Palemahan* are the wise use of natural resources, maintaining balance, and ensuring the sustainability of nature.

Preserving nature from the perspective of *Tri Hita Karana* which in this context is the implementation of the *Palemahan* values is achieved in various ways. Keeping rivers, beaches, and sacred sites clean is a way of maintaining the cleanliness of nature to foster a harmonious relationship between humans and nature. Other forms of harmonisation can be achieved through environmental conservation, such as planting trees, avoiding damage to ecosystems, and using natural resources wisely. Preserving nature can also be achieved through proper waste management to prevent environmental pollution.

The philosophy of waste management emphasises the preservation of nature as a human responsibility in order to safeguard ecosystems and environmental sustainability. This philosophy holds that waste disrupts the natural cycle (*Pralaya*); therefore, waste management is an expression of respect for nature as a manifestation of God. Effective waste management is achieved by applying the 3R principles (*reduce, reuse, recycle*) to reduce the burden on landfill sites. Composting organic waste and sorting inorganic waste are steps towards managing waste to turn it into an economic resource without damaging the environment and whilst preserving nature.

The value of *Palemahan* makes a significant contribution to environmental conservation by serving as a legal-cultural foundation for implementing the 3R (Reduce, Reuse, and Recycle) principles in waste management policies in Denpasar City. The Reduce principle is reflected in efforts to minimize waste generation at its source by promoting responsible consumption patterns and restricting the use of single-use plastics. The Reuse principle is implemented through the repeated use of materials that retain functional and economic value, thereby reducing the exploitation of natural resources and minimizing waste generation. Meanwhile, the Recycle principle is realized through the conversion of organic waste into compost and the recycling of inorganic waste to improve resource efficiency while reducing the volume of waste disposed of at final disposal sites. These practices are consistent with Denpasar Mayoral Regulation Number 15 of 2023, which emphasizes source-based waste management and active community participation. Within the normative legal framework, integrating the value of *Palemahan* into the implementation of the 3R principles strengthens environmental governance by transforming cultural values into normative standards that encourage environmentally responsible behavior. Consequently, *Palemahan* functions not only as a philosophical concept but also as a legal-cultural instrument that supports environmental conservation, reduces pressure on landfill capacity, and reinforces the implementation of sustainable waste management in accordance with the principles of *good governance*.

4. Conclusions

Waste management in Denpasar City demonstrates that the implementation of good governance principles significantly enhances the effectiveness of environmental governance. The integration of professionalism, transparency, accountability, and public participation strengthens institutional capacity in waste management through the combination of technological innovation, human resource development, and compliance with national standards. Law functions as the highest authority, as reflected in the issuance of Mayor Regulation (Perwali) No. 2023, which provides a normative framework governing waste management procedures and mechanisms. The main legal implication of this regulatory framework is the reinforcement of regulatory compliance and institutional coordination, which contributes to a more structured, consistent, and enforceable waste management system at the local level.

This study finds that the effectiveness of waste management in Denpasar is not only driven by regulatory and administrative governance, but also strengthened by the

integration of local wisdom values, particularly Tri Hita Karana. The Parahyangan value contributes to the internalization of moral and spiritual responsibility among stakeholders. The Pawongan value strengthens social cohesion through mutual cooperation and community participation. The Palemahan value supports environmental sustainability through the implementation of the 3R principles (reduce, reuse, recycle). The synthesis of good governance principles and Tri Hita Karana constitutes the novelty of this research, as it presents a hybrid governance model that integrates legal-administrative mechanisms with cultural and ethical values in environmental management.

The contribution of this study lies in proposing a conceptual framework for local government policy that integrates formal legal governance with local wisdom-based governance to improve the effectiveness of environmental policy. The legal implication of this approach is the need to strengthen normative instruments that not only ensure administrative compliance but also institutionalize cultural values within environmental governance frameworks. Future research is recommended to conduct comparative studies in other regions to examine the applicability of the Tri Hita Karana-based governance model or other forms of local wisdom in waste management systems. Further empirical studies are also required to assess the long-term effectiveness of integrating good governance principles with local cultural values, particularly in relation to environmental compliance, behavioral change, and policy sustainability.

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