

TOURISM WASTE MANAGEMENT GOVERNANCE IN DENPASAR CITY AFTER THE CLOSURE OF SUWUNG LANDFILL

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Abstract

Denpasar City functions as an urban center and a major support area for Bali's tourism sector, facing significant pressure in waste management. According to the National Waste Management Information System (SIPSN), Bali generates approximately 1.2 million tons of waste annually, with Denpasar City identified as the largest contributor at the provincial level. Waste composition is dominated by organic waste at around 68%, while plastic waste remains a critical issue in urban and tourism areas. During peak events, such as New Year's Eve, Denpasar's Environmental Agency recorded a surge of 900–1,000 tons of waste collected within a single day. The waste management challenge has become more critical following the overcapacity condition and planned permanent closure of the Suwung landfill, which has long served as the primary final disposal site for the Sarbagita region, with a transition period extending to 2026. This situation requires a fundamental transformation of urban and tourism waste management systems in Denpasar. This study aims to analyze the governance of tourism waste management in Denpasar City after the closure of the Suwung landfill using a qualitative descriptive approach through policy analysis, secondary data review, and examination of official government documents. The findings indicate that the main challenges include high waste generation rates, limited decentralized waste processing infrastructure, suboptimal waste segregation at the source, and weak integration of the tourism sector into the urban waste management system. In conclusion, strengthening collaborative governance involving local government, tourism actors, and communities is essential to improve tourism waste management in Denpasar City. Enhancing public service capacity, enforcing regulatory frameworks, and promoting waste reduction at the source are key to ensuring environmental sustainability and maintaining Bali's tourism competitiveness.

Keywords: Denpasar City, Environmental Sustainability, Public Governance Tourism, Waste Management.

A. INTRODUCTION

Denpasar City plays a strategic role as the center of government, economic activity, and tourism in Bali Province. Tourism activities generate large volumes of waste with specific characteristics, including organic waste from restaurants, single-use plastics, food and beverage packaging, and residues from accommodation and entertainment activities. The post-pandemic surge in tourist arrivals has accelerated the daily rate of waste generation, exceeding the capacity of conventional waste management systems.

The Suwung Landfill has functioned as the primary final disposal site for Denpasar and the Sarbagita metropolitan area for more than three decades. Critical capacity constraints, leachate pollution, methane gas emissions, and social impacts on surrounding communities prompted the policy decision to close the Suwung Landfill. This closure marks a

fundamental shift in Bali's urban waste management system and creates institutional pressure on local governments to develop adaptive and sustainable management schemes.

The national legal framework designates waste management as a mandatory responsibility of local governments, as stipulated in Law No. 18 of 2008 on Waste Management. This law affirms a paradigm shift from the collect–transport–dispose approach toward source-based waste reduction and handling. The responsibilities of producers, business actors, and communities are explicitly regulated as part of a shared responsibility system.

Technical policy reinforcement is provided through Government Regulation No. 81 of 2012 on the Management of Household Waste and Household-Like Waste. This regulation emphasizes upstream waste reduction, source separation, and optimization of on-site processing facilities. The 3R principle (reduce, reuse, recycle) serves as the operational framework to be integrated into local policies, including the tourism sector, which contributes significantly to waste generation.

Sectoral policy is further clarified through Minister of Environment and Forestry Regulation No. P.56/MENLHK/SETJEN/KUM.1/10/2015, which governs procedures and technical requirements for waste management at the regional level. This regulation requires city governments to formulate waste reduction plans, develop area-based processing systems, and involve business actors in control mechanisms and performance evaluation of waste management.

The Denpasar City Government has established local policies through regional regulations on waste management that mandate source separation, strengthening of waste banks, development of TPS 3R facilities, and restrictions on single-use plastics. These policies are aligned with Bali Governor Regulation No. 97 of 2018 on the Limitation of Single-Use Plastic Waste Generation, which has direct relevance to tourism activities.

The closure of the Suwung Landfill reveals limitations in institutional and technical capacity within the tourism waste management system. Gaps in coordination among local government agencies, tourism industry actors, and local communities remain evident. Continued reliance on large-scale final disposal facilities indicates weak implementation of source- and area-based waste management principles.

A governance approach becomes crucial in this context. Waste management governance emphasizes multi-actor roles, policy transparency, implementation accountability, and participation of the private sector and communities. This framework is relevant for addressing the complexity of tourism waste management, which simultaneously involves economic, environmental, and social interests.

Indonesia's national agenda for reducing greenhouse gas emissions through its Nationally Determined Contribution (NDC) identifies the waste sector as a key contributor to climate change mitigation. Post-closure waste management of Suwung has direct implications for achieving methane emission reduction targets. Integrating environmental policy with sustainable tourism development thus becomes a strategic necessity for Denpasar City.

These conditions underscore the urgency of examining the governance of tourism waste management in Denpasar City following the closure of the Suwung Landfill. Analysis is needed to assess regulatory effectiveness, institutional capacity, stakeholder collaboration patterns, and the readiness of alternative management systems. The findings are expected to generate practical policy recommendations to strengthen sustainable urban tourism waste governance.

Studies on waste management in Indonesian tourism areas generally focus on technical processing aspects, community behavior, and reduction of single-use plastic waste. Several

studies highlight the effectiveness of waste banks, TPS 3R facilities, and the role of local communities in participatory waste management. These approaches contribute significantly to understanding waste management practices at the micro level.

Research on urban waste governance largely positions local governments as the primary actors, emphasizing regulatory compliance and infrastructure provision. Institutional analyses often remain limited to evaluations of formal policies without examining power relations, cross-sector coordination dynamics, and the involvement of tourism business actors as major waste producers.

Studies on tourism waste management in Bali have predominantly been conducted in village-based tourism destinations and coastal areas, focusing on environmental awareness among tourists and local communities. These studies have not sufficiently linked tourism waste management to structural changes in final disposal systems following the closure of regional-scale landfills.

Literature addressing landfill closures tends to emphasize technical aspects of site conversion, alternative facility capacity, and environmental risks. Governance approaches after landfill closure—particularly in tourism cities facing high waste generation pressure—remain very limited. The linkages between landfill closure policies, local institutional readiness, and adaptation by tourism actors have been insufficiently explored.

There is still a lack of research that comprehensively analyzes tourism waste management governance by integrating regulatory, institutional, financing, monitoring mechanisms, and multi-actor participation dimensions following the closure of the Suwung Landfill. An analytical gap is evident in the absence of studies measuring the effectiveness of coordination among city governments, the tourism sector, local communities, and waste service providers during the system transition.

Moreover, empirical studies linking tourism waste management to climate change mitigation agendas through methane emission reduction remain scarce, particularly at the city level. The relationship between environmental regulation implementation and contributions to Indonesia's NDC targets in the waste sector has not been systematically elaborated within the context of tourism cities.

Based on these conditions, a significant research gap exists regarding how tourism waste management governance in Denpasar City operates after the closure of the Suwung Landfill and the extent to which such governance can address environmental, institutional, and tourism sustainability challenges. This study is expected to fill the literature gap by providing a contextual, regulation-based governance analysis oriented toward post-landfill urban policy practice.

B. LITERATURE REVIEW

Collaborative Governance

In the context of your study, the need to strengthen collaborative governance among local government, tourism actors, and communities clearly emerges as a primary solution pathway following the closure of the Suwung landfill (TPA Suwung). Collaborative governance is understood as a governance arrangement in which public actors invite non-state actors into a shared forum to engage in collective, consensus-oriented decision-making (Ansell & Gash, 2008). This perspective emphasizes that complex public problems characterized by cross-sectoral interactions and competing interests are more realistically addressed through joint action rather than through singular hierarchical control (Emerson et al., 2012).

Within this framework, the quality of the collaborative process such as face-to-face dialogue, trust-building, commitment, and shared understanding becomes a decisive factor in

determining whether collaboration remains merely “ceremonial” or evolves into genuinely productive collective action (Ansell & Gash, 2008). Analytically, collaborative governance provides a lens to assess the extent to which collaboration is institutionalized and capable of generating collective capacity for implementing tourism waste management policies (Emerson et al., 2012; Bryson et al., 2015). Indicators:

- Existence of regular and functional multi-actor collaborative forums
- Clarity of rules and mandates for collaboration (MoUs, SOPs, service agreements)
- Facilitative leadership (conflict mediation, sustaining commitment)
- Levels of trust and openness in information exchange
- Shared goals and clearly defined role distribution
- Joint financing or incentive mechanisms for waste reduction and treatment
- Joint monitoring and evaluation mechanisms and cross-actor accountability

Network Governance

Network governance explains the shift from “government as the sole controller” toward “governance through networks” when public service delivery depends on multiple interdependent organizations (Rhodes, 1996; Provan & Kenis, 2008). In networked societies, power and resources tend to be dispersed, requiring governance capacities that balance stakeholder influence rather than relying solely on rule-making authority (Bovaird, 2005).

Inter-actor relationships are conceptualized as exchanges of resources—such as information, authority, funding, and technical capacity—that require negotiation and horizontal coordination (Provan & Kenis, 2008). Consequently, accountability can no longer be understood solely through bureaucratic chains of command, but must also operate through network-based mechanisms such as service contracts, performance standards, and social control (Bovaird, 2005; Rhodes, 1996).

For research emphasizing regulation, institutions, coordination, participation, and accountability, network governance offers an analytical lens to assess whether governance arrangements remain sectoral or have evolved into integrated cross-sectoral systems linking tourism, environmental management, and community actors (Rhodes, 1996). Indicators:

- Mapping of network actors (local government agencies, villages/urban wards, hotels/restaurants, community groups, third parties) and their roles
- Cross-sectoral coordination mechanisms (inter-agency meetings, joint units, lead agencies or single-command structures)
- Patterns of resource exchange (waste generation data, fleets, TPS3R facilities, contractors)
- Rules governing network relationships (contracts, SLAs, service standards, sanctions)
- Conflict resolution and joint decision-making mechanisms
- Clarity of performance accountability (who is responsible for what, based on which indicators)
- Network adaptability capacity in response to systemic change (e.g., post-landfill closure)

C. RESEARCH METHODOLOGY

This study employs a qualitative method with a descriptive approach to gain an in-depth understanding of governance in the management of tourism-related waste in Denpasar City following the closure of the Suwung landfill (TPA Suwung). The qualitative approach is selected because it enables the researcher to capture the dynamics of actors, coordination processes, and policy practices within the context of an urban waste management system in transition, while the descriptive design is used to present the findings in a systematic and contextual manner. The research location is Denpasar City, Bali Province, with a focus on tourism areas, waste management facilities, and relevant local government institutions. The

research period follows the ongoing research year and is adjusted to the field data collection schedule. The scope of analysis is directed toward governance dimensions, including the regulatory and policy framework, the roles and institutional capacity of local government, patterns of coordination and cross-stakeholder collaboration (including the tourism sector), participation of business actors and the community, as well as challenges and strategies for strengthening governance.

The research subjects include stakeholders directly involved in tourism waste management in Denpasar. Informants are selected using purposive sampling based on criteria of knowledge, experience, and authority relevant to the research topic. Informants comprise officials from local government agencies responsible for environmental management and tourism, managers of waste processing facilities (such as TPS 3R and area-based units), tourism business actors (hotels, restaurants, and destination managers), managers of environmental communities or waste banks, as well as academics or experts in the fields of waste management and sustainable tourism. The data consist of primary data (in-depth interviews and field observations) and secondary data (documentary studies), sourced from local government agencies, tourism business actors, community organizations, and official documents such as laws and regulations, local policies, reports, strategic plans, and relevant scientific publications. Data collection techniques include semi-structured interviews, direct observation of waste management practices in tourism areas and processing facilities, and document review to assess policy consistency, institutional design, and planning directions.

Data analysis is conducted qualitatively through stages of data reduction, data display (narratives, tables, and matrices), and conclusion drawing and verification by tracing patterns, relationships, and key findings. The analytical process applies a governance framework that positions regulation, institutions, coordination, participation, and accountability as the main dimensions for interpreting field and documentary evidence. Data validity is ensured through source triangulation and method triangulation, namely by cross-checking interview information with observation results and official documents to ensure consistency and credibility. This study is limited to the analysis of governance in tourism waste management following the closure of the Suwung landfill in Denpasar City and therefore does not include detailed technical discussions of waste processing technologies or quantitative measurements of waste generation.

D. RESULTS AND DISCUSSION

The management of tourism-related waste in Denpasar City following the closure of the Suwung Landfill (TPA Suwung) reflects a shift that is not merely technical, but also engages structural and operational dimensions. Prior to the closure, waste management practices largely relied on a “collect–transport–dispose” logic, with TPA Suwung functioning as the terminal node of the regional disposal system. This relatively linear model, it should be noted, meant that waste reduction at source and upstream segregation had not yet become dominant priorities, particularly in areas with high tourism intensity and stable daily waste generation.

Dependence on TPA Suwung, interestingly, implied weak institutional incentives to expand processing infrastructure and governance at the area level. Because the “end burden” was absorbed by the landfill, efforts to strengthen segregation and decentralized processing tended to progress more slowly than actual needs. When the closure occurred, the city government and relevant stakeholders not only lost a large-scale final disposal facility, but were also confronted with the need for rapid adjustments in system design, role distribution, and service rhythms. As a result, repositioning the strategy from a downstream-oriented approach toward reduction, segregation, and on-site processing became unavoidable.

The impact of this transition was most acutely felt in the tourism sector, which has long been one of the major contributors to urban waste generation. Your research findings indicate that tourism waste composition is complex and heterogeneous: organic waste from culinary activities tends to dominate, while inorganic fractions—such as plastic packaging, beverage bottles, and single-use materials—consistently appear in significant volumes. Operationally, waste generation is not only high but also fluctuates in line with tourism activity intensity, particularly in hotels, restaurants, and entertainment venues. These facilities produce daily waste streams with dynamics that are difficult to predict if relying solely on conventional collection-based schemes.

The closure of TPA Suwung further revealed that the existing system was not fully prepared to absorb tourism waste generation without the buffer of a large-scale final disposal site. Pressure consequently shifted to TPS 3R facilities and village/urban ward-level processing units, not only in terms of increased volume loads but also in the need for more disciplined segregation to prevent processing bottlenecks. In this context, management effectiveness can no longer be assessed solely through the availability of collection fleets; it is increasingly determined by the capacity of area-based governance to consolidate segregation practices, strengthen processing capacity, and maintain stable, consistent coordination among actors in everyday operations.

From a regulatory perspective, the research shows that Denpasar City already possesses an adequate policy framework for governing tourism waste management. National and local regulations provide a clear legal basis for waste reduction and handling. The city government has established obligations for source-level segregation, restrictions on single-use plastics, and responsibilities for tourism businesses to manage the waste they generate. Nevertheless, on-the-ground implementation continues to face various constraints. Compliance among tourism businesses tends to be largely administrative and has not yet fully translated into sustained behavioral change.

Institutionally, tourism waste management in Denpasar City is characterized by the dominant role of the local government, particularly agencies responsible for environmental management and sanitation. Relevant departments are tasked with planning, implementation, and oversight of waste management activities. The Tourism Office plays a role in guidance and outreach to tourism businesses, especially regarding the adoption of environmentally friendly policies. Village and urban ward governments are involved in managing area-based waste processing facilities. Research findings indicate that while institutional roles are formally defined, inter-agency coordination remains sectoral and has not yet been fully integrated into a collaborative governance framework.

Patterns of coordination and collaboration among stakeholders in tourism waste management following the closure of TPA Suwung have yet to demonstrate strong consistency. Collaboration between local government and tourism businesses has largely taken the form of persuasive approaches and policy appeals. Some large-scale hotels and restaurants have developed independent waste management systems, including partnerships with third parties. However, these practices remain uneven and have not been institutionalized as city-wide standards for tourism waste management. Environmental communities and waste banks contribute to education and community-based waste management, but their involvement remains sporadic and limited to specific areas.

Participation among tourism businesses varies considerably. Large-scale tourism enterprises generally possess greater resources and managerial capacity to implement sustainable waste management practices. In contrast, small and medium-sized enterprises face constraints related to knowledge, costs, and access to processing facilities. Community participation in waste segregation has begun to increase through educational programs and

waste banks, yet consistency in implementation remains a major challenge. Behavioral change in waste management practices has not yet been evenly realized across all tourism areas in Denpasar City.

The research also identifies a range of governance challenges in tourism waste management following the closure of TPA Suwung. These include limited capacity of alternative processing facilities, weak monitoring and enforcement mechanisms, and suboptimal financing schemes for waste management. Historical dependence on final disposal systems continues to shape mindsets and operational practices. This condition underscores that the closure of TPA Suwung is not merely a technical issue, but a governance challenge involving systemic and institutional transformation.

Overall, the findings indicate that the closure of TPA Suwung represents a critical momentum for transforming the governance of tourism waste management in Denpasar City. Systemic change requires strengthened regulatory enforcement, enhanced institutional capacity, and the development of more structured multi-actor collaboration. Effective governance of tourism waste management depends not only on the availability of policies and facilities, but also on shared commitment among government, tourism businesses, and communities to realize sustainable tourism.

E. CONCLUSION

This study concludes that the closure of the Suwung Final Disposal Site (TPA Suwung) has brought about a fundamental shift in the tourism waste management system in Denpasar City. A system that previously relied on large-scale end-of-pipe disposal has transitioned toward approaches emphasizing waste reduction and processing at the source and area level. This transformation positions tourism waste management as a strategic issue that extends beyond technical considerations, encompassing dimensions of governmental governance, institutional coordination, and multi-actor participation.

The regulatory framework governing tourism waste management in Denpasar City is, in principle, already in place and aligned with national and local policies. These regulations provide a strong legal foundation for local governments to promote waste segregation at the source, restrict the use of single-use plastics, and encourage the involvement of tourism business actors in waste management. Nevertheless, policy implementation at the operational level has not yet been optimal. Compliance among tourism businesses remains largely normative and administrative in nature, while monitoring and enforcement mechanisms have not been applied consistently.

From an institutional perspective, this study indicates that tourism waste management in Denpasar City continues to be dominated by the role of the local government, particularly agencies responsible for environmental management and sanitation. Cross-sectoral coordination—especially between the environmental and tourism sectors—has not been fully integrated into a collaborative governance system. The roles of tourism business actors and community groups tend to be supplementary, rather than being positioned as strategic actors with balanced responsibilities and contributions in post-closure waste management following the shutdown of TPA Suwung.

Participation by tourism business actors and local communities exhibits considerable variation. Large-scale tourism enterprises are relatively better prepared to implement sustainable waste management practices compared to small and medium-sized enterprises, which face limitations in resources and capacity. Community participation in waste segregation has increased; however, it remains uneven and inconsistent across tourism areas. This condition suggests that behavioral change in waste management requires a long-term process supported by continuous education and appropriate incentives.

Overall, the study concludes that the governance of tourism waste management in Denpasar City in the post-TPA Suwung closure period has not yet been fully effective. The main challenges lie in the limited capacity of alternative waste processing facilities, weak coordination among stakeholders, and the suboptimal functioning of monitoring and financing mechanisms for waste management. The closure of TPA Suwung represents a critical momentum for reforming tourism waste governance toward a more integrated, collaborative, and sustainability-oriented approach, ensuring both environmental protection and the long-term viability of the tourism sector in Denpasar City.

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