

THE WASTE MANAGEMENT POLICY

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Abstract

The issue of waste management is presently a multifaceted challenge, necessitating a comprehensive approach for effective resolution. The waste management policy encompasses various levels of governance, including laws, government rules, regional regulations, and governor regulations. In line with this, Pangsas Village has developed village regulations pertaining to trash management. The prevailing technique in waste management involves a sequential progression from upstream to downstream. The implementation of an upstream strategy has been observed in Pangsas Village with the adoption of certain village ordinances pertaining to cleanliness, aesthetics, organisation, and environmental well-being. Nevertheless, the current state of waste management remains suboptimal due to the absence of regulations mandating garbage sorting by dealers, markets, and workshops. Similarly, the current downstream strategy is suboptimal due to the lack of waste bank regulation in the draught. However, this issue can be addressed by enhancing the draught village laws or by implementing a decision made by the village head.

INTRODUCTION

The association between Bali and tourism is inseparable, as the allure of its natural landscapes and distinctive arts and culture serve as the primary draws for visitors. Bali's renown extends both domestically and internationally due to its profound spiritual essence rooted in Hinduism, earning it the moniker "Island of the Gods." Consequently, this reputation has led to a surge in tourist arrivals and has concurrently established Bali as a coveted destination for individuals seeking employment opportunities within the tourism sector. The advancement of tourism has resulted in a rise in overall well-being, while concurrently leading to a growing population density in Bali. The environment will be impacted by the rise in population density due to the generation of trash and subsequent pollution and environmental degradation resulting from human activities.

The issue of trash management is a significant societal phenomenon that warrants particular attention from all stakeholders, as garbage generation is an inherent aspect of human existence. The significant accumulation of unmanageable garbage gives birth to a range of issues stemming from the absence of viable alternatives and community viewpoints on waste management and utilisation, manifesting in both direct and indirect consequences.

Careless waste disposal has immediate and indirect consequences. immediate implications encompass a range of infectious diseases, skin ailments, and respiratory issues. Indirect repercussions manifest in the form of potential flooding, resulting from the obstruction of water flow in rivers due to the accumulation of waste deposits. According to health professionals, waste pollution has detrimental effects, mostly on human health. This phenomenon might lead to an escalation in gastrointestinal illnesses, cholera outbreaks, typhus cases, dysentery occurrences, and various other related ailments. The prevalence of diseases such as dengue fever has been seen to be on the rise, mostly attributed to the proliferation of disease-carrying agents, notably flies and cockroaches. This growth can be linked to the accumulation of waste, particularly in landfill sites. Hence, it is imperative to adopt a fresh outlook on the utilisation and management of trash.

The government appears to possess a high level of awareness regarding this particular disease. Hence, there is a perceived need to alter the patterns of waste management. Government personnel has the requisite jurisdiction and responsibility to uphold the law, namely in terms of guaranteeing compliance with all regulations stipulated by environmental legislation within the community. The government can fulfil its mandate and responsibilities to enforce environmental legislation by employing oversight mechanisms and implementing

legal penalties. One type of business involves the implementation of statutory requirements. This analysis will focus on the waste management strategy in Pangsas Village, examining its implementation from the central government down to the village administration.

METHOD

In waste management, the approach used is from upstream to downstream. An upstream approach has been implemented in Pangsas Village with the draft village regulations regarding cleanliness, beauty, order and environmental health.

RESULTS AND DISCUSSION

Waste Management Policy in Pangsas Village

According to statistics provided by the Head of the Bali Province Environmental Service on February 7, 2019, it has been demonstrated that the daily volume of plastic garbage in 2017 amounted to 414 tonnes. Furthermore, there was a 1.61% increase in the volume of plastic waste in 2018, resulting in a daily total of 414.7 tonnes.

Given the substantial magnitude of plastic waste generated in Bali Province, there is an imperative need to establish comprehensive waste management policies and strategies. This includes the implementation of regulations aimed at reducing waste buildup, particularly with regards to Single Use Plastics (SUPs). The subject matter at hand pertains to Law no. 18 of 2008, which deals with Waste Management. This law emphasises the adoption of an integrated and comprehensive waste management system. This signifies a departure from the previous approach, which primarily focused on the final disposal of waste. Instead, the new approach encompasses the entire waste management process, starting from the early stages of production, where products with the potential to become waste are considered, all the way to the point where these products have been utilised and subsequently transformed into waste. The ultimate goal is to ensure the safe return of waste to the environment.

Article 19 specifically governs the management of domestic trash and waste that is comparable to household waste within the context of substance pertaining to waste management. According to the article, the management of household waste and waste similar to domestic waste involves the implementation of waste reduction strategies and the proper handling of waste materials. According to Article 20, the implementation of waste reduction operations involves three primary actions, which are the limitation of trash buildup, the recycling of waste, and the reuse of waste. These three tasks exemplify the notion of

environmentally sustainable waste management known as the 3R approach, which encompasses reducing, reusing, and recycling. According to Article 22, there exist five primary actions involved in the organisation of waste management operations, namely sorting, collecting, transporting, processing, and ultimate processing of garbage. The objective of adopting a holistic strategy in waste management is to mitigate and restrict the accumulation of waste, enhance recycling practises, optimise waste utilisation, and minimise the amount of waste deposited in landfills. This is particularly crucial for plastic waste, as its improper usage contributes to the proliferation of numerous diseases, in addition to its inherent challenges in terms of usability. The process is decomposed by microbes.

In Presidential Regulation (PP) No. 18 of 2012, which pertains to the Management of Household Waste and Waste similar to household waste, the concept of waste generation limitation is elucidated. This concept entails the endeavour to minimise the production of waste, encompassing the entire lifecycle of a product and/or its packaging, from the pre-production stage to the cessation of product and/or packaging utilisation. There are several strategies for establishing constraints on trash generation. These include the utilisation of recyclable items and packaging that can be quickly decomposed through natural processes, the reduction of plastic bag usage, and the avoidance of disposable goods and product packaging.

In order to effectively enforce the guidelines outlined in Government Regulation no. 18 of 2012 pertaining to the management of household waste, it is imperative for the government to establish Presidential Regulation Number 97 of 2017, which addresses the policies and strategies for the management of household waste and similar waste materials at a national level.

According to the policy direction outlined in the Regional Strategy (Akstrada), the objective pertaining to the management of household waste and household-like waste is to achieve a 30 percent reduction in trash generation by the year 2025, relative to the waste generation rate prior to the implementation of Jakstrada. In addition to achieving a 70 percent reduction in waste through the use of sorting, collection, transportation, management, and final processing methods. The government engages in strategic waste management practises that encompass the treatment of domestic waste, which involves activities such as sorting, separating, handling, and managing waste generated by households.

The province of Bali is characterised by a high population density due to its role as a hub for economic development and a popular tourist destination. The population density in Bali is expected to have both favourable and unfavourable outcomes, contributing to the

establishment of a structured way of life that prioritises hygiene and environmental sustainability within the area. Hence, the Bali Provincial government formulates written regulations and implements policies aimed at mitigating factors that may pose threats to the aesthetic appeal and long-term viability of the environment. Improper and inadequate waste management practises can engender adverse consequences across social, economic, and environmental dimensions. According to the relevant governing body, the Provincial Government possesses the jurisdiction to oversee waste management.

The bank exercises its authority within its jurisdiction by formulating policies, creating legally compliant products, and executing strategic initiatives. The formation of Bali Province Regional Regulation Number 5 of 2011 concerning Waste Management was based on the aforementioned concerns.

The execution of waste management in accordance with Bali Provincial Regulation Number 5 of 2011 on Waste Management involves the implementation of trash reduction and handling measures.

Waste reduction initiatives encompass the implementation of strategies aimed at minimising the generation of waste. According to Article 12 of Bali Provincial Regulation Number 5 of 2011, there are specific limitations imposed on the formation of waste. It is mandated that individuals must utilise materials that possess the characteristics of reusability, recyclability, and/or biodegradability through natural processes. In order to effectively implement measures aimed at reducing trash generation, further provisions are required. The policy regarding the limitation of single-use plastic waste generation is established by the Bali Provincial Government, as outlined in Bali Governor Regulation Number 97 of 2018. The aforementioned regulation imposes a stringent prohibition on the utilisation of single-use plastic bags, polystyrene (polystyrene), and plastic straws by producers, distributors, and corporate entities operating within the region of Bali. In continuation of the aforementioned waste management policy extending from the central to the regional domains, Pangsang Village has formulated Village Regulations pertaining to Cleanliness, Aesthetics, Organisation, and Environmental Well-being. Waste management inside the community is regulated by the village bylaws, which ensure collaboration at both the Banjar Dinas and Banjar Adat levels. As indicated in paragraph 3 of Article 6.

Waste Management Mechanism in Pangsang Village

The waste management mechanism encompasses a series of waste handling actions, which encompass sorting, collection, transportation, management, and final processing.

The practise of waste sorting

In this particular instance, waste sorting is predicated upon Denpasar City Regional Regulation Number 3 of 2015, which pertains to Waste Management. The regulation stipulates that waste sorting entails the act of categorising and segregating waste depending on its type, quantity, and/or characteristics. The act of sorting rubbish is a crucial task within the field of waste management. The process of garbage sorting results in the segregation of waste into two main categories: organic waste and inorganic waste. Pangsas Village has incorporated legislation pertaining to this topic inside its village governance framework, specifically outlined in Article 7.

It is incumbent upon every proprietor or resident of a residential or commercial structure to assume responsibility for maintaining the cleanliness of the surrounding environment, which include the upkeep of yards, channels, sewers, and waste water management facilities.

Every proprietor or resident of a structure or premises is required to undertake the proper disposal of waste or excrement by:

The process of categorising garbage into organic and non-organic materials.

Dispose of the waste by placing it in plastic bags or trash cans that are conveniently portable and transferring them to designated trash receptacles. Additionally, implement waste management practises that involve processing waste directly at its point of origin.

In the current regulations, it is observed that traders, offices, educational institutions, marketplaces, and workshops are obligated to furnish garbage containers. However, there is a lack of attention on the practise of waste sorting, as stipulated in Article 8, subsections (1) and (2).

It is incumbent upon every merchant engaged in the sale of goods to furnish appropriate receptacles for the disposal of waste materials resulting from their commercial activities. It is mandatory for any individual or entity overseeing an office, educational institution, market, kiosk, shop, workshop, public service site, or similar establishment to ensure the provision of a designated area and receptacle for trash disposal.

The process of garbage collection refers to the automatic memory management technique employed by programming languages to reclaim memory that is no longer in use

The process of waste collection involves the retrieval of waste materials from their point of origin and their subsequent transportation to a Transfer and Processing Station (TPS), accomplished through the utilisation of either a wheelbarrow or a dedicated garbage pick-up truck. The task of cleaning in Pangsan Village has been regularly undertaken by sanitation personnel.

The topic of waste collection is of significant importance in the field of environmental management.

Transportation refers to the process of managing garbage by means of transporting it from its origin and/or from the TPS/TPST to the TPA, utilising a specialised vehicle designed for waste collection, commonly known as a rubbish truck.

Waste processing management refers to the systematic approach employed to address waste by modifying its properties, composition, and quantity. One waste management initiative implemented by the government is the establishment of Waste Banks. The Waste Bank programme operates on a community-based model, wherein active involvement of community members in waste management endeavours can effectively alleviate the environmental strain caused by waste hazards. Additionally, community engagement in waste management initiatives can yield economic advantages, as community members have the opportunity to convert waste materials into valuable commodities. In addition to the production of bags, garments, and other equipment with community waste, it is also possible to get organic fertiliser from this waste material. Community participation refers to the active involvement of community members in various activities and programmes that are initiated by the government with the aim of empowering and fostering the development of the community. This active involvement encompasses the community's willingness to engage in the planning, execution, and maintenance processes of these initiatives. The demonstration of community engagement in the implementation of the trash bank programme is evident through the practise of waste segregation, encompassing both organic and inorganic garbage, as well as the categorization of waste according to material composition, such as plastic, paper, glass, and metal. The waste bank system can serve as a mechanism for implementing social engineering, thereby facilitating the establishment of an effective waste management system within society. The categorization of garbage within the waste bank consists of two distinct classifications, specifically organic waste and inorganic waste. Upon careful examination, it is evident that the current Village Regulations do not encompass the regulation of Waste Banks.

Anticipation of such outcomes may arise from the implementation of the Village Regulations or the discretionary decision-making of the Village Head.

The concluding stage of waste management and disposal

The TPA, which stands for the final processing location, is a designated facility responsible for the safe processing and disposal of waste materials, ensuring the protection of both human health and the environment.

The waste sorting stage is of utmost importance in this waste management system, as it involves the categorization and segregation of garbage based on its type, quantity, and characteristics. The act of segregating residential garbage has the potential to mitigate waste volume at waste treatment plants (TPS) and waste disposal sites (TPA). This is due to the fact that waste carriers typically convey organic waste to TPS and TPA, while inorganic waste is collected separately and subsequently directed to garbage Banks. During this particular phase, the one assuming the most significant position is the homemaker/Partiya Karkerên Kurdistan (PKK).

CONCLUSION

The prevailing methodology employed in waste management is characterised by an upstream to downstream approach. A proactive strategy has been used in Pangsang Village through the formulation of village ordinances pertaining to cleanliness, aesthetics, organisation, and environmental well-being. However, the current state of waste management is not yet considered optimal due to the absence of regulations mandating garbage sorting by dealers, markets, and workshops. Similarly, the current downstream strategy is suboptimal due to the absence of provisions in the draught village regulations pertaining to waste banks. However, it is possible to anticipate this by making improvements to the draught village regulations or by making a decision through the village head.

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