

## Research Article

# Examining the Indonesia Bureaucracy Response and Problem in Pandemic Times: A Preliminary Diagnostic Study

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**Abstract.**

The assessment of waste management policies within the Environmental Agency of Palu City has been governed by Regional Regulation No. 11 / 2013, which pertains to the management of garbage. Nevertheless, the implementation of this regional regulation has proven to be ineffective, namely in relation to the problem-solving element. By analyzing the goals, objectives, and contents, it can be inferred that the regional regulation is designed to address the waste issue in Palu City. The objective of this study was to assess the waste handling and management strategy implemented in Palu City with regards to its adherence to the Adipura standards. The employed research methodology was descriptive in nature and falls within the qualitative paradigm. The analysis employs William Dunn's theory, as evidenced by the utilization of policy criteria such as effectiveness, efficiency, adequacy, equity, responsiveness, and accuracy. The findings indicated that the waste treatment and management policy in Palu City with regards to Adipura was suboptimal. The failure of Palu City to secure the Adipura title in 2022 is evident. This observation demonstrates that the efficiency of waste management has not been fully realized. The process of landfill rubbish disposal in the Kawatuna landfill had not been concluded at the time of the assessment. Furthermore, the optimization of waste management in every urban village is yet to be achieved. The incomplete fulfillment of the budget allocated for waste management stands as the primary cause for this circumstance, with approximately 60% of the funds being disbursed. This observation demonstrates that the allocation of funds for trash management has not been commensurated, as there still remain several villages lacking the necessary means of transport.

**Keywords:** policy, waste management, Adipura

## 1. Introduction

Palu City, being recognised as a significant urban centre within Indonesia, possesses substantial natural, cultural, and tourism assets. The Palu City Government has initiated the Adipura Programme with the aim of preserving cultural heritage, promoting the tourism sector, and enhancing environmental quality. The primary objective of the programme is to establish an environment that is both aesthetically pleasing and ecologically sustainable. Additionally, it seeks to bolster the cultural identity of the local community and augment the city's attractiveness as a tourist destination. Nevertheless,

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it is crucial to periodically assess the programme in order to guarantee the efficacy and long-term viability of the implemented measures, given the dynamic and evolving nature of the circumstances.

Before the initiation of the Adipura Programme, Palu City encountered several environmental issues, encompassing air and water pollution, inadequate waste management, and environmental deterioration as a consequence of fast urbanisation. Furthermore, the cultural and tourism potential of Palu City was frequently underutilised. In the given setting, the Adipura Programme emerges as a strategic measure to effectively tackle these difficulties and exploit the available opportunities. The Adipura Programme consists of multiple interconnected and mutually reinforcing elements, one of which is sustainable spatial planning, as well as enhancing waste management efficiency, preserving natural resources and ecosystems, and fostering the preservation and development of local cultural heritage. The use of a holistic approach facilitates the establishment of connections between the environment, culture, and the local economy, thereby fostering a sustainable and multifaceted influence.

The residents of Palu City hope that the Adipura Program will bring significant positive changes to the quality of the environment and their daily lives. By improving the environment and empowering local culture, it is hoped that the program will encourage the growth of a sustainable tourism sector. However, financial challenges, diverse community participation, cross-sector coordination, and adjustments to regulatory changes are some of the factors that need to be overcome in the course of implementing this program.

In the past, a number of monitoring and evaluation initiatives were undertaken with regards to the Adipura Programme. The assessments yielded significant findings pertaining to the attainment of programme objectives, engagement of the community, ecological consequences, and the efficacy of resource management. Although certain favourable outcomes have been attained, the assessments have also unveiled domains that necessitate enhancements. The Adipura Programme has experienced substantial advancements since its inception. Recent advancements include the incorporation of additional components, the enlargement of coverage areas, and the adjustment to evolving environmental and tourism circumstances. Furthermore, the implementation of the programme has been inspired by global trends in sustainability and tourism. The success of the Adipura Programme is contingent upon the active engagement of communities and other stakeholders. By actively participating in the processes of planning, execution, and assessment, the programme significantly enhances its likelihood of attaining its objectives.

Inadequate waste management infrastructure can be a major obstacle. Lack of processing facilities, such as proper landfills or recycling plants, can be a barrier to waste management. Awareness of the importance of waste management is still lacking. Understanding waste segregation, reuse and waste reduction can still be a challenge. The government's role in developing policies that support sustainable waste management and also the involvement of the private sector in waste management is very important. The use of technology in waste management, such as smart waste collection systems or modern recycling methods, can help in handling waste efficiently. However, this can be an obstacle if the technology is not available or affordable.

The environment and society are subject to perpetual change. Hence, it is crucial to conduct routine programme evaluation in order to ascertain any modifications that may impact the long-term viability and effectiveness of the Adipura programme. The capacity to adapt and enhance the programme is crucial for ensuring its continued relevance and efficacy. Conducting a policy evaluation of the Adipura Programme in Palu City is an essential undertaking aimed at comprehensively assessing the program's accomplishments, identifying the obstacles encountered, and exploring prospects for future advancement. By means of this assessment, the Palu City Government can ascertain that the measures undertaken are in optimal accordance with the initial programme objectives, thereby enabling the implementation of more strategic modifications to effectively tackle emerging challenges.

This study employs the Policy Evaluation technique developed by William Dunn. According to Dunn as stated in Nugroho [1], the concept of evaluation might be synonymous with appraisal, rating, and assessment. Evaluation is a process that focuses on the production of reliable and accurate data, as well as the advantages derived from policy results. Evaluation is a valuable tool for assessing the effectiveness of policies. It can provide accurate and consistent information regarding policy performance, including the extent to which policy objectives have been achieved and the alignment with societal needs, values, and opportunities. Additionally, evaluation contributes to the examination and evaluation of the values that underpin the selection of target objectives.

Furthermore, evaluation aids in the application of various policy analysis methods, such as problem formulation and the development of recommendations. Evaluation, as a component of the policy process, places greater emphasis on the performance of policy, specifically its implementation [1]. Dunn outlines the parameters for assessing public policy, which may be discerned from the criteria employed in policy assessment. These criteria encompass effectiveness, efficiency, sufficiency, equity, responsiveness, and correctness.

## 2. Methods

Research is an iterative and methodical pursuit of knowledge, wherein truth is sought via the utilisation of scientific methodologies and adherence to relevant principles and guidelines. Based on the characteristics exhibited, this study employs a qualitative research methodology. According to Moleong, qualitative research aims to comprehensively understand the phenomenon experienced by research subjects, such as behaviour, perception, motivation, and action. This understanding is achieved through descriptive analysis using verbal and linguistic expressions within a specific natural context, employing diverse scientific methodologies. According to Nazir, the descriptive research design is characterised as a form of study that aims to uncover factual information through a systematic and comprehensive analysis. The purpose of this research strategy is to identify and examine phenomena that manifest within the population, with the intention of facilitating subsequent investigation or analysis.

Qualitative research is a comprehensive process of data analysis, which encompasses many stages including data collecting, data compaction, data presentation, and conclusion formulation. Data compaction refers to the systematic procedure of choosing, concentrating, streamlining, summarising, and altering field notes, transcripts, interviews, documents, and other forms of empirical data. Data compaction refers to the process of modifying data without the need for data sorting or reduction. Data compression is an ongoing process that persists throughout life, particularly when it is focused on qualitative research. Anticipating data compression is essential prior to data collection, as researchers frequently form conclusions that may involve conceptual frameworks, instances, research questions, and data gathering that are closely aligned with their preconceived notions. Following the process of data collecting, the subsequent step involves the use of data compression techniques. This entails the creation of concise summaries, the formulation of category codes, and the generation of analytical memos. Therefore, it can be inferred that through streamlining the process of data analysis, qualitative research is anticipated to more effectively incorporate the whole of the data without the need to diminish the field discoveries acquired during the research (Data Networking Process). Data presentation refers to a systematic arrangement of information that enables the derivation of meaningful conclusions. This phenomenon occurs due to the act of presenting the data, which facilitates comprehension of the situation at hand and subsequently informs decision-making processes.

### 3. Results and Discussion

William Dunn's theoretical approach is one of the approaches in public policy analysis used to evaluate government program or policies. This approach puts forward a comprehensive evaluation concept by involving several different dimensions. In the context of evaluating waste management program, researchers apply a policy evaluation criteria approach based on what William Dunn has put forward by looking at 6 (six) approaches, these approaches can be seen as follows:

#### 3.1. Effectiveness

The efficacy of the Adipura programme necessitates the active engagement of diverse stakeholders. The Adipura programme is implemented to assess the efficacy of the initiative in facilitating the enhancement of the urban environment, with the ultimate goal of establishing a sustainable and ecologically friendly metropolis. The assessment of community well-being can be gauged, in part, by the level of environmental cleanliness [2]. Several factors have been identified as influential in shaping individuals' impressions of the Adipura programme. These factors include knowledge, experience, interest, motivation, and requirements. Despite the various initiatives undertaken by the City Government, such as the acquisition of waste collection fleets for urban villages, the implementation of labor-intensive work, the enactment of Local Government regulations to restrict plastic waste, the organisation of urban village cleaning competitions, the establishment of Green Open Spaces in all urban villages, and the formation of the Adipura Task Force at the urban village and sub-district levels, Palu City has unfortunately been unable to attain the Adipura status. Effectiveness refers to the degree of accomplishment in attaining the objectives established by the Palu City Environment Office with regards to the Adipura achievement.

#### 3.2. Efficiency

The concept of optimal efficiency refers to the most favourable assessment of the exertion required to generate the intended outcome. Insufficient public understanding on effective environmental management remains a prevailing concern. The attainment of predetermined standards and recognition by the Ministry of Environment and Forestry

Republic of Indonesia, as exemplified by the Adipura award, necessitates the collaborative optimisation of synergy among all stakeholders involved in environmental management in Palu City. Nevertheless, it remains a potent tool for assessing the efficacy of local governments in their efforts to enhance waste management and establish clean, verdant, and sustainable urban green spaces. The classification of districts/cities in the 2022 Adipura programme is determined by the Regional Strategic Policy, the capacity of the waste management system, verified data from the National Waste Management Information System, and the management of landfill operations and green spaces.

Furthermore, the Environmental Agency of Palu City has implemented the Aditwiyata Programme, which involves a collaborative effort with schools to promote environmental cleanliness and cultivate a sense of understanding regarding the significance of maintaining cleanliness from a young age. Aditwiyata, also recognised as Green School on an international scale, is a programme initiated by the Ministry of Environment with the aim of fostering knowledge and promoting environmental conservation awareness within school communities. It is anticipated that the engagement of all members of a school community in various school activities will foster the development of a salubrious atmosphere and mitigate any adverse environmental consequences. The Aditwiyata programme holds significant value in cultivating the environmental attitudes of students and school community members, as evidenced by its integration into daily school life. This phenomenon is evident in the daily attitudes and behaviours exhibited by individuals, be it inside educational institutions, domestic settings, or their immediate surroundings.

Based on the secondary data acquired, it is evident that the collective count of Aditwiyata schools in Palu City amounts to 74 schools. These schools can be categorised as follows: There are a total of 19 schools in Aditwiyata City, 37 schools in the Provincial Aditwiyata programme, 13 schools in the National Aditwiyata programme, and 5 schools in the Independent Aditwiyata programme.

### 3.3. Sufficiency

Waste can serve as a viable indication for assessing the cleanliness of the urban environment. Numerous urban areas have a range of environmental challenges, including issues such as waste management, accessibility to green spaces, air and water pollution, as well as concerns pertaining to climate change. The correlation between waste management practises and the public's perception of cleanliness in market areas and rivers/open water is significant. The management of cleanliness is seen in the

market vicinity and the container area, however in the river and open water region, cleanliness is evident along the water body and its adjacent riverbanks.

The efficiency of garbage management in any urban settlement has not been excellent. This is due to the suboptimal utilisation of the allocated funds for waste management. The whole fulfilment of waste management, amounting to Rp. 31,587,101,110, - has not been achieved, with just approximately Rp. 23,841,280,693 or almost 75% being realised. In addition, it should be noted that there exist urban communities that now lack access to a means of transportation for the disposal of waste materials. In the past, the waste collection fleet consisted of 48 units. However, in 2022, an additional 22 units were introduced, resulting in a total of 70 units. Despite this increase, the current fleet size is deemed inadequate for the purpose of segregating waste into organic, non-organic, and general waste categories. To effectively carry out separate waste collection, an estimated 150-200 fleet units are required to ensure the prevention of waste mixing. Moreover, it is worth noting that the resources allocated for garbage collection operations in each Village remain constrained, with a mere provision of one driver and two workers. Consequently, the efficiency of waste transportation to the village area is yet to be fully optimised. Furthermore, the Palu City Government has implemented a labor-intensive initiative, with a workforce of 3500 individuals responsible for daily street cleaning activities in the vicinity of offices and shops. However, this programme has been deemed ineffectual in effectively preserving the cleanliness standards within Palu City.

### 3.4. Equalisation

Based on the observations conducted by researchers at the Final Waste Disposal Site, it has been noted that the manual separation of waste is still being practised due to the non-functionality of the waste processing facility established by the city government and USAID. Additionally, the presence of roaming livestock, particularly cows, at the Kawatuna landfill poses a significant risk to both animal and human health, as they consume waste materials as their food source. The Adipura award should serve as a catalyst for cities to cultivate a citizen-centric approach,

extending beyond the realm of physical infrastructure and including a broader spectrum of considerations. The primary objective of quality environmental management is to enhance the overall quality of life and well-being of the population it serves. Equalisation is a policy that aims to achieve equitable distribution of policies, ensuring that the consequences or efforts are equally allocated by the environmental agency

of Palu City. The evaluation of landfill preparedness in waste management yielded a score of approximately 40%, mostly due to the ongoing building and development of waste management infrastructure. The garbage management operations in each hamlet are not functioning properly due to insufficient funding allocated by the Palu City government for waste management in these areas. There exist a number of settlements that currently lack access to garbage transport vehicles. In April 2023, the municipal administration of Palu implemented a new fleet of garbage transport vehicles with the aim of enhancing waste management efficiency. This initiative seeks to address the existing waste handling rate, which now stands at approximately 60%, and elevate it to a target range of 70% to 80%. Hence, it is imperative to garner community participation in the selection process of waste removal from households, encompassing both organic and non-organic waste materials. In order to facilitate the prompt transportation of organic or recyclable garbage, the local administration has constructed a facility known as TPS3R. Subsequently, any remaining residue will be sent to Kawatuna. TPS3R is an acronym in the Indonesian language that stands for “Tempat Pengelolaan Sampah dengan Prinsip Reuse, Reduce, dan Recycle.”

### 3.5. Responsiveness

The concept of responsiveness refers to the ability of a system or entity to react promptly and effectively. The waste management services provided by the Environmental Service of Palu City are recognised as being of the highest level. The quality of services rendered by government agencies and janitorial service companies is widely regarded as satisfactory. The Environmental Service officers, in conjunction with their respective sub-districts, demonstrate a high level of responsiveness and efficiency in addressing complaints or concerns from service recipients. However, the government frequently has challenges in delivering services, particularly in terms of community engagement and inadequate buildings and equipment. This issue can also be examined in terms of the appropriateness of protocols and the implementation of charges, such as restitution or waste disposal fees.

Based on the secondary data obtained, it can be seen the location of the Reduce, Reuse, Recycle Waste Management (TPS3R) Sites in Palu City as follows:

The Waste Management Reduce, Reuse, Recycle (TPS3R) system implemented in tourist regions serves as a waste management strategy and processing technology aimed at addressing trash-related issues and their associated consequences. The 3R (Reduce, Reuse, and Recycle)



TABLE 1: Location table of Waste Management Reduce, Reuse, Recycle (TPS3R) Sites in Palu City.

No.	TPS3R/Sub-district/Regency
1	TPS3R in Talise Valangguni urban village, Mantikulore sub-district
2	TPS3R in Silae Village, Ulujadi Sub-district
3	TPS3R in Pengawu Village, Tatanga Sub-district
4	TPS3R in Duyu Village, West Palu Sub-district
5	TPS3R in Palupi Village, Tatanga Sub-district
6	TPS3R in Petobo Village, Palu Selatan Sub-district

Source: processed from secondary data 2023

management strategy commences with collecting garbage from individual households, followed by waste segregation and the implementation of organic waste management practises, such as composting. The objective of this programme is to enable the government to offer infrastructure to densely populated residential communities seeking to adopt community-driven waste management practises that align with local preferences and environmental circumstances.

The objectives of this TPS3R are:

1. People can recognize the function of TPS3R
2. The community can recognize waste by type and can do their own composting.
3. Operators can conduct waste segregation and composting at area level
4. Providing cheap and quality organic fertilizer to farmers
5. Boosting the regional economy
6. Establish the legality of a trusted and independent organizational structure.

TPS3R is a waste Management facility that focuses on the principles of Reduce, Reuse, and Recycle, aiming to minimize trash generation at its origin within a community or area. The objective is to enhance comprehension and consciousness regarding waste management, as well as promote Clean and Healthy Living Behaviour (PHBS) within the community, with the simultaneous aim of alleviating the volume of trash requiring disposal in landfills. In line with the labor-intensive approach, the TPS3R Construction Implementers and TPS3R Operational Implementers refer to local communities that have been officially recognised as Community Self-Help Groups (KSM) Construction Implementers and TPS3R Users and Maintainers Group (KPP).

### 3.6. Accuracy

The primary objective of the Adipura programme is to foster the leadership and dedication of local governments in districts and cities. It seeks to promote widespread engagement across all societal levels, with the aim of facilitating the integration of green economic growth, social functions, and ecological functions within the development process. This is achieved through the application of principles of good governance. The criteria for tracking the 2022 Adipura nomination involves regions that actively participate in reporting the national waste management information system (SIPSN). These regions must demonstrate a waste reduction and management achievement of over 50 percent by July 31, 2022. Based on the provided statistics, the individual stated that the proportion of garbage under management in Palu City was 89.27% in the year 2020. Subsequently, in 2021, this percentage witnessed an increment of 3.54%, resulting in a total of 92.81% of waste being managed. Based on the attained presentation score surpassing the 50 percent threshold, it is fair to consider Palu as a potential nominee.

Palu City has implemented a comprehensive and sustainable policy framework and strategic approach to effectively manage and mitigate household garbage and waste materials that are similar in nature to household waste under the city's jurisdiction. The waste reduction achievement indicators encompass three key elements: a decline in per capita waste generation, an upsurge in recycling of waste at its origin, and an augmentation in the reuse of trash at its origin. Furthermore, the waste management performance indicators include the following: an augmentation in waste segregation, a reduction in the quantity of garbage transported for final processing, an escalation in the volume of waste delivered to waste treatment facilities, and an upsurge in the quantity of waste that undergoes processing. Environmental management initiatives through policy implementation encompass the establishment of the Adipura Task Force, rejuvenation of the TPS3R programme, enhancement of garbage collection at the

residential level, collaboration with environmental communities, and advancements in park infrastructure.

Palu City does not yet have adequate infrastructure for efficient waste management, such as waste collection, processing and recycling systems. The low level of public awareness and participation in waste management could be the cause. Lack of understanding of the importance of waste sorting or lack of habits to maintain environmental cleanliness can be a factor. Policies that are less supportive or ineffective implementation of policies in waste management can also be a factor in Adipura's failed

acceptance. The government and local communities must work together to improve waste management systems, environmental awareness, and infrastructure so that Palu City can meet the standards required to receive the Adipura award in the future.

Encouraging community participation in hygiene management in Palu City can face various barriers. Some of the barriers faced in this endeavor include:

**Awareness and Education:** Many communities may lack an understanding of the importance of environmental hygiene and the negative impacts of unsustainable behavior. Low education and awareness on these issues can be a major barrier. **Indifference:** Some individuals may lack concern for environmental cleanliness or tend to ignore the impact their actions have on the environment. They may feel that these issues are irrelevant or not their responsibility. **Limited Resources:** Some communities may face resource limitations, such as time and money, which make it difficult for them to participate in hygiene activities. **Infrastructure Inadequacies:** Poor infrastructure, such as a lack of adequate bins or efficient waste management systems, can be a barrier in encouraging community participation. **Economic Uncertainty:** Unstable or low economic conditions can make communities focus on their basic needs and lack the time or resources to participate in hygiene initiatives. **Government Indifference:** The absence of support or active role from the local government in encouraging community participation in hygiene management can also be a barrier. **Faulty Social Norms:** Faulty social norms or inappropriate sustainable behaviors within communities can hinder efforts to change behavior towards more environmentally friendly practices. **Technological Incompetence:** In some areas, especially more remote ones, access to technology and information may be limited, making it difficult to deliver messages and education on hygiene. **Social Conflict and Tension:** Social conflicts or tensions within communities can divert attention from hygiene issues and make the necessary cooperation difficult to achieve.

Overcoming these barriers requires sustained efforts in education, awareness and promotion of environmental hygiene. Governments, NGOs and civil society can work together to overcome these barriers by creating an enabling environment for community participation in hygiene management.

## 4. Conclusion

In conclusion, it can be said that the effectiveness of the waste handling and management policy in Palu City towards achieving the Adipura award has not been fully realised. This phenomenon is observable in the year 2022. The city of Palu was unable to secure the Adipura designation due to suboptimal waste management practises. The

topic of discussion pertains to the disposal of rubbish in landfills. The construction of the Kawatuna landfill had not been finalised throughout the period of evaluation. The efficiency of garbage disposal in each village has likewise been suboptimal. This can be attributed to the suboptimal utilisation of the allocated funds for waste management. The fulfilment of waste management costs has not been fully achieved, with just approximately 60% being realised. The allocation of funds for trash management has not been optimised, resulting in certain metropolitan communities lacking the necessary means to transport refuse.

Based on the research conducted, the researcher needs to recommend several things as an effort to get the *Adipura* trophy in the following year:

1. (a) Completion of Kawatuna Landfill Construction.
- (b) Addition of waste collection fleet garbage fleet for each urban village in Palu City.
- (c) It needs the support of the entire community of Palu City to keep supporting the local government's efforts in waste management.
- (d) Developing the enthusiasm and willingness of the people of Palu City to separate their waste based on organic and non-organic categories.

## References

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