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The Effectiveness of the TOSS Program in Waste Management in Klungkung Regency: Integrating the Principles of the Neo-Weberian State in Environmental Policy

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Abstract
Waste management is a complex issue that requires innovative and sustainable approaches. Klungkung Regency faces challenges in waste management, including increasing waste volume, limited infrastructure, and low community participation. The Klungkung Regency Government has implemented the Local Waste Processing Site (TOSS) Program as an innovative strategy for managing waste into alternative energy sources. This study analyzes the effectiveness of waste management policies and the implementation of the Neo-Weberian State (NWS) principles in environmental governance in Klungkung. The research method used is a literature study with a qualitative descriptive approach. The results of the study indicate that although the TOSS Program has had a positive impact in reducing waste generation and creating economic opportunities, various obstacles are still faced, especially in terms of community participation and supporting infrastructure. Therefore, a more effective, innovative, and sustainable strategy is needed to improve the success of waste management in the Klungkung Regency.

Abstrak
Pengelolaan sampah merupakan isu kompleks yang memerlukan pendekatan inovatif dan berkelanjutan. Kabupaten Klungkung menghadapi tantangan dalam pengelolaan limbah, termasuk meningkatnya volume sampah, keterbatasan infrastruktur, serta rendahnya partisipasi masyarakat. Pemerintah Kabupaten Klungkung menerapkan Program Tempat Olah Sampah Setempat (TOSS) sebagai strategi inovatif dalam mengelola sampah menjadi sumber energi alternatif. Penelitian ini menganalisis efektivitas kebijakan pengelolaan sampah serta implementasi prinsip Neo-Weberian State (NWS) dalam tata kelola lingkungan di Klungkung. Metode penelitian yang digunakan adalah studi kepustakaan dengan pendekatan deskriptif kualitatif. Hasil penelitian menunjukkan bahwa meskipun Program TOSS telah memberikan dampak positif dalam mengurangi timbulan sampah dan menciptakan peluang ekonomi, berbagai kendala masih dihadapi, terutama dalam aspek partisipasi masyarakat dan infrastruktur pendukung. Oleh karena itu, diperlukan strategi yang lebih efektif, inovatif, dan berkelanjutan untuk meningkatkan keberhasilan pengelolaan sampah di Kabupaten Klungkung.

INTRODUCTION

Waste management is a complex problem because the amount and composition of waste are increasingly diverse. Proper waste storage must be done to avoid negative impacts on health and the environment. One problem caused by waste is the decline in aesthetics around the landfill, which has the potential to cause social conflict with the surrounding community (Sari et al., 2023). According to research by Mertayani et al., (2023) the Law of the Republic of Indonesia Number 18 of 2008 concerning Waste Management is an important legal basis that regulates waste management and governance in Indonesia. This law provides a legal basis for the government and society to carry out sustainable and responsible waste management activities. One of the important points in the regulatory law regarding the sorting, collection, transportation, processing, and disposal of waste is the efforts to protect the environment from the negative impacts of waste. Wafa & Angin, (2024) also said that The high volume of waste in Banyuwangi Regency, which reaches 1,245 tons every day, is a serious threat and needs to be considered through alternative waste management programs. Household waste and low public awareness contribute greatly to the pile of waste.

The composition of waste requires a good storage system to prevent negative impacts on health and the environment. Aesthetic problems around landfills that can trigger social conflict are also relevant issues, especially in areas with high population density. To overcome this problem, a collaborative approach is needed between the government, the private sector, and the community to implement the principles of circular economy-based waste management. In addition, education and socialization to the community about the importance of waste sorting and processing must continue to be encouraged so that waste management programs can run more effectively and sustainably. According to research (Shofiyah & Irawati, 2024) the processing of thermoplastic and thermoset polymer waste at the Main Waste Bank (BSI) of Jember Regency. BSI plays a role in fostering waste bank units but faces obstacles in sorting and processing plastic waste. This community service program aims to provide knowledge and technology related to polymer waste processing. The socialization carried out includes strategies for processing plastic into products of economic value, such as handicrafts, pellets, fuel, brick mixtures, and asphalt. The recycling methods discussed include primary, secondary, tertiary, and quaternary processes.

With the implementation of this technology, it is hoped that plastic waste management in Jember will become more effective, support the Zero Waste program, and increase the economic and aesthetic value of recycled products.

However, waste management is not only a problem in Jember Regency but also various other regions in Indonesia, including Klungkung Regency. This regency developed the Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) Program as an innovative strategy for dealing with waste problems sustainably. The TOSS program integrates the principle of decentralization in waste processing by actively involving the community while utilizing simple technology to process waste into alternative energy sources. In this context, this study focuses on waste management in the Klungkung Regency with a case study of the TOSS Program and the integration of the Neo-Weberian State principle in environmental governance. The Neo-Weberian State principle emphasizes the role of government in presenting more adaptive, efficient, and innovation-based policies to address public problems. With this approach, waste management is expected to run more effectively through synergy between the government, community, and private sector.

Based on data from the Bali Provincial Environmental Service, the volume of waste produced in Bali continues to increase every year. Klungkung Regency is ranked second with a waste volume of 2,893 cubic meters per day. The excess waste capacity in various regions, including Klungkung, has encouraged the Klungkung Regent to create innovations in waste management in the area. This innovation is known as the Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) Program, which is the only local government-based waste management program in Bali Province. The data in this study were obtained from primary and secondary sources. Primary data were collected by distributing questionnaires to 98 respondents and direct interviews with informants. Meanwhile, secondary data came from various reports, scientific articles, and research related to the TOSS Program. The results of the analysis of community responses to this program in Gunaksa Village showed that the level of active community participation in the TOSS program was still relatively low. (Shofiyah & Irawati, 2024). As for research Cristina et al., (2023) The level of community knowledge and attitudes is significantly related to household waste sorting

behaviour in Gunaksa Village. Education and the formation of positive attitudes are needed to increase participation in waste management.

Referring to the total population in the area, which exceeds 230 thousand people, on average, each individual in Klungkung Regency produces around 0.5 kilograms of waste per day. The composition of the waste produced is also very diverse, with organic waste dominating up to 68% of the total daily waste production. Other types of waste include materials such as dust, stones, and the like at 8%, plastic glasses and bottles at 7%, plastic sheets at 5%, and plastic bags, which contribute 4% (Suriyani, 2020). Therefore, the high daily waste production in Klungkung Regency highlights the challenges in waste management, especially the dominance of organic waste that has not been optimally utilized. Plastic waste also requires more effective reduction and recycling strategies. In addition to limited infrastructure, public awareness of sorting waste is still low. Therefore, studies on production patterns and waste management strategies are important to realize sustainable solutions.

Although the Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) program has been implemented as a solution for renewable energy-based waste management, various obstacles are still faced, such as the lack of waste sorting at the source, limited infrastructure, and low community participation in waste processing. This requires a more effective, innovative, and sustainable management strategy. Therefore, this study aims to analyze waste production patterns and review the effectiveness of waste management policies in the Klungkung Regency. This study also highlights the importance of integrating the Neo-Weberian State (NWS) principle, which emphasizes the role of government as a regulator and facilitator in creating more participatory and efficient environmental governance. The results of the study are expected to provide recommendations to improve the sustainability of the waste management system in this area.

This research was conducted because waste management in the Klungkung Regency still faces major challenges, especially with the increasing volume of waste and limited processing infrastructure. Although the government has implemented the Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) program as an innovative solution, its effectiveness still needs to be studied further, especially in the context of community participation, regulatory policies, and environmental impacts. In

addition, the integration of the Neo-Weberian State (NWS) principle in waste management in Klungkung has not been widely studied. This approach is important because it emphasizes the role of the state as a regulator and facilitator while encouraging community and private sector involvement in the waste management system. Through this research, the author wants to provide a literature-based analysis of the effectiveness of policies that have been implemented, challenges faced, and recommendations for more sustainable policies. The results are expected to be a reference for local governments and academics in designing more effective and evidence-based waste management strategies.

RESEARCH METHODS

This study uses a library research method with a qualitative descriptive approach to analyze waste production patterns and the effectiveness of waste management policies in the Klungkung Regency. Data sources in this study were obtained from scientific journals, research reports, government policy documents, and articles from official websites such as the Klungkung Regency Government and news about waste management activities in the Klungkung Regency.

Descriptive qualitative methods and library research have a strong correlation in social and policy research, especially in analyzing phenomena based on available literature sources. Literature studies can be presented in two ways: direct quotations and indirect quotations. Direct quotations are used when researchers take text from other sources without changing the content, either in whole or in part. Meanwhile, indirect quotations are used when researchers summarize or rearrange the essence of several sources in their own words. In a literature study, researchers compile a literature review that includes relevant definitions, concepts, theories, and research models (Sari et al., 2023). Meanwhile, descriptive research is research that attempts to describe and interpret something, such as situations and conditions with existing relationships, opinions that develop, consequences or effects that occur, and so on (Rusandi & Rusli, 2021).

The data were analyzed using content analysis, reviewing various documents and related literature to identify patterns, challenges, and strategies for waste management. In addition, this study also examines the application of the Neo-Weberian State (NWS) principle in waste management

policies, especially in the involvement of government, community, and private sector. Through this approach, the study is expected to provide a comprehensive picture of the effectiveness of waste management in the Klungkung Regency, as well as recommendations for more sustainable policies.

RESULTS AND DISCUSSION

RESULTS

1. Waste Management Profile in Klungkung Regency

Klungkung Regency is the second smallest Regency after Denpasar City out of 9 (nine) Regencies and Cities in Bali Province, Indonesia, with boundaries in the north of Bangli Regency, east of Karangasem Regency, west of Gianyar Regency and south of the Indian Ocean. One-third (112.16 Km2) of the Klungkung Regency area is located on the island of Bali, and two-thirds (202.84 Km2) are islands, namely Nusa Penida Island, Nusa Lembongan Island and Nusa Ceningan Island. Klungkung Regency consists of 4 Districts, namely Klungkung District, Banjarangkan District, Dawan District and Nusa Penida District. Klungkung Regency is an Island Regency that has the potential mostly in the marine fisheries and agriculture sectors (Pemerintah Kabupaten Klungkung, 2021).

Currently, Klungkung Regency, Bali Province, has 3 alternative waste processing systems that can be applied, namely: using the existing Bangli Regional final waste processing site or Tempat Pembuangan Akhir (TPA), building a new TPA for Klungkung and communal-scale processing (for ex, ample in the form of a Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS). Klungkung Regency actually had a final waste processing site or Tempat Pembuangan Akhir (TPA), Sente, which received all waste produced. The existence of social and environmental problems caused the Sente TPA to be closed at the end of 2017, but it has now been re-operated due to the limited land for the TPA owned by Klungkung Regency. Furthermore, the Government is currently planning to build a new TPA that will only receive waste from the Klungkung Regency (Chaerul et al., 2020).

Pellet-fueled Gasifier Generators are used as a source of electrical energy for the Waste Shredder Machine at the TOSS Center, which has succeeded in reducing waste shipments to the Sente TPA by 50%. The TOSS Center also produces large amounts of compost that is used for various

purposes, such as the Ornamental Plant Nursery Center of the Klungkung DLHP, the PKK Heart Garden, and agricultural demonstration plot trials by universities and the Klungkung Agriculture Service. In addition, compost is used for rice production for employees through rice fields on TOSS land. The OSS Center provides social benefits by absorbing 60 workers, including Poor Families (35%), victims of layoffs due to the pandemic (6%), and disabilities (1.6%). The production of compost reduces the cost of purchasing fertilizer for city parks and government offices. The use of pellet-fueled generators reduces electricity consumption costs, while the sale of recycled inorganic waste by the Nadi Lestari Cooperative improves employee welfare (Suwirta, 2024).

2. Production Patterns and Composition of Waste in Klungkung Regency

Various studies have examined the production patterns and composition of waste in the Klungkung Regency. One of them is a study that evaluates the 3R (Reduce, Reuse, Recycle) based waste management strategy in Klungkung District. This study found that waste management in the area involves a series of systematic activities to control, reduce, and utilize waste so that its impact can be minimized (Mertayani et al., 2023). Regional Regulation of Klungkung Regency Number 7 of 2014 concerning Waste Management: this regulation regulates waste management efforts, including processing aimed at changing the characteristics, composition, and quantity of waste. This regulation also includes final waste processing as an effort to return waste and/or residue from previous processing to the environmental media safely (Pemerintah Kabupaten Klungkung, 2014).

Klungkung Regency produces 30,425.74 tons of waste, with 88.91% successfully managed and 3,795.83 tons (11.09%) unmanaged. Compared to other regencies in Bali, Klungkung has a fairly good level of waste management, although still below Denpasar City and Badung Regency. The main challenge is optimizing waste processing and reducing unhandled waste to achieve a more sustainable management system. Based on the graph, Klungkung Regency has a smaller amount of waste generation compared to Denpasar City, Badung, and Gianyar. The amount of successfully managed waste is greater than that which is unmanaged, with a fairly high percentage of management. However, there is still some unhandled waste, which can cause environmental problems if not managed properly. This waste production pattern and composition show that although the waste management system in Klungkung is quite good, optimization is still needed to reduce the amount of unhandled waste (Pemerintah Provinsi Bali, 2022).

Waste management data in Bali Province shows that Klungkung Regency continues to improve its waste management. However, the increase in waste production from year to year is a challenge in itself. A study found that the Senate landfill, which has been operating since the 1990s, experienced excess capacity in 2017 and was finally closed in 2018. Since then, there have been no more district-scale landfills serving the mainland Klungkung area. (Wijayakusuma & Setiawan, 2019).

3. Implementation of the Local Waste Processing Facility (TOSS) Program in Klungkung Regency

The Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) Program in Klungkung Regency is a local government innovation in managing waste independently and sustainably. This program aims to overcome the problem of waste by processing it into alternative energy sources, such as fuel pellets. The Regent of Klungkung initiated TOSS as a solution to the increasing accumulation of waste along with population growth and tourism activities (Marsitadewi et al., 2021). The implementation of the TOSS program involves the active role of the community in sorting waste from the source. Organic waste is processed into compost, while inorganic waste is recycled or processed into Refuse Derived Fuel (RDF) for New Renewable Energy (EBT). This program began with the sorting of waste from households in Semarapura City, which consists of six sub-districts (Maulana, 2023).

The establishment of the TOSS Center also supports the success of the implementation of TOSS. The TOSS Center increases waste processing capacity from 182.5 tons to 2,500 tons per year, pellet production from 2.4 tons to 9.03 tons per year, compost production from 36 tons to 102 tons per year, and is able to manage inorganic waste from 0 tons to 80.64 tons per year (Suwirta, 2024). In addition, the TOSS program also provides economic benefits to the community by creating new job opportunities in waste management and pellet production as an alternative fuel. This is in line with the program's goal of reducing unemployment through community empowerment in waste management (Indonesia Power Unit Pembangkitan Bali, 2025).

However, implementing the TOSS program is not without challenges. Several villages have experienced obstacles in operationalizing this program, such as a lack of community participation and limited supporting facilities. Therefore, more intensive education and socialization efforts are needed to increase awareness and the active role of the community in waste management. (Febyanti et al., 2022). Overall, the TOSS program in Klungkung Regency shows that with innovation and active community

participation, waste problems can be overcome effectively and provide added value to the local economy.

4. Level of Community Participation in Waste Management in Klungkung Regency

The level of community participation in waste management in Klungkung Regency shows significant variation, influenced by factors such as knowledge, attitude, and the availability of supporting facilities. According to Marsitadewi et al., (2021) Community knowledge and understanding, a study in Gunaksa Village, showed that out of 100 respondents, 7% were very aware, 57% were aware, 32% were less aware, and 4% were not aware of the Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) Program. The average knowledge score was 2.67, indicating that the community was aware of the program. However, an in-depth understanding of the program is still lacking, with an average score of 2.07, indicating that the community only knew without understanding more deeply about the implementation of the TOSS program.

Community attitudes towards waste management programs also play an important role in their participation. Research in Semarapura Klod Village found that less positive community attitudes were related to low participation in community-based waste bank management. Of the 74 respondents with less positive attitudes, 100% showed low participation, while of the 16 respondents with sufficient attitudes, 75% showed sufficient participation. This shows a significant relationship between attitudes and community participation in waste management (Oktaviani et al., 2022).

Despite programs such as TOSS, community participation in waste management is still weak. This is due to the level of waste sorting that has not reached the performance target of 90%. To increase participation, more intensive education and socialization efforts, as well as the provision of adequate supporting facilities, are needed (Mertayani et al., 2023). Overall, increasing community participation in waste management in the Klungkung Regency requires a holistic approach that includes increasing knowledge, changing attitudes, and providing adequate facilities. Collaboration between the government, the community, and other related parties is essential to achieving effective and sustainable waste management.

5. Challenges in Waste Management in Klungkung Regency

Waste management in the Klungkung Regency faces several significant challenges that require serious attention. One of the main problems is the condition of the Sente Final Disposal Site or Tempat Pembuangan Akhi (TPA), which has exceeded its capacity (over-capacity),

causing an increasingly worrying accumulation of waste (Nambi, 2023). In addition, limited facilities and infrastructure, such as heavy equipment that often breaks down, hinders the effective waste management process (Putra, 2022). Budget and human resource limitations are also obstacles to optimal waste management efforts (Mertayani et al., 2023). Lack of community participation in waste sorting at the source adds to the complexity of this problem (Mertayani et al., 2023). Education and socialization efforts that have not been maximized have resulted in low public awareness of the importance of good waste management (Putra, 2022). To overcome these challenges, the Klungkung Regency Government needs to increase collaboration with various parties, including the private sector and the community, and adopt innovative and sustainable waste management technologies (Nambi, 2023).

6. Neo-Weberian State (NWS) Approach

The Neo-Weberian State (NWS) approach is a governance paradigm that combines elements of Max Weber's traditional bureaucracy with modern management practices. Christopher Pollitt and Geert Bouckaert first introduced the concept to understand public administration reform trends in continental Europe and the Nordic countries as an alternative to the more market-oriented New Public Management (NPM) approach. (Bouckaert, 2022). The Neo-Weberian State (NWS) approach combines elements of traditional bureaucracy with modern management practices to enhance the government's capacity to direct and coordinate public policy. Research shows that neo-Weberian political strategies promote public sector modernization that strengthens the government's directive and coordinating capacity, which serves to enhance public policy effectiveness and responsiveness to societal needs. (Ramos & Milanesi, 2020). In addition, the integration between NWS and the concept of public value can create governance that is more effective and responsive to community needs (Ongaro, 2024).

7. Impact of the TOSS Program on the Environment and Local Economy in Klungkung Regency

The Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) program in Klungkung Regency has had a significant impact on the environment and local economy. Environmentally, the program has succeeded in reducing the volume of waste by processing organic waste into compost and inorganic waste into fuel pellets for community electricity. (Putra,2022; Pinatih, 2024). The Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) program in Klungkung Regency has had a significant impact on the local environment and economy. From an

environmental perspective, this program aims to reduce waste accumulation through the Reduce-Reuse-Recycle (TPS 3R) system, which is expected to reduce pollution and maintain the cleanliness of tourist areas such as Aan Secret Waterfall. However, the supporting infrastructure is still not operating optimally, and many people still litter, causing water pollution and reducing tourist attractions. From an economic perspective, the TOSS program encourages community participation in sorting and processing waste into products of economic value, such as compost or recycled goods, which have the potential to increase local income. However, the success of this program still depends on changes in community habits in managing waste and adequate infrastructure support (Kumara et al., 2023)

DISCUSSION

1. Waste Production Patterns and Composition in Klungkung Regency

Klungkung Regency, as one of the areas with rapid population growth and a tourism sector, faces challenges in waste management. Waste production in this area continues to increase every year, with total waste generation reaching 30,425.74 tons per year. Of this amount, around 88.91% has been successfully managed, while 11.09% or around 3,795.83 tons of waste is not handled properly. In terms of waste composition, most of it consists of organic waste from households, restaurants, and traditional markets. Inorganic waste is also quite significant, especially from industry and tourism activities.

A study by Mertayani et al., (2023) identified that the Reduce, Reuse, Recycle (3R)-based management strategy has been implemented in several areas but still faces obstacles in its implementation. Klungkung Regency Regional Regulation Number 7 of 2014 concerning Waste Management has provided a legal framework for handling waste, including more environmentally friendly processing and final processing. However, challenges remain in optimizing waste processing. Klungkung Regency has a fairly good level of waste management compared to other regencies in Bali but is still below Denpasar City and Badung Regency. In general, although the waste management system is running, the increase in waste production from year to year is a major challenge. The capacity of the Senate TPA, which

was closed in 2018 due to excess capacity, is proof that waste management policies in Klungkung must continue to be improved.

2. Implementation of Waste Management Policy and TOSS Program

To overcome these challenges, the Klungkung Regency Government implemented the Local Waste Processing Site or Tempat Olah Sampah Setempat (TOSS) program. This program is designed to reduce dependence on landfills by processing organic waste into compost and inorganic waste into fuel pellets (Refuse Derived Fuel). TOSS also adopts a waste sorting system from the source, which is implemented at the household and institutional levels. The TOSS Center in Klungkung has contributed greatly to waste reduction. Waste processing capacity increased from 182.5 tons to 2,500 tons per year, pellet production increased from 2.4 tons to 9.03 tons per year, and compost production increased from 36 tons to 102 tons per year. In addition, around 80.64 tons of inorganic waste is successfully managed each year. The success of this program has not only had an impact on the environment, but also on the community's economy. This program has created jobs for local communities, including vulnerable groups such as poor families, victims of layoffs, and people with disabilities. However, there are several obstacles in the implementation of this program. Lack of community participation in sorting waste and limited facilities are the main obstacles. Therefore, more intensive education and socialization are needed to increase public awareness of the importance of good waste management.

3. Partisipasi Masyarakat dalam Pengelolaan Sampah

The level of community participation in waste management in Klungkung Regency shows quite large variations. A study in Gunaksa Village showed that only 7% of 100 respondents had a deep understanding of the TOSS program, while 32% still did not understand the program. Community attitudes towards waste management programs also affect the effectiveness of their implementation. In some villages, low awareness of the benefits of waste sorting has resulted in low participation in community-based waste banks. In fact, in Semarapura Klod Village, it was found that people with less positive attitudes towards waste management tend not to participate in existing programs.

To increase participation, strategies that can be applied are:

a. More intensive education and socialization involving local communities and educational institutions.
b. Economic incentives, for example, provide financial benefits for residents who actively participate in waste bank or waste processing programs.
c. Improvement of supporting facilities, such as separate waste bins and waste processing centres, that are more affordable for the community.

4. Integration of Neo-Weberian State (NWS) Principles in Waste Management

The Neo-Weberian State (NWS) approach emphasizes a strong government role in coordinating public policies while still adopting modern management principles. In the context of waste management in the Klungkung Regency, this approach is relevant because it combines the roles of government, society, and the private sector in creating more effective and sustainable policies. The main elements of the NWS approach that can be integrated into waste management policies in Klungkung include:

a. Increasing bureaucratic capacity - The government must strengthen regulations and monitoring systems in waste management. This can be done by implementing technology-based waste management standards and improving the coordination system between agencies.
b. Multi-stakeholder collaboration - The NWS approach emphasizes partnerships between the government, the private sector, and the community. In the TOSS program, cooperatives such as the Nadi Lestari Cooperative are involved in recycling inorganic waste, which shows that this collaboration can run effectively.
c. Modernization of public administration - Digitalization of waste management systems, such as application-based reporting systems or real-time monitoring of waste generation, can improve governance efficiency.
d. Data-based policies and periodic evaluation - The government needs to adopt a stricter evaluation system to ensure the effectiveness of waste management policies. A data-driven approach allows for the identification of areas for improvement

and policy innovations that are more appropriate to local conditions.

Through the integration of NWS principles, the effectiveness of waste management in Klungkung can be increased with a bureaucracy that is more responsive to community needs and broader collaboration with various stakeholders.

5. Policy Recommendations for Sustainable Waste Management

Based on the research findings, several policy recommendations can be implemented to improve the effectiveness of waste management in Klungkung Regency:

a. Optimization of the TOSS Program—The government needs to expand the scope of this program to more villages by improving supporting facilities and community training.
b. Strengthening Regulation and Law Enforcement – Regional regulations must be enforced more strictly to prevent littering.
c. Technological Innovation in Waste Management – The government can adopt technologies such as waste-to-energy to convert waste into renewable energy sources.
d. Increasing Community Participation – Economic incentives and education strategies need to be expanded so that the community is more active in sorting and managing waste.
e. Integration of the NWS Approach in Public Policy—The government must strengthen its role in coordinating and innovating waste management policies by utilizing modern management practices.

By implementing these strategies, Klungkung Regency can create a waste management system that is more effective and sustainable and has a positive impact on the environment and the community's economy.

CONCLUSION

This study shows that waste management in the Klungkung Regency still faces various challenges even though the TOSS Program has been implemented. This program has succeeded in reducing the amount of waste generated and generating

economic benefits for the community through the production of compost and fuel pellets. However, several obstacles are still found, such as low community participation in sorting waste, limited management infrastructure, and lack of awareness of the importance of sustainable waste management. The Neo-Weberian State approach can be a solution by emphasizing the role of government in creating more efficient and innovation-based policies. To improve the effectiveness of waste management, a collaborative strategy is needed between the government, the private sector, and the community. The recommendations proposed in this study include optimizing the TOSS Program, strengthening regulations, increasing community participation, and utilizing technology in waste processing. With a more comprehensive strategy, it is hoped that waste management in the Klungkung Regency can run more effectively and sustainably and provide a positive impact on the environment and community welfare, as well as the environment and the community's economy.

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