



Optimization of Source-Based Waste Management in Apuan Village Through Village Regulations

Luh Putu Suryani, Ni Made Puspasutari Ujjanti, Ida Ayu Putu Widiati, I Made Gianyar, Dewa Gede Agung Semarabawa, I Wayan Sunarta, Ayu Metta Sandra, Ni Putu Laksmi Krisnina Maharani

Law Study Program Doctoral Program, Postgraduate Program, Warmadewa University
putusuryani099@gmail.com

ARTICLE INFO	ABSTRACT
<p>Keywords: Trash, Management, Village regulations</p>	<p>Trash is a problem faced almost everywhere in the world. Considering the numerous waste issues that occur, it is expected that all elements of society work together to tackle the waste problem from upstream to downstream. Bali, which is famous as a tourist destination, also has serious waste issues, prompting the Governor of Bali to issue Governor Regulation No. 47 of 2019 regarding Source-Based Waste Management. The purpose of this research is also to discuss the legal framework that enables the Apuan village government to implement a source-based waste management program and to understand the mechanism of source-based waste management. The research method involves conducting interviews with the Apuan Village Government, Susut Sub-district, Bangli Regency. Source-based waste management has not been fully implemented in Apuan Village due to the lack of legal framework for source-based waste management. The proposed solution to the partner is to draft a new village regulation that provides detailed provisions for implementing source-based waste management, as well as conducting Focus Group Discussions (FGD) and raising awareness about the importance of proper waste management. The method to be used involves providing assistance during the drafting of the village regulation and conducting public awareness campaigns on the significance of source-based waste management.</p>
<p>How to cite: Suryani, L. P., Ujjanti, N. M. P., Widiati, I. A. P., Gianya, I. M., Semarabawa, D. G. A., Sunarta, I. W., Sandra, A. M., & Maharani, N. P. L. K. (2023). Optimization of Source-Based Waste Management in Apuan Village Through Village Regulations. Law Doctoral Community Service Journal, Vol.2(2). Doi: https://doi.org/10.55637/ldcsj.2.2.7604.87-91</p>	

1. INTRODUCTION

The development of the tourism sector in Bali has had a positive impact on the Balinese economy. The tourism industry has an important role in increasing the hotel, restaurant and other sectors. On the other hand, the increase in the number of tourist visits coupled with an increase in various supporting businesses, as well as an increase in the population of the Province of Bali, are feared to have negative impacts such as pressure on environmental quality. One of the pressures on the environment that is starting to appear is the increase in waste generation.

In 2019, waste generation in the Province of Bali has reached 4,281 tons/day, of which 60% is organic waste, 20% is plastic waste, 11% is paper waste, and the other 9% is metal, glass and other waste. Of the 4,281 tonnes/day waste

generated, 856.2 tonnes/day constituted plastic waste, of which 49% was handled properly through the Reduce, Reuse, Recycle (TPS3R) Waste Management Site/Integrated Waste Management Site (TPST).)/waste banks that exist, while the remaining 51% cannot be handled properly. Much of this untreated plastic waste enters river waterways (20.7 tonnes/km²), beaches (3.9 tonnes/km²), and land (2.1 tonnes/km²) (Mongobay, 2019).

From the data above, it can be seen that the waste problem is a serious problem that requires integrated handling from various parties. As one of the "Greening of Tourism" destinations designed by the United Nations World Tourism Organization (UNWTO) in 2012, Bali must immediately improve because the impact will be very broad. Garbage on land that is washed away by the flow of river water

eventually ends up on several beaches in the Bali region and this can reduce the aesthetics and cleanliness of the beach. If this is not handled quickly and precisely, then it is unlikely that Bali as a world tourist destination will be rated as bad internationally.

But the reality is, public awareness in efforts to protect the environment is still very low. People still think that the problem of waste is a trivial problem, so that littering is something that is normal and will not cause a big problem (Sutrisnawati & Purwahita, 2018). Both central and regional governments have issued regulations and policies in dealing with waste. However, this does not necessarily bring significant positive changes to people's behavior to have concern for keeping the environment free of waste. However, it is also undeniable that the lack of facilities in the form of trash cans in public places is also one of the contributing factors to the waste problem (Setiawan, 2021). The availability of landfills in public places such as terminals, markets, city parks is still very limited so visitors have a tendency to litter and this is still an obstacle in waste management (Dinata, 2017).

Governor of Bali Regulation Number 47 of 2019 concerning Source-Based Waste Management (hereinafter referred to as Pergub Bali No. 47 of 2019) regulates the obligation of producers to reduce waste by withdrawing household waste/garbage and similar types of household waste/specific waste from products and product packaging for recycling, reuse and reuse, by designating unit waste banks, sector waste banks, and/or master waste banks in each district/city as Temporary Storage Facilities.

In Bangli Regency itself there are still lots of piles of garbage that have piled up due to the lack of facilities to accommodate garbage and the lack of public awareness in environmental cleanliness. Garbage that has piled up in various corners is still a problem in environmental hygiene. To improve waste management as well as follow up on Bali Governor Regulation No. 47 of 2019, the Bangli Regent issued Bangli Regent Instruction Number 2 of 2021 concerning Source-Based Waste Management in Villages/Kelurahan and Traditional Villages (hereinafter referred to as Bangli Regent Instruction No. 2 of 2021).

In this Bangli Regent's Instruction, instructs the Bekel/Lurah and Bendesa Adat in Bangli Regency to carry out source-based waste management in each Village/Kelurahan and Adat Village either independently or in an

integrated manner between Villages, Sub-Districts and/or Traditional Villages guided by Governor of Bali Decree Number 381/03-P/HK/2021 concerning Guidelines for Source-Based Waste Management in Villages/Kelurahan and Traditional Villages, as attached. One of the traditional villages that has followed up on the Bangli Regent's Instruction is Apuan Village.

The Head of Apuan Village Head of Bangli Regency has issued Apuan Village Regulations in 2023 concerning Source-Based Waste Management (hereinafter referred to as Perdes Apuan 2023). Apart from Bangli Regency and Apuan Village which have followed up on Bali Governor Regulation No. 47 of 2019, this paper intends to analyze source-based waste management in terms of environmental legal aspects.

PKM research has been carried out by many people. The first research is from Mariam, dkk (2021) that discuss about optimization of integrated waste management and processing in an effort to improve the environmental quality of the community of ciampea udik village, Bogor regency. The second research is from Wahyuni, dkk (2022) that discuss about optimization of waste handling in sekaran village through the digitalization of waste banks towards a self-consulted Village In 2025. Last, the research conducted by Sandika, dkk (2022) about PKM optimizing waste management through sorting the source of its generation in pecatu village, south kuta district, Badung Regency, Bali. Based on the previous research, the researcher decides to discuss these fundamental problems, such as:

1. What is the legal product that allows the Apuan Village Government to implement a source-based waste management program?

2. What is the mechanism for resource-based waste management?

Based on the problems above, through community service activities a possible solution will be sought for Apuan Village to implement a source-based waste management program. Furthermore, a solution to a resource-based waste management mechanism was sought. The aim of this activity was to assist the Apuan Village Government, Susut District, Bangli Regency to draft a Village Regulation on source-based waste management. The purpose of this study is also to discuss legal products that enable the Apuan village government to implement a source-based waste management program and to find out the mechanism for source-based waste

management. The target for this community service activity is the Apuan Village Government apparatus, Susut District, Bangli Regency. So that it can realize activities effectively and structured.

2. RESEARCH METHOD

The method of implementation carried out in the community service program is by:

The method of implementation carried out in the community service program is by:

1. Partner Problem Mapping: Conducting interviews with Apuan Village Administration, Kec. Shrink, Kab. Bangli.
2. Legal Counseling:
 - Providing input to the community on the importance of Village Regulations as a legal umbrella for source-based waste management in Apuan Village.
 - Dissemination of Governor of Bali Regulation Number 47 of 2019 concerning Source-Based Waste Management, Bangli Regent Instruction Number 2 of 2021 concerning Source-Based Waste Management in Villages/Kelurahan and Traditional Villages
3. Assistance in Drafting Village Regulations: Inviting and involving the Apuan Village administration to draft Village Regulations.
4. Focus Group Discussion: Inviting village officials, BPD Apuan Village, village assistants, LPM, and community leaders.

3. RESULTS AND DISCUSSION

3.1 A Legal Product that Enables the Apuan Village Government to Implement a Source-Based Waste Management Program

One of the government's roles is to exercise the authority to issue legal products that can be used as a legal umbrella. Likewise, with the Apuan Village Government, in an effort to optimize resource-based waste management, the Apuan Village Government deems it necessary to establish a rule that can be used as a legal umbrella.

In accordance with the provisions of Article 1 number 12 of the Regulation of the Minister of Home Affairs of the Republic of Indonesia

Number 44 of 2016 concerning Village Authority states that:

“Village authority is authority belonging to the Village including authority based on origin rights, village-scale local authority, authority

assigned by the Government, Provincial Regional Government, or Regency/City Regional Government as well as other authorities assigned by the Government, Provincial Government, or Regency/City Regional Government in accordance with the provisions of laws and regulations.

Village Legal Products are legal products in the form of regulations which include Village Regulations, Joint Village Head Regulations, Village Head Regulations, Village Consultative Body Regulations, and in the form of decisions which include Village Head Decisions and Village Consultative Council Decisions.

In line with the Development Vision of the Province of Bali "Nangun Sat Kerthi Loka Bali" through the Planned Universal Development Pattern, which means maintaining the sanctity and harmony of Bali's nature and its contents, to create a prosperous and happy Balinese Krama and gumi life, from time to time in accordance with the principles of the Trisakti Bung Karno. Balinese ancestors/elders have passed down a Balinese Krama life order that unites and maintains a balance/harmony between Balinese Nature, Balinese Krama (humans), and Balinese Culture.

Obviously in an effort to maintain and preserve Bali's nature, the Provincial Government of Bali has issued regulations/policies and programs for nature conservation, protection of holy places, seas, lakes, rivers, springs, mountains, forests, vegetation (agriculture). and plantations), and the natural environment so that Bali's nature becomes green, beautiful and clean.

Pergub Bali No.47 of 2019 mandates that the obligation to manage waste is carried out starting from individuals in the household as producers of waste. Household waste management is carried out independently or in collaboration with Traditional Villages and Villages/Kelurahan by:

- a. Use goods and/or packaging that can be recycled and easily decomposed by natural processes;
- b. Limiting waste generation by not using single-use plastics;
- c. Use products that generate as little waste as possible;
- d. sorting waste;
- e. Deposit waste that is not easily decomposed by nature to the Waste Bank and/or Waste Treatment Facility (FPS);
- f. Processing waste that is easily decomposed by nature; And
- g. Prepare trash bins to accommodate residual waste.

To improve waste management as well as

follow up on Bali Governor Regulation No. 47 of 2019, the Bangli Regent issued Bangli Regent Instruction No. 2 of 2021 which in the third point stipulates that "Bekel/Lurah and Bendesa Adat in Bangli Regency must carry out Source-Based Waste Management in each Oesa/Kelurahan and Adat Village either independently or in an integrated manner between Villages, Sub-Districts and/or Traditional Villages by referring to Governor of Bali Decree Number 381/03-P/HK/2021 concerning Guidelines for Source-Based Waste Management in Villages/Sub-Districts and Traditional Villages, as attached".

Based on the foregoing, the BPD and the Apuan Village Headquarters together drafted legal rules that allow the Apuan Village Government to implement a source-based waste management development program in the form of a Village Regulation. In the context of administering village government, the Village Government as stated in Article 69 of Law Number 6 of 2014 concerning Villages is given the authority to form Village Regulations.

With the drafting of a village regulation regarding source-based waste management in Apuan Village, which will then be ratified through a village meeting, Apuan Village will have a Village Regulation that is used as the legal basis for source-based waste management towards a Safe, Compliant Apuan Village. ,Whole, Beautiful, Comfortable.

3.2 Source-Based Waste Management Mechanism

The substance of Governor Regulation Number 47 of 2019 concerning Source-Based Waste Management and Governor of Bali Decree Number 381/03-P/HK/2021 concerning Guidelines for Source-Based Waste Management in Villages/Kelurahan and Traditional Villages in general can be adopted in the Apuan Village Regulation Draft, but there are several provisions that need to be adjusted to the conditions, readiness and ability of Apuan Village in applying the implementation of Source-Based Waste Management. From the outreach activities, an idea developed that Apuan Village needed readiness to implement the Village Regulations, especially in terms of the readiness of Human Resources, funding and infrastructure in Resource-Based Waste Management. In the discussion session with the Environment Service there was input, that the Bali Governor's Instruction which was followed up with the Bangli Regent's Instruction needed to be accompanied by the provision of assistance and facilities from the Bangli Regency Government

and the Bali Provincial Government, given the conditions of each Village in Bali having different capabilities, as well as the handling characteristics waste according to their respective conditions. Implementation of Resource-Based Waste Management in Villages still requires readiness, both in terms of rules, apparatus, infrastructure, community and culture.

The basic concept of resource-based waste management is integrated waste management that involves the community. This waste management model uses the 3R principle, namely reduce or reduce the amount of waste produced, reuse or reuse items that are no longer used, and recycle, namely reprocessing the waste so that it can become an item that is more useful or has market value.

Waste management in Apuan Village starts from the source of the waste. Residents in the area are asked to sort the waste they produce. Waste is sorted based on its nature, namely organic waste and inorganic waste. Organic waste is waste that is easy to decompose naturally such as vegetable and fruit waste, food waste and leaf waste. Meanwhile, inorganic waste is waste that cannot be decomposed by nature, such as bottles, plastic, glass, cans, and cardboard. The waste is then disposed of in separate trash bins that have been provided according to its nature. Organic waste is disposed of in organic waste bins or can be processed into compost by digging or holes in the moor or vacant land owned by each song or resident's house, while inorganic waste is disposed of in inorganic labeled bins. Inorganic waste is brought to the Garbage Bank office where it will be formed.

4. CONCLUSION AND SUGGESTION

4.1 Conclusion

1. The legal product that allows the Apuan Village Government to optimize resource-based waste management is in the form of a Village Regulation.
2. The resource-based waste management mechanism starts with each family head in sorting organic and inorganic waste. Organic waste is managed independently by the head of the family by utilizing lava to make compost, while inorganic waste will be taken to a waste bank which will be formed later.

4.2 Suggestions

The Government of Bangli Regency and the Provincial Government of Bali should provide assistance and facilities, bearing in mind that each village in Bali has different abilities, as well as the characteristics of waste handling according to

their respective conditions. Implementation of Resource-Based Waste Management in Villages still requires readiness, both in terms of rules, apparatus, infrastructure, community and culture.

REFERENCES

- Dinata, I. W. W. (2017). Kewenangan Dinas Lingkungan Hidup (DLH) Kabupaten Bangli Dalam Pengelolaan Sampah. Udayana University Press, Denpasar.
- Mongobay. (2019). Inilah Data dan Sumber Sampah Terbaru di Bali.
- Sutrisnawati, N. K., & Purwahita, A. A. R. M. (2018). Fenomena Sampah dan Pariwisata Bali. *Jurnal Akademi Pariwisata Denpasar*, Vol. 9(1).
- Setiawan, I. K. P. (2021). Analisis Aspek Lokasi: Sarana Prasarana dan Pelayanan TPA Regional Bangli. *Jurnal Vastukara*, Universitas Udayana, Denpasar.
- Sandika, I. K. B., Ariasih, N. K., Sutarwiyasa, I. K., Lesmana, P. S. W., Ginantra, N. L. W. S. R., Widiartha, K. K., Marlinda, N. L. P. M., Marlinda, N. L. P. M., & Indrawan, I. G. A. (2022). PKM Optimalisasi Pengelolaan Sampah Melalui Pemilahan Pada Sumber Timbulannya di Desa Pecatu, Kecamatan Kuta Selatan, Kabupaten Badung, Bali. *Jurnal Pengabdian Masyarakat Sains Dan Teknologi*, Vol.1(4).
- Mariam, I., Latianingsih, N., & Danaryani, S. (2021). Optimalisasi Pengelolaan dan Pengolahan Sampah Terpadu dalam Upaya Meningkatkan Kualitas Lingkungan Masyarakat Desa Ciampea Udik Kabupaten Bogor. *Jurnal Aplikasi IPTEKS*, Vol.7(1).
- Wahyuni, Mandala, C. A. P., Cahyani, F. D., Nurdiansyah, M. B., Hamaddulloh, R. H., Aditiya, M. R. D., Astuti, S. D. P., Wati, A. T. I. P., Zahroh, N. A. A., Firmansyah, D., Kurnia, Z. B., Andriansyah, A., Aliyya, W. L. N., Amri, M. S., Aisudin, M., Riski, W. A., & Haikal, M. F. (2022). Optimalisasi Penanganan Sampah di Desa Sekaran Melalui Digitalisasi Bank Sampah menuju Desa Mandiri Sampah 2025. *Bernas: Jurnal Pengabdian Kepada Masyarakat*, Vol.3(4).
- Peraturan Gubernur Bali Nomor 47 Tahun 2019 tentang Pengelolaan Sampah Berbasis Sumber
- Instruksi Bupati Bangli Nomor 2 Tahun 2021 tentang Pengelolaan Sampah Berbasis Sumber di Desa/Kelurahan dan Desa Adat