



Zero Wastefor Creative Economy And Tourism In Kolo Asakota Village, Bima City

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Abstract: Garbage is a major problem in the development of beach tourism in Kolo Village, Bima City. Garbage causes beaches to become dirty, beaches become less beautiful, brings unpleasant odors, causes disease and environmental pollution. The results of observations of the state of waste in Kolo Village showed that the prominent waste problems are waste heaps, waste sources, waste sorting, waste storage/TPA, waste transportation, waste destruction, and low compliance/awareness of regional regulations regarding waste handling. The 2024 Mataram University PMD KKN program in Kolo sub-district aims to provide understanding to the community about the importance of the Zero Waste concept, digitize the promotion of Zero Waste Tourism and creative economy MSMEs, train community creativity in processing waste into craft products with selling value. Apart from that, the PMD KKN program is also to promote and maintain the cleanliness of tourist and residential environments. The results of the activity show that the Mataram University PMD KKN program in Kolo sub-district has influenced the community's enthusiasm for implementing zero waste and using recycled waste into products of economic value such as shopping bags (Z-Bags), key chains, and compost for agriculture. It is hoped that the Zero Waste concept will spur community creativity and develop a creative economy and waste-free tourism.

Keywords: Creative Economy; Tourism; Zero Waste

Introduction

Kolo is a sub-district in Asakota District, Bima City-NTB with an area of 26.49 square kilometers. Crossed by the Trans-Malay road, Kolo Sub-district is bordered by the Bima Strait in the West, Ambalawi Sub-district in the North, Rite Sub-district in the East, and Jatiwangi Sub-district in the South. The distance from Kolo to Bima City is 19 kilometers. Kolo is located on the coast with the

potential of an area that is extraordinarily famous for its marine products and tourism such as Kolo Beach. Most of the residents' jobs are fishermen, depending on marine products for their livelihood. Unfortunately, these potentials are disrupted by the problem of waste causing new problems such as dirty tourist areas full of waste on the coast.

In 2023, the amount of waste production in Bima City will reach 80.68 tons per day or 29,448 tons per year.

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However, it can only be handled with a superior conventional pattern, transport and disposal reaching 78 percent, which is 22,969 tons per year or 62.93 tons per day from the target of 80 percent through the NTB Zero Waste program, this is due to limited facilities and infrastructure and a lack of personnel," said H. Mukhtar at the inauguration of the main waste bank, in the yard of the Bima City DLH office, Tuesday, February 6, 2024 (SUARANTB.com).

Kolo, which is part of the Asakota District of Bima City, has problems with waste, waste disposal and processing, especially Kolo is a coastal tourist village area that often receives waste on its coastline, thus polluting tourism potential. Quoted from *Tribunlombok.com*, Bima City, the Bima Dive Diving Community, held an underwater and beach cleanup activity at So Pancala Beach and Kolo Sea in 2022 which involved the Kolo community tourism group, the Kopa Mbojo Nature Lovers Community, the Navy and the Bima City Police Polairud managed to collect almost 1 ton of waste, which is dominated by plastic waste that is not only on land or the beach but also on the seabed (Atina, 2022).

In addition, in Kolo there are creative economy UMKM in the form of fish processing into ready-to-consumer products that also produce waste from the production process. It is not known how the waste is handled, it is feared that it will end up being wasted.

Kolo Village Head, Rustam said, waste management here is still hampered by the absence of a waste disposal site. His party has proposed to the Bima Bappeda and DLHK. By the Bima City Government, the village was asked to prepare the land. "We have prepared it but there has been no realization. We hope that the NTB Bappeda can be the door to realizing this," said Rustam at the BAPPEDA Friday Greetings activity (Fian, 2023).

Based on the results of a location survey through interviews with residents of Kolo Subdistrict and quotes in the situation analysis sub-chapter, the waste problem is: (Wahyudin, Syamsiah, & Sunjoto, 2017)

Waste generation/sources

The coast of Kolo Beach is filled with garbage sent from other areas and stranded and piled up on the coast so that the beach looks dirty and reduces the tourist attraction. In addition, the community's consumptive activities produce waste such as from fish processing and household waste and the use of disposable packaging.

Waste sorting

Waste sorting is intended to facilitate the process of reusing the waste. Meanwhile, the waste in Kolo is mixed, between organic and inorganic so that the utility value of the waste is reduced.

Containment

Trash bins and landfills are containers for waste, but in Kolo there is no landfill (Final Disposal Site) which causes waste to be scattered everywhere and ends up piling up carelessly.

Garbage transportation

Regular waste transportation and clear waste transition from settlements and ending up in landfills. While in Kolo it was only effective for a while and has not been running until now.

Waste disposal

In Kolo, people destroy waste by burning it. Even though the waste is still useful by using the concept of a creative economy where it can be recycled and has a selling value.

Compliance/awareness of social rules.

People who are less aware of the impact of waste on the creative economy and tourism. Still using single-use packaging such as plastic bags and bottled water.

The impact of the above problems is the tourism sector, dirty areas with poor waste management reduce tourist interest. On the contrary, clean areas can attract tourist interest, such as several villages in Bali which are famous for being beautiful and clean are filled with many tourists, both local and foreign. Meanwhile, for the creative economy, the impact is the lack of materials to produce a recycled product because the value of waste is low. Such as organic waste that should be processed into fertilizer/compost but is mixed with inorganic waste. Inorganic waste such as plastic bottles and plastic cups and wood that can be processed into handicrafts with sales value but are burned and washed into rivers and into the sea. Therefore, it is necessary to implement the Zero Waste concept as a lifestyle to encourage the life cycle of resources, in this case waste, so that it can be reused more optimally and has sales value and encourages crafts and tourism.

Method

Zero Wastecan can be called a zero-waste lifestyle. This lifestyle aims to minimize the amount of waste produced every day. This is expected to maintain resources and preserve nature. This lifestyle emphasizes avoiding the use of disposable products. In addition to being useful for reducing waste, the Zero Waste lifestyle provides several benefits such as reducing global warming, saving expenses, maintaining health, and increasing creativity, especially the Creative Economy and Tourism.

The Zero Waste lifestyle has the 5R principle, namely (Marliah, 2022):

Refuse, interpreted as refusing the use of unnecessary items that will become trash. Can be applied such as refusing the use of plastic bags when shopping at the supermarket.

Reduce, reduce the use of unnecessary products, thereby reducing the amount of waste generated from the products used.

Reuse, reusing items that have been used. Examples of its application include using drinking bottles or tumblers so that they can be used many times.

Recycle, means recycling existing waste to be used as useful items. For example, changing plastic bottle waste into planting containers, plastic cup packaging waste into bags, and wood waste into handicrafts.

Rot, defined as decomposing, can be done on organic waste. Decomposing organic waste into compost.

By implementing the Zero Waste concept, it will have an impact on the development of the creative economy and tourism. Clean, trash-free tourist attractions can attract tourists, of course, by actively promoting them through digital media using the slogan "Zero Waste Tourism Area". In addition, craft products from wood and plywood waste in the form of key chains can be decorated with ornaments or shapes that depict the potential of Kolo itself, such as marine and fish tourism, so that they have selling value and can be a source of additional income.

Therefore, the Zero Waste concept is solved in every work program that involves every element of society, starting from children, teenagers, adults, and the elderly. Do not forget to establish cooperation between communities, community organizations, and village governments with KKN PMD Kolo Universitas Mataram 2024:

Zero Waste Socialization. Providing an understanding to the public about the importance of the Zero Waste concept so that the public understands about *Zero Waste*.

Socialization of Digitalization of Zero Waste Tourism Promotion & UMKM. Providing an understanding to the public about the importance of digitalizing Zero Waste Tourism and MSME promotions so that people can maximize tourism and craft potential.

Demonstration of bags made from used glass packaging. Training community creativity in processing waste so that people can make bags from waste.

Compost Demonstration from organic waste. Training community creativity in processing waste so that people can make compost from waste.

Demonstration of Planting Containers from used glass and bottle packaging. Training community creativity in processing waste with the aim that the community can make planting containers from waste.

Ecobrick demonstration from waste bottles and food packaging. Training community creativity in processing waste so that people can make Ecobricks from waste.

Demonstration of Keychains from plywood/wood waste. Practice community creativity in processing waste so that people can make hangers/souvenirs from waste.

Clean Friday. Inviting people to live a waste-free life so that people care about waste.

Teaching School. Learning and playing with the Zero Waste concept with the target of elementary school children participating in Zero Waste.

Black and White Drawing Competition with Zero Waste Theme. Motivating children about Zero Waste with the target of elementary school children to participate in the Zero Waste campaign.

Result and Discussion

Zero Waste Socialization

KKN PMD Kolo, Mataram University 2024 invited the Bima City Environmental Service represented by Iskandar Masjrun, ST., (Head of UPT TPA Bima City), Herlistiatuti, ST., (Head of UPT Environmental Laboratory Bima City), and Haerunnas, S.Sos., MM, (Environmental Supervisor of Bima City) as resource persons for activities in the Kolo Village hall and providing an understanding to the community about the importance of the Zero Waste concept and waste management. The important points conveyed in the activity which was attended by various elements of society were the full awareness of the community in processing household waste such as KKN PMD Kolo successfully processing household waste at the post into products in the form of Z-Bags and compost, the role of the Waste Bank in processing waste into useful things, and cooperation between the Kolo Village apparatus with youth organizations and the community in reactivating waste transportation so that the waste problem in Kolo Village can be overcome.



Figure 1. KKN PMD Kolo held a Zero Waste Socialization with speakers from the Bima City Environmental Service in the Kolo Sub-district hall

Dissemination of Digitalization of Tourism Promotion

Head of Marketing Division of Bima City Tourism Office, Buana Eka Putra S, S.Par., became a speaker in the activity held by KKN PMD Kolo by inviting the community. He conveyed the importance of tourism promotion utilizing digitalization with 2 methods, namely DOT (Destination, Origin, & Time) and POSE (Posting Media, Own Media, Social Media, & Endorse Media) such as KKN PMD Kolo creating Instagram, Tik-Tok, and Youtube accounts that upload the environment and tourism in Kolo.



Figure 2. KKN PMD Kolo held a Digitalization Socialization of Tourism Promotion with the Head of Marketing of the Bima City Tourism Office and the Head of Kolo Village at the Kolo Tourism Lodge Hall.

Demonstration of Bags Made from Used Glass Packaging

KKN PMD Kolo together with the Chairperson of PKK Kolo, Rohana, and mothers in Kolo Village succeeded in making Z-Bags from plastic cup waste. Plastic cup packaging waste was collected during big events such as weddings and religious events at the Karang Taruna field. The enthusiasm of the mothers succeeded with a target of 1 bag per meeting. This activity aims to train the creativity of the community in processing waste into bags that are useful and have a selling value. Rohana as the Chairperson of PKK Kolo said that activities like this are more beneficial than mothers just sitting around gossiping without any real results.



Figure 3. Demonstration, Exhibition, and Z-Bag products with PKK Chair Kolo

Demonstration of Keychains from Used Plywood

The children of SDN 13 Kolo and SDN 68 Kolo successfully channeled their talents and creativity by making key chains from plywood waste in various shapes and sizes. The activity took place in conjunction with the Sekolah Mengajar work program. Plywood waste that was considered useless and was simply thrown away was cut, drawn, and colored according to the tourism potential in Kolo so that it could become a souvenir that increases the creative economy and tourism. The Head of Kolo, Rustam SE said that this kind of handicraft activity trains the creativity and business spirit of the community.



Figure 4. Demonstration of Keychains from Used Plywood at SDN 13 Kolo and SDN 68 Kolo

Ecobrick Demonstration from Plastic Packaging Waste

Ecobrick is an eco-friendly brick made from solid packaging bottle waste filled with plastic waste that is cut into small pieces. The target of this activity is children at SDN 13 Kolo. KKN PMD Kolo together with students collect waste around the school and cut clean waste for Ecobrick materials.



Figure 5. Ecobrick Demonstration at SDN 13 Kolo

Demonstration of Planting Containers from Plastic Packaging Bottle Waste

The use of plastic bottles as planting containers using the capillary principle can minimize the time for watering plants. The bottle is cut in half, then the bottle cap is perforated and a fibrous rope or used cloth is attached to absorb and channel water from the bottom to the top of the planting medium/compost. SDN 68

Kolo is enthusiastic about this activity and at the same time understands more about Zero Waste.



Figure 6. Demonstration of planting containers made from plastic packaging bottle waste

Compost Demonstration from Household Organic Waste

KKN PMD Kolo invites the community to process household waste, especially organic waste, into compost that can be used as a planting medium. Organic waste is mixed with EM4 (Effective Microorganisms 4) which has been dissolved with sugar and then stored for 3 weeks before it can be used. Residents are enthusiastic because many plant flowers in their yards.



Figure 7. Demonstration of Compost from organic waste

Teaching School

KKN PMD Kolo conducted a Teaching School program at SDN 13 Kolo and SDN 68 Kolo. The Principal warmly welcomed the enthusiastic students. The activity was filled with Zero Waste material which was of course interspersed with various icebreakers that trained the students' focus so that in 5 meetings the students were able to master the material and apply it.



Figure 8. Request for Permit for Teaching School Activities

Clean Friday

KKN PMD Kolo together with the community carries out mutual cooperation activities every Friday in various places. such as in the Babul Hikmah Mosque

environment, the Village Office, the Karang Taruna Field, the residential environment and the coast.



Figure 9. Mutual cooperation with youth organizations at the Babul Hikmah Kolo mosque on Friday morning.

Supporting/Additional Work Programs

Various supporting work programs and additional activities accompany the implementation of the main work program and community approach. meaning Joint Gymnastics every Saturday in the Karang Taruna field with all elements of society. Every Thursday, cleaning the Babul Hikmah Mosque area. Every Thursday night, performing Yaasinan together in every Mosque and Mushola and TPQ. In the 1 Muharram 1446 activity, KKN PMD Kolo became the committee together with the Babul Hikmah Mosque Youth and the event was a success by presenting Qori & Qori'ah and Ustadz so that it became a shared blessing. A great momentum to enliven the 79th Anniversary of the Republic of Indonesia, KKN PMD Kolo together with Karang Taruna established various competitions involving all elements of society such as marble racing, sack racing, eating crackers and volleyball. In addition, the KKN PMD Kolo is also involved in traditional activities in Kolo, such as Do'a Rasa (Village Prayer as a symbol of gratitude to God Almighty), Kalondo Wei, Peta kapanca, and big community events as well as Mangrove Planting and Cleaning Amahami Beach with all KKN PMD Mtaram University in Bima City.



Figure 10. Opening event for 1 Muharram, joint exercise with students of SDN 13 Kolo, Yasinan with the Kolo youth, and attending a wedding ceremony.

Conclusion

The KKN PMD activities of the University of Mataram in Kolo Village were carried out well. The community was very enthusiastic to participate in the Zero Waste program, for the development of the creative economy and tourism.

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