

SOCIALIZATION OF THE MANUFACTURE OF ECOBRICK AS A SOLUTION TO MANAGEMENT OF PLASTIC WASTE IN NAGARI TANJUNG BETUNG, PASAMAN

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ABSTRACT

The theme of Waste Processing Activities with Ecobrick The problem of plastic waste management in Nagari Tanjung Betung is still an unresolved problem. The absence of a landfill makes the people in the Nagari Tanjung Betung tend to litter on vacant land/land and also on the banks of rivers. In addition, many people in Nagari Tanjung Betung still use river water in their daily lives, be it for washing, bathing, defecating and urinating, and other activities. This poor sanitation will certainly trigger various diseases that can threaten the public's health status. Until now, conventional processing, such as dumping it in landfills or burning, has not been able to cope with the growing amount of plastic waste. Solution Along with the times and science, a solution is offered for managing plastic waste which is considered more effective, namely converting it into ecobricks. Ecobrick is an environmentally friendly brick made from plastic bottle waste filled with leftover plastic waste that is no longer used. The size of the plastic bottles used are free as available. Plastic bottles are filled with unused scraps of plastic waste so that there is no space left in the bottle nor is there any air left in the bottle so that the ecobrick doesn't slosh. Purpose The aim of waste management with ecobrick is to reduce waste scattered around the Nagari Tanjung Betung environment. The benefits of ecobricking are useful for more effective waste management so that later it will be able to make the environment cleaner and healthier. Besides being useful for waste management, the function of ecobricks can also be seen from an economic and functional perspective. Ecobricks can be a source of income if managed properly because the ecobricks themselves can be used as basic materials for making furniture, furnishings, and building materials such as the walls of a room. In addition to saving the cost of making these products, ecobricks can also be traded on the market with the same purpose as above. Methods and Stages of Implementation The methods and stages of implementing this activity start from licensing activities, identification and problem solving, preparation of tools and materials, ecobrick counseling. Processing waste with Ecobrick will later be able to provide many benefits and benefits for the community. Conclusions and Suggestions Management of plastic waste in Nagari Tanjung Betung is still an unresolved problem. As the times progress, a solution for managing plastic waste is offered which is considered more effective, namely turning it into ecobricks. Ecobrick is an environmentally friendly brick made from plastic bottle waste filled with leftover plastic waste that is no longer used. It takes the desire and willingness of the community to directly contribute and change attitudes to no longer litter.

Keywords: Garbage, Ecobrick, Environment, Waste, Processing

1. INTRODUCTION

1.1 Situation Analysis

1.1.1 Nagari Partner Profile with Data and Image/Photo Nagari Situation Nagari/Village

Partner Identity :

- a. Nagari Name : Tanjung Betung, Subdistrict : South Rao
- b. District : Pasaman
- c. Wali Nagari Name : Abdul Haris
- d. Wali Nagari/Village Office Address : Tanjung Betung, Nagari Tanjung Betung, South Rao Subdistrict, Pasaman District
- e. Another Information : Nagari Profile Nagari Tanjung Betung is one of the Nagari located in South Rao Subdistrict, Pasaman District, West Sumatra, which is 46km from the Capital City of Pasaman District. Nagari Tanjung Betung has an area of 109.75 km², which is 32.38% of the total area of South Rao Subdistrict. Nagari Tanjung Betung consists of 9 Jorongs namely Jorong Tanjung Betung, Jorong Kauman, Jorong Kauman Selatan, Jorong Rambahan, Jorong Rambahan Selatan, Jorong Kampung Tujuh, Jorong Purbanauli, Jorong Air Hangat and Jorong Rambahan Baru. Geographically, Nagari Tanjung Betung is surrounded by hills. The Tanjung Betung Wali Nagari office itself is located in Jorong Tanjung Betung, Nagari Tanjung Betung. The total population of Nagari Tanjung Betung is 12,624 residents out of 26,192 residents of South Rao Subdistrict. Meanwhile, the population growth rate for 2010-2020 is 2.12% of the 1.88% population growth rate for South Rao Subdistrict. The population percentage of the total population is 4.21% of the 8.7% total population percentage and the population density (per km²) is 127 km⁴ of 77 km⁴. While the sex ratio is 100.13 out of 98.85 the total sex ratio of South Rao Subdistrict. Its location in a valley area and surrounded by hills makes the area good for rice fields and plantations.

The many springs and long, fast-flowing rivers also make this an excellent condition for local people as they can irrigate their rice fields, plantations, dan fish ponds. The people of Nagari Tanjung Betung have diverse work backgrounds, namely farmers, gardeners, fish pond owners, traders, to teachers. Differences in the field of livelihood are not an obstacle for the community to establish social relations between individuals. It was proven that when Gotong Royong was held in several jorongs, the surrounding community actively participated in cleaning up the Gotong Royong area.

1.1.2 Nagari Institutions and Organizations

Nagari Tanjung Betung is one of the nagari which is the location for implementing the Pilot Project for the Formation of Fostered Nagari in accordance with the Decree of the Governor of West Sumatra No. 140-257-2005, which was then followed by Governor Regulation No. 53 of 2006 concerning General Guidelines for the Implementation of Fostered Nagari. Within 5 years of project implementation, several development programs have been implemented that refer to and are guided by the Priorities and Development Programs in the Empowering Nagari Agenda as the Development Base in 2006-2010. The intended development programs (activities) are: 1. Formation of institutions at the nagari level (LPMN, LAN, Bamus, Karang Taruna, Wirid Yasinan, Posyandu,

Kelompok Tani, and Gapoktan) 2. Budgeting and reporting 3. Making monuments nagari borderline and nagari maps 4. Improved administrative management facilities and infrastructure 5. Sending financial management staff to attend training 6.

Data collection and registration of nagari assets 7. Preparation of the nagari RPJM. All programs (activities) that have been implemented aim to improve the ability of the nagari government in carrying out its duties and responsibilities with a priority on capabilities in institutional arrangements and inter-agency cooperation, capabilities in administrative, financial and asset management of the nagari, as well as capabilities in increasing community participation and migrants in development. The programs (activities) implemented are expected to provide real benefits in improving the economy and welfare of all the people of Nagari Tanjung Betung.

1.1.3 Problems Faced by Nagari Government Institutions and/or Nagari Communities

The Fostered Nagari development program implemented in Nagari Tanjung Betung has not been integrated with existing agricultural development programs. However, based on community information in the Forum Group Discussion (FGD), these development programs continue to provide benefits to the community, even though there are several obstacles. For example, the utilization of Jitut has not been able to reach a large enough rice field and its maintenance is also inadequate, where it is felt that there is a shortage of maintenance staff and there is no special budget for this activity. In addition to the several existing obstacles, there were several positive things (progress) from the implementation of the nagari development program (activities). This can be seen from the continuous efforts made beside the limitations. Efforts to improve institutional arrangements have been made with the formation of nagari complementary institutions, namely: LPMN, LAN, Bamus, PKK, Karang Taruna, Wirid Yasinan, Posyandu, Kelompok Tani, and Association of Kelompok Tani. The institutions formed are expected to be able to become a forum for community aspirations and hone the ability of the community to organize in solving nagari development problems. The institutions formed reach all community groups, including the youth as the next generation in the nagari and farmers who make up the largest part of the population of Nagari Tanjung Betung.

2. PROBLEM SOLUTION

2.1 Solutions to systematically solve the problems of governance and development of the nagari and communities in the nagari according to priority

- a. Fixing technical problems with waste problems in the Nagari Tanjung Betung environment, such as holding TPS (Temporary Shelters), recruiting waste collection officers, and providing education on how to process simple waste to the community with the 3R approach (Reduce, Reuse, Recycle)
- b. Always trying to foster public awareness of the importance of keeping the environment clean by collaborating with relevant stakeholders and providing clear evidence that waste can have a negative impact on people's health and quality of life.

2.2. The types of output that will be produced from each of these solutions are good for governance management and nagari development, as well as the capacity of the communities in nagari a. Availability of TPS (Temporary Shelters) in Nagari Tanjung Betung, operation of garbage collectors, and application of simple waste processing

methods to the community with the 3R approach (Reduce, Reuse, Recycle) b. Changes in attitudes, behavior and habits of the community in littering

2.3 Each solution has its own output and wherever possible it is measurable or can be quantified.

- a. There are 2 TPS in Nagari Tanjung Betung, 2 waste collectors are active per day in Nagari Tanjung Betung, and around 30% of the waste can be processed per day in the Nagari Tanjung Betung either by Reduce, Reuse or Recycle.
- b. Availability of at least 2 trash bins in each house in the Nagari Tanjung Betung.

2.4 Research results and data collection survey of the proposing team relating to the activities that have been carried out 9 based on research and surveys that have been conducted in Nagari Tanjung Betung, several problems were found, one of which was related to garbage scattered on the sides of roads and rivers and there was no Final Disposal Site and there is no certain officer who will transport the garbage. Meanwhile, many people in Nagari Tanjung Betung still use river water for their daily lives, especially for washing, bathing, defecating and urinating, and other activities.

This poor sanitation will certainly trigger various diseases that can threaten the public's health status.

3. METHOD

3.1 Activity Implementation Methods

The method of implementing the activities used starts from licensing activities, identification and problem solving, preparation of tools and materials, extension of ecobrick making. • Licensing Licensing as the initial stage of this activity which aims to provide information to the regional apparatus and the Nagari Tanjung Betung community regarding the plan to implement this activity to the community. Licensing activities are carried out using the direct discussion method with the Wali Nagari Tanjung Betung. • Identification and Problem Solving The second stage is identification and problem solving. Problem identification aims to see the problems that occur in Nagari Tanjung Betung, so that solutions can be generated from these problems as a form of solving problems that occur in

Nagari Tanjung Betung. • Preparation of Tools and Materials The tools and materials that must be prepared for making this ecobrick are plastic waste, plastic bottles, scissors, and long wood. • Counseling on Ecobrick Making Counseling was carried out for the people of Nagari Tanjung Betung using lecture and demonstration methods. Counseling aims to explain what ecobrick is, the benefits of ecobrick and how to make ecobrick. This activity was carried out in the Tanjung Betung Wali Nagari Office Hall.

3.2 Participation of Partners in the Implementation of Activities

- a. Provide facilities and infrastructure needed for the smooth running of activities
- b. Become a facilitator and bridge to connect the proposing team with other relevant stakeholders in the Nagari Tanjung Betung. As for the evaluation results obtained from the start of the activity, there are still some other communities who do not have garbage disposal sites and some residents still use vacant land to accommodate waste from the community.

4. RESULT AND DISCUSSION

4.1 Results of the Community Service Program activities for making ecobricks from plastic waste have been carried out in Nagari Tanjung Betung. The results of this activity provide insight, increase knowledge, skills and entrepreneurial desires for the community, namely by making ecobricks from used plastic bottles. At first the community did not know much about how to use used bottles, this activity opened their minds and insights about the importance of keeping waste clean.

4.2. Output

- a. Reduced waste in the Nagari Tanjung Betung so that environmental cleanliness can be maintained
- b. The community understands the importance of having a landfill for themselves. 4.2.1

Prototype Photo



Fig. 1 Product Prototype Photo

4.2.2 Product (Model, Design, Technology, Social Engineering and or Public Policy)

- a. Title of Product 13 Ecobricks
- b. Product Description Ecobricks are a term for plastic bottles filled with non-biological materials that make them very dense and hard. Ecobricks are one of the solutions that can be applied to reduce plastic-based waste and recycle it to make it more useful. The use of ecobricks, among others, as a material for making furniture, rooms, parks, and full-scale buildings such as schools and houses.



Fig. 2 Flyer/Product Manufacturing Posters

5. CONCLUSION AND URGENCY

5.1 Conclusion

- In Nagari Tanjung Betung there are still several problems related to waste, such as the absence of a Final Disposal Site, the absence of garbage collectors in Nagari Tanjung Betung, etc.
- Ecobrick processing of waste is an innovative waste management method that is environmentally friendly and has economic value.
- There is still a lack of public awareness in the Nagari Tanjung Betung to be able to maintain cleanliness around the environment.

5.2 The Urgency of the Sustainability of the Helping Nagari Development Program

- Helping to solve nagari problems
- As a form of contributing ideas and innovation to Nagari so that later it can support the success of the program being implemented.

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