Mendon Grass-based Eco Bag represents village potency development in supporting ecotourism in Ngargotirto Sragen Indonesia

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Abstract. The village potency optimization and the attempt of reducing rubbish from disposable plastic shopping bag are environmental issues encouraging tourism business actors to initiate eco bag production to support ecotourism. This exploratory research analyses village potency development in Ngargotirto village, Sragen, Indonesia through mendong grass-based eco bag using Sessions’ deep ecology theory. Informants were selected using purposive sampling. Observation, in-depth interview and related documentation were obtained from managers of Eco Bag business in Ngargotirto Village, surrounding people, tourists, and staffs of Living Environment and Cooperatives, Micro-, Small-, and medium-scale enterprise, and Industry and Trade Service Offices of Sragen Regency. Data was validated using source triangulation and analysed using an interactive model of analysis. Villagers have knowledge and skill on processing mendong grass into environment-friendly eco bag following ecotourism, design, production, and e-marketing training held by government and tourism business actors. Some basic materials derive from outside region; hence production cost is still high and plastic-based accessories are still used. Rainy season inhibits drying process and makes eco bag easy to mold. Business actors control production and marketing quality and quantity, increase villagers’ income, and support sustainable tourism through collaborating with private to reach national and global markets.

1 Introduction

Waste is a serious environmental issue today. The data of Republic of Indonesia’s Ministry of Living Environment and Forestry shows that people produce 18,893,832.32 ton waste in 2022. 14,621,116.22 ton waste has been managed, while the rest of 4,272,727.10 ton has not been managed. Plastic waste is on the second position as the waste with the largest volume with 18.2% of total composition of wastes produced in one year, following the total production of food waste. In Sragen, the composition of plastic wastes is also in the second position as the waste with the largest volume with 11.2% below the food waste.

The reduction of plastic bag use is an attempt needing to be taken because plastic takes long time to be decomposed [1]. The enforcement of paid-plastic bag is an attempt of
minimizing plastic waste production, but it is considered as less effective because consumers prefer paying IDR 200 to bringing their own shopping bag. A possible solution is to grow an orientation to improve the people’s awareness of using reusable bags. People prefer using reusable bags for some reasons: use effectiveness and attractive design. Therefore, eco-bag production should be able to cover those concepts [2,3]. Mendong grass-based bag is more appropriate than plastic bag to carry groceries. In the past, consumers (e.g., women) shopping in the market often used their own basket and the groceries were wrapped using recyclable leaves. This concept can be reapplied today, recalling the ever-existing problem related to plastic waste [4,5].

Communication, information, and education are important to provide to the people as the consumers, because they contribute to plastic reduction. Stores should also be committed to providing eco-bags that can be used repeatedly rather than plastic bag. Factory, company, producer, seller, and consumer should take collaborative attempts to make the substitution of plastic shopping bag with the reusable eco-bag can be implemented maximally. It can realize the dream of being free from plastic waste, supported with the collaboration of all components involved [6].

Reducing the use of plastic bags through optimizing the use of plaited bags can be applied in the concept of village management. Ngargotirto is one of villages in Sumberlawang, Sragen, Central Java, Indonesia. This village is well-known for its people working as the producers of plaited bags made of grass as its basic material that is quite popular in foreign markets. This plaited bag is like an ordinary bag as it applies sustainable environment concept and therefore is called an eco-bag. In the production process, the producer pays attention to environment conservation through selecting basic material, production process, and consumers’ use orientation. The concept of eco-bag is a solution to environmental issues due to the ever-increasing production of waste annually [7,8]. Departing from this problem, Micro-, small-, and medium-scale enterprises (MSMEs) producing mendong grass-based eco-bag are developed. As one of sectors supporting tourism, MSMEs produce competitive products according to market demand that can be a solution to the problem being faced. Mendong grass-based eco-bag can be the solution to plastic waste problem due to the excessive use of plastic-based shopping bag [3,9].

In deep ecology perspective, people are positioned to be the part of nature rather than separated from it. Deep ecology has three elements: feeling, spirituality, and action. As the part of living environment, people have relation to the management of environmental crisis. Each action taken by the people will affect themselves significantly. Thus, if the people treat nature negatively, the harm felt by nature will have an impact on them. People should move toward the living environment consciousness and have eco-literacy to create a sustainable society. It is this awareness of the importance of nature that later generates living environment-friendly behavior and the attempt of taking care of and maintaining living environment as a habit and a lifestyle. In the new culture of sustainable society, people organize their life considering the importance of living environment conservation. This stems from the awareness of the importance of living environment based on eco-literacy. It is this awareness that underlies the organization of social life including the aspects of basic need consumption, energy consumption, technology use, and all areas of society life [10]. Solving this problem, MSMEs of Ngargotirto Village can support the realization of eco-tourism through contributing to creating tourists who care about the environment. This research aims to analyse the development of Ngargotirto Village potency in Sragen, Indonesia, in supporting eco-tourism through mendong grass-based eco bag using George Sessions’ deep ecology theory.
2 Method

This research employed qualitative methods with an exploratory approach. Data collection was carried out using observation, in-depth interview, and documentation. The informants of research consisted of managers of Eco-Bag Business in Ngargotirto Sragen, surrounding people, tourists, Living Environment, and Cooperative, MSMEs, as well as Industry and Trade Service Offices of Sragen Regency selected using purposive sampling. Data were then validated using source triangulation technique and analysed using an interactive analysis model [11].

3 Result and Discussion

3.1 Production process of mendong grass-based eco bag

Eco-bag craft made of mendong grass as its basic material is still found rarely in the market. This condition becomes challenge and opportunity all at once to mendong grass-based eco-bag producers in Ngargotirto, Sragen, Indonesia. These village MSMEs producing eco-bag initiated to collaborate with each other to produce eco-bag craft. They usually produce mendong grass-based eco-bags in their own house terrace. Mendong (Jimbridistys umbellaris) is a type of pseudo grass or reeds with 100 cm length on average. This plant is like rice stalks but greener in colour and standing more sturdily. This plant is planted in muddy, swamp, or rice farmland and needs sufficient water and can be harvested 3-5 months after planting [12].

Having been harvested, mendong should be seasoned directly under the sun until it is dry. That is why the process of harvesting mendong should be done in sunny and hot weather. Mendong is also viewed as a weed as it can trigger siltation in the irrigation channel due to its very rapid growth. However, this plant viewed as a weed, in fact, has very high economic value if it is processed into creative products such as bag crafts.

The process of producing eco-bags includes drying mendong grass to get woven ropes as the basic material of bag production. The equipment used is dynamo to twist the mendong rods into long ropes. Thereafter, the 3 (three) long ropes are twisted and put together to result in a big rope and so on until a very strong and solid plaited rope is generated. It is this big mendong rope that is used to produce varying plaited creative products, including mendong grass-based eco-bag [13]. In the production process, MSMEs involve supporting workers coming from Ngargotirto villagers to maximize the empowerment of community resources. Local market becomes one of first targets for selling the mendong grass-based eco-bag. But overseas sales orientation is also important to consider expanding the enthusiasts. The manager of mendong grass-based eco-bag in Ngargotirto states that this product is quite popular abroad because it is still found rarely in other states, and therefore giving it distinctive uniqueness. In technology development, eco-bag sales is also done through online marketplace to reach foreign market. It indicates that mendong grass-based eco-bag has bargaining position in local, national, and international markets such as United Arab Emirates, South Korea, Saudi Arabia, and some other states [2,14].

3.2 Challenge in the mendong grass-based eco bag production

The development of tourism sector post-Covid-19 pandemic also exerts negative effect, that is, the increasing contribution of waste volume produced by tourists. Non-well-managed rubbish can affect the cleanliness and comfort of tourist area and result in environmental pollution [15,16]. The idea inspires mendong grass-based eco-bag as the design of shopping bag oriented to the attempt of maintaining and conserving environment by reducing the use
of plastic shopping bag so as to support eco-tourism. Grass is a basic material of bag that is very environment-friendly, but it instead becomes the obstacle in the process of producing mendong grass-based eco-bag. It is because of mendong grass unavailable in Ngargotirto Village due to drought experienced by this area during dry season. This requires the MSMEs producing mendong grass-based eco-bag in Ngargotirto Village to buy the grass from mendong grass producing regions such as Demak and Tasikmalaya. Season also determines the productivity of mendong eco-bag MSMEs because the drying process is dependent on sun’s heat. In addition, the weakness of the eco-bag product is that it still uses raffia plastic as an additional ornament [17]. Table 1 shows the challenges and solutions in mendong grass-based eco-bag production.

Table 1. Challenges and Solutions in the mendong grass-based eco-bag production

<table>
<thead>
<tr>
<th>No.</th>
<th>Challenge</th>
<th>Solution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Lack of raw materials during the long dry season</td>
<td>Ngargotirto Village buys the grass from Demak and Tasikmalaya</td>
</tr>
<tr>
<td>2.</td>
<td>The drying process of mendong grass depends on the sun’s heat</td>
<td>Procurement of drying machine</td>
</tr>
<tr>
<td>3.</td>
<td>This eco-bag product still uses raffia plastic as an additional ornament.</td>
<td>Using raffia with minimum quantity</td>
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In addition to running business independently, the actors of MSMEs are also supported by Living Environment, and Cooperative, Industry and Trade Service Offices of Sragen Regency. MSMEs get education and information on business management and the attempt of conserving living environment. The competition rate between eco-bag products and other similar products is high enough, but it is considered reasonable in MSME’s economic world. Innovation and consistency should be implemented to maintain and to improve the quality of the product in order to be competitive in the market. In addition, consistent precision and persistence are important in production process and business management. To get a good eco-bag product, some criteria should be met: unique design, content quality, creativity, and environmental value [18].

The production of mendong grass-based eco-bag represents the people’s eco-literacy. Ngargotirto villagers’ awareness of the importance of the attempt of reducing plastic-based shopping bag that can harm the sustainability of living environment underlies the production of mendong grass-based eco-bag. This attempt is also a means of socializing the environmental movement expected to improve the Indonesian people’s awareness of the importance of supporting, protecting, and maintaining environment, particularly through reducing plastic waste. The people’s commitment to reducing waste plastic piling by substituting eco-bag for plastic shopping bag should be maintained to support eco-tourism [10, 19].

4 Conclusion

The production of mendong grass-based eco-bag as one of Ngargotirto Village’s potencies represents the attempt of bringing eco-tourism into reality. The use of plastic-based shopping bag increases the quantity of plastic wastes generating environmental problems until today. It should be dealt with by using the reusable mendong grass-based eco-bag. Through people’s eco-literacy supported with education and information provided by Living Environment, and Cooperative, Industry and Trade Service Offices of Sragen Regency, MSMEs can produce high-quality eco-bag. Although the basic material (mendong grass) is still bought from other
regions, the productivity of MSMEs remains to be stable. It can be seen from the consumers’ enthusiasm with this product so that it can reach local, national, and international markets.

References


