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# Reducing Traveler Spending: Bag Reduction Strategies in the Context of Environmentally Sustainable Tourism Development

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## Abstract

This research discusses strategies to reduce tourists' expenditures through reducing the use of shopping bags in the context of developing environmentally sustainable tourism. In global tourism, plastic waste has become one of the significant environmental issues. Recognizing the negative impact of plastic waste on the environment, this study explores the potential use of eco-friendly shopping bags as an alternative to reduce the use of single-use plastic bags. Through policy analysis, literature review, and case studies, this study evaluates various bag reduction strategies and understands their impact on traveler spending and the environment. The strategies studied include implementing a ban or tax on plastic bags, awareness campaigns to promote the use of reusable bags, providing incentives for travelers to adopt eco-friendly alternatives, and researching and producing eco-friendly shopping bags by the government as a follow-up measure to phase out plastic bag production. The results show that reducing the use of shopping bags can result in spending savings for tourists as well as promote environmental awareness and sustainable practices. However, challenges such as resistance from tourists and local businesses as well as accessibility issues to eco-friendly alternatives were also recognized. This research also discusses the socio-economic implications of the bag reduction strategy, including its impact on the tourism sector and challenges in its implementation. Collaboration between stakeholders and policy support were identified as key factors in successfully implementing a bag reduction strategy. As such, this study makes an important contribution to the practical understanding of bag use reduction strategies in the context of sustainable tourism. The implementation of these strategies is expected to help reduce the negative impact of tourism on the environment while promoting environmental awareness among tourists. The policy implications resulting from this research are expected to help guide more sustainable tourism development efforts in the future.

**Keywords:** Plastic Waste; Shopping Bags; Recycling; Environmentally Friendly

## 1. Introduction

Plastic is a non-organic waste that has many benefits but also has significant negative impacts if not utilized and managed properly, especially in daily life. The increasing use of plastic in daily life is feared to have adverse effects because plastic is a non-biodegradable waste that is difficult to decompose. Plastic is often used by people, especially sellers in the market, including in food packaging, as a basic material for automotive components, and can also be used as a raw material for making children's toys and many other things. The excessive use of plastic by society and its disposal after use will cause environmental pollution.

Plastic waste is discarded material made from non-renewable chemical substances. According to Jambeck et al. (2015) and Nufus & Zuriat (2020), Indonesia ranks second globally after China in terms of plastic waste production in water, with approximately 187.2 million tons. This is supported by data from the Ministry of Environment and Forestry, which indicates that plastic waste from 100 stores or members of the Indonesian Retail Entrepreneurs Association (APRINDO) can reach around 10.95 million plastic bag sheets annually. This amount is equivalent to an area of 65.7 hectares covered by plastic bags. The increasing volume of plastic waste and its environmental hazards pose a serious problem that requires urgent solutions (Fauzi et al., 2019).

The concept of 3R is seen as a solution in addressing plastic waste. Waste management using the 3R approach is a widely recognized model that prioritizes waste management by focusing on preventing the generation of waste, minimizing waste through reuse of unused items, and recycling waste through biodegradable methods to dispose of waste in an environmentally friendly manner. The 3R concept can be implemented by: Reuse, which means reusing plastic items; Reduce, which involves reducing the purchase or use of plastic items, especially single-use ones; and Recycle, which entails recycling plastic items. Hence, several

studies have been conducted to reuse unused plastic and those disposed of in the environment, utilizing one of the 3R concepts, namely Recycle, which involves recycling plastic waste.

In our research, we examined a well-known natural tourist destination known as Bali Lestari Beach. Bali Lestari Beach is located on Pematang Pasir Street, Serdang Bedagai Regency, North Sumatra Province. The beach itself offers a Bali-like atmosphere that attracts tourists. The abundance of plastic-wrapped accessories, clothing, and food items leads to a significant amount of scattered waste. The predominant type of waste generated by tourists and vendors at Bali Lestari Beach is plastic or inorganic waste. The high production of inorganic waste poses a serious problem that requires more serious handling, especially in the transportation process to the landfill. Therefore, in addressing the waste issue, recycling plastic waste and producing environmentally friendly shopping bags are the best solutions to implement, especially if the community is not yet capable of managing waste effectively. Therefore, in our research focus, we provide efforts to propose a solution to transform the use of plastic shopping bags into reusable and environmentally friendly shopping bag.

## 2. Literature Review

### 2.1. Definition of Plastic

Plastic in general is, plastics are long-chain polymers of atoms that bind to each other. This chain forms many repeating molecular units, or 'monomers'. Plastics generally consist of carbon polymers only or with oxygen, nitrogen, chlorine or sulfur in the spine. According to natalia lusnita, One of the plastic products that is often used by people in their daily lives is disposable grocery plastic bags. People often use disposable plastic bags unwisely. For example, when consumers buy bananas, soda drinks and dish soap, the cashier will use at least 3 plastic bags, namely 1 plastic bag for bananas, 1 plastic bag for soda drinks and 1 plastic bag for dish soap. Furthermore, this disposable plastic bag will become garbage that takes 20 to 1000 years to finally be decomposed. Plastic material is very preferred because it has practical properties, light weight and waterproof, this is in accordance with human life that has high mobility.

According to Gogte M, the term "plastic" includes organic materials, such as the elements carbon (C), hydrogen (H), nitrogen (N), chlorine (Cl) and sulfur (S), which have properties similar to those that grow naturally in organic materials such as wood, horns and rosin. Plastic is a polymer. Plastic bags are made of ethylene, a gas produced as a byproduct of oil, gas and coal production. Ethylene is made into a polymer (chain of ethylene molecules) called polyethylene. This substance, also known as polyethylene or polythene, is made into pellets, which are used by plastic manufacturers to produce a variety of items, including plastic bags. These plastic bags also have an impact on marine life. Plastic waste carried by currents Plastic bags have killed about 100,000 whales, seals, turtles and other marine animals every year around the world. In the water, plastic bags can look wrong for marine animals such as birds, whales, seals and turtles who swallow the bag and then die from intestinal obstruction. Plastic bags are the fifth most common garbage found on the beach.

### 2.2. Concept 3r

According to Amanda B, the principle of the 3R concept (Reduce, Reuse, Recycle) is a sequence of steps from management to those that start from reducing waste, reusing and recycling. The main priority of course Reduce, is to reduce waste generation, then Reuse, reuse, then Recycle, recycle the material to give the material a second chance, when it can no longer be reused, the waste is recycled (Recycle), which is melted, chopped, and melted to be formed into a new product that is likely to reduce the quality of the material.

## 3. Research Method

### 3.1. Research Place

Bali Lestari Beach, on Pematang Pasir Street, Serdang Bedagai Regency, North Sumatra Province.

### 3.2. Research Time

- Abstract topic determination: March 25, 2024
- Abstract preparation: March 28, 2024
- Abstract submission: March 31, 2024
- Abstract announcement: April 12, 2024
- Determination of full paper: April 16, 2024
- Preparation: April 17-20, 2024
- Collection: April 21, 2024

### 3.3. Tools and Materials

- Cloth
- Sewing thread
- Sewing needle
- Rope
- Scissors
- Meter
- Sewing machine (optional)
- Pencil

### 3.4. Tools and Materials

1. Prepare the necessary materials and tools, such as cloth, scissors, needles, thread, and sewing machine (if any).
2. Cut the fabric to the desired size to make a shopping bag.
3. Fold the fabric in half with the inside facing out.
4. Sew the exposed edges of the fabric to create the sides of the bag.
5. Cut the fabric to make the bag strap to the desired length.
6. Sew the bag strap to the top of the bag on both sides.
7. Sew the bottom of the bag to give it extra strength.
8. Repeat the above process to strengthen the bag or add additional details as desired.
9. Done, Shopping bag ready to use.

### 3.5. Cost Details

Transportation Fee:	Rp 100,000
Consumption Cost:	Rp 90,000
The cost of making a bag sample:	Rp 32,000
Overall cost:	Rp 222,000

### 3.6. Data Collection Method

In this study, researchers use a type of qualitative research, qualitative research is research that intends to understand the phenomenon of what is experienced by the research subject, for example, behavior, motivation, perception, by way of description and utilizing various scientific methods. In qualitative research there are several data collection approaches used. Several types of approaches include:

- Case study
- Interview
- Participatory observation
- Document analysis
- Action research
- Content analysis

The approach to data collection will largely depend on research objectives, research questions, and the context of the research subject. This approach emphasizes the aspect of deep understanding of a problem. This research method uses a more in-depth analysis technique, namely examining one problem will be different from the nature of the problem. The purpose of this approach is to understand deeply about a problem. In this paper, there are 3 data collection methods used, namely observation, documentation, and interview.

## 4. Results and Discussion

### 4.1. Overview of Results

In this section, we present the results of our research on reducing plastic shopping bag usage among tourists at Bali Lestari Beach and replacing them with environmentally friendly alternatives. We also discuss the efforts made to achieve green tourism by addressing the issue of plastic waste.

## 4.2. Result

### 4.2.1. Reducing Plastic Shopping Bag Usage among Tourist

Through observation and interviews with tourists and vendors at Bali Lestari Beach, we found that there is a significant reliance on plastic shopping bags for carrying purchased items. However, there is also a willingness among tourists to adopt environmentally friendly alternatives if provided. Many tourists expressed concern about the environmental impact of plastic waste and showed interest in using reusable bags.

### 4.2.2. Replacing Plastic Shopping Bags with Environmentally Friendly Alternatives

We implemented a manufacturing method to produce reusable shopping bags using simple materials like cloth, thread, and scissors. The method involved cutting fabric to desired sizes, sewing edges to create bags, adding straps for carrying, and reinforcing the bottom for strength. The cost of producing these bags was relatively low, making them a viable alternative to plastic shopping bags.

### 4.2.3. Efforts to Achieve Green Tourism

By introducing environmentally friendly shopping bags and promoting their use among tourists, we aimed to contribute to the concept of green tourism. Green tourism emphasizes sustainable practices that minimize environmental impact. Our efforts align with the principles of the 3R concept (Reduce, Reuse, Recycle) by reducing waste generation (plastic shopping bags), reusing materials (cloth for bags), and promoting recycling (by encouraging the use of reusable bags).

## 4.3. Discussion

### 4.3.1. Impact of Plastic Waste at Bali Lestari Beach

Plastic waste poses a significant threat to the environment, especially in coastal areas like Bali Lestari Beach. The abundance of plastic waste not only detracts from the natural beauty of the beach but also endangers marine life. By addressing the issue of plastic shopping bags, we aim to mitigate the environmental impact and preserve the natural ecosystem of the beach.

### 4.3.2. Role of Reusable Shopping Bags

Reusable shopping bags offer a practical and sustainable solution to the problem of plastic waste. By encouraging tourists to use reusable bags, we not only reduce the consumption of single-use plastics but also promote environmentally conscious behavior. Reusable bags are durable, versatile, and can be used multiple times, making them an effective alternative to disposable plastic bags.

## 5. Conclusion

From this research, it can be concluded that efforts to reduce the usage of plastic shopping bags and promote sustainable tourism at Bali Lestari Beach have yielded positive results. Based on observations and interviews, it is evident that tourists are becoming increasingly aware of the environmental impact of plastic waste and are willing to switch to eco-friendly alternatives if provided. The simple manufacturing method for producing reusable shopping bags has proven to be effective, with relatively low production costs. Furthermore, these efforts align with the principles of the 3R concept (Reduce, Reuse, Recycle) in waste management and have the potential to initiate green tourism initiatives in Indonesia.

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