

# Management of Coastal Areas with Sustainable Marine Ecotourism Development in Purworejo Regency, Central Java, Indonesia

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## Management of Coastal Areas with Sustainable Marine Ecotourism Development in Purworejo Regency, Central Java, Indonesia

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**Abstract.** The beach is a favorite tourist destination for the Indonesian people. As Indonesia is blessed with many beaches which attracts people to visit. Indonesians usually come to the beach in the holiday to fish, see beautiful scenery, and play around. Central Java Province in Indonesia has a beach cluster situated to the north and south of the Java Island. Jatimalang Beach is the south coast of Java which has excellent natural beauty, which is located in Purworejo Regency. This research is focused on the beach facilities and infrastructures, tourist's ecotourism awareness, and environmental sustainability management of the Jatimalang Beach Purworejo. The study was carried out in November till December 2019 by using the qualitative research method. Information discovered during fieldwork are used to direct data collection. Qualitative researchers, are closely engaging with the environment being examined. This work was conducted through observations and interviews with tourist at Jatimalang Beach, as well as a literature review. The results showed that the facilities and infrastructure found in Jatimalang Beach were the presence of lifesavers, waste, parking lots, freshwater swimming pools for children, toilets, electrical facilities, and worship places. In addition, tourists are often willing to preserve nature and the sustainability of marine tourism on the Jatimalang Beach, however many of them do not understand the importance of ecotourism and need to be educated again.

**Keywords:** ecotourism, beach, infrastructure facilities, sustainable tourism

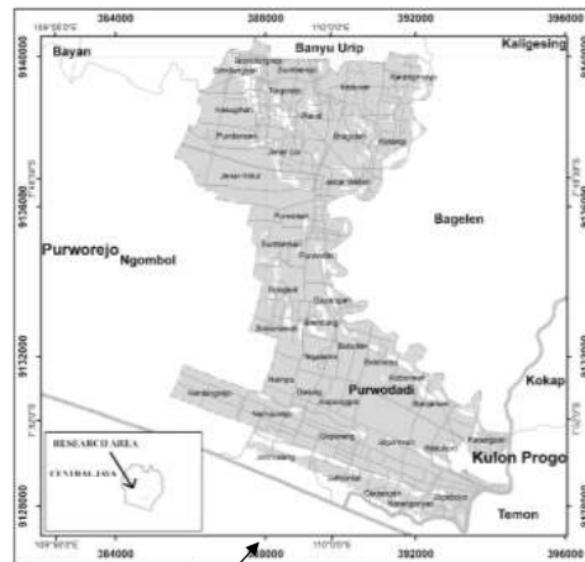
### 1. Introduction

Purworejo is a regency located on the southern coast of Central Java, which has many tourist destinations with beautiful views. The study was conducted at Jatimalang Beach located in Jatimalang Village, Purwodadi District, Purworejo Regency, Central Java, Indonesia. The weather conditions in the Jatimalang Village are hot and humid [1]. Jatimalang Beach is included in the Integrated Maritime

Region category in the RIRW Central Java Province [2]. In addition, establishes Jatimalang Beach as Purworejo District's tourism destination that can be more developed and be added to the potential destination, thus can increase the tourism sector [3]. The integrated coastal management can increase local own-source revenue [4]. The problems found in the Jatimalang Beach are the badly managed infrastructure for coastal area development, the lack of public support for the tourism industry, the non-optimal coastal development planning, the inadequate some facilities, and also a lack of synergy in tourism management [1]. Based on these problems, the solutions and recommendations which is related to the Jatimalang beach tourism management are needed that prioritize environmental aspects so that they can provide an overview for the government to manage the integrated and sustainable coastal tourism areas.

## 2. Methods

This research describes the variables that are appearing in the study area. The descriptive research mentions the society problems, the activity relationship, attitudes, views, and processes that are currently happening and also the effects of some phenomenon. The research method used is the qualitative research methods, which the data collection is guided by the facts found at the time of research in the field [5]. The qualitative research illustrates the interpretation and meaning of the current situation, which emphasizes the role of researchers as a major part of the research. Data collection was carried out by the observation, using an open questions lists, and interviews with beach visitors focused on the way of thinking from respondents. Qualitative researchers, interact intensely with the reality under study [6]. The ecology of the environment, culture, and social economy as a basis is taken into account in the analysis of the management and development of sustainable marine tourism. Figure 1 presents the research location in the Jatimalang Beach, Purwodadi District, Purworejo Regency. The research was conducted on November to December 2019, by using the field observations and primary data collection through the interviews with the tourists, also the secondary data are found by the literature review. This data was taken in the form of photos, questionnaires related to coastal tourism, data on ecological conditions, convenience, participation, and perception in protecting the environment. The study area, located in Jatimalang Beach, Purwodadi District, Purworejo, Indonesia presented in Figure 1.



**Figure 1.** The study area, located in Jatimalang Beach, Purwodadi District, Purworejo, Indonesia [7]

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### 3. Results and Discussion

#### 3.1. Result

##### 3.1.1. Land Use

Jatimalang Village has an area of around 150 Ha with the land use composition divided into four main groups, namely rice fields with the total area of 51.75 Ha, dry land with 98.35 Ha, 8.12 Ha of buildings, and 41.23 Ha of gardens usage. More population increase, the more land requirements needed by the population, however the availability of the land is very limited [8]. The increasing usage of the dry land is in line with the residential land usage increase. The expansion of dry land agriculture is the conversion activity of the dryland agriculture with bush [9]. In addition, the raise of the plantations is also the majority conversion of shrubs [10]. The yard farmland in the study area is planted with the fruit trees with the utilization of the fruits for the population food [1]. Figure 2 shows the usage of the land use in Jatimalang Village.

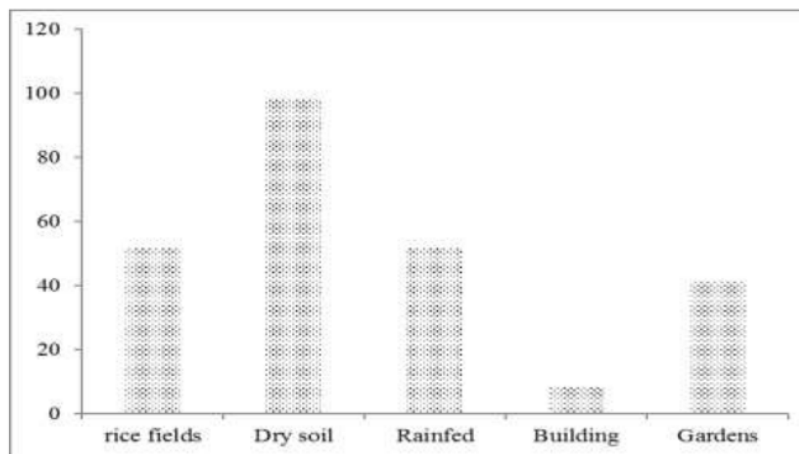
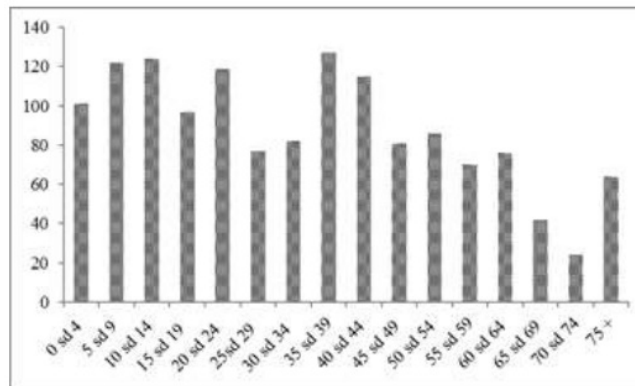


Figure 2. Land Use in Jatimalang Village (Ha)

##### 3.1.2. Total Population

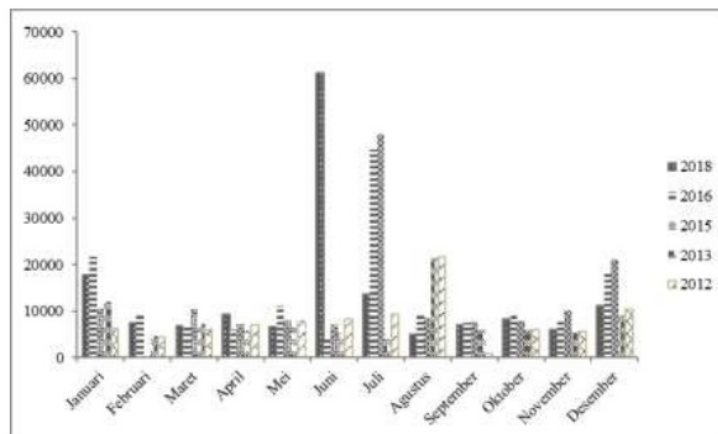
The total population in Jatimalang Village in year 2018 is 1189 people, consisting of 623 males and 566 female residents. The highest composition of people in the productive age of 35–39 years old is 127 people, following by the teenage age of 10–14 years old with 124 people, while the people of 70–74 years old was the lowest composition with 24 people. Figure 3 displays the number of residents and the composition of the population based on their age in Jatimalang Village. The residents are mostly work in the tourism sector by selling the food and drink in the beach. Thus, some of them also work in the fields of giant prawns and fish cultivation, and also as the farmers. The Jatimalang people also utilize the brown sugar in the coconut trees to be sold in the market [1]. Figure 3 shows the Number of residents in Jatimalang Village



**Figure 3.** Number of residents in Jatimalang Village

### 3.1.3. Visitors

In the last five years, the highest number of tourist arrivals in Jatimalang Beach was in July with the total of 24,006 people, followed by 17,211 people on June. The visitor took the advantage of the holidays held on these months to travel to the beach. The high number of tourists visit also occurred during the new year moment in January with 13,676 people and on December with 14,020 people. The total number of tourists arrivals on Jatimalang Beach is presented in Figure 4.



**Figure 4.** Number of tourist arrivals in Jatimalang Beach in 2012-2018

### 3.1.4. Visitors

The tourist who have visited Jatimalang Beach gave different perception on the supporting infrastructure and facilities. This result is based on the availability of the place of worship, trash bin, electricity, connecting roads, food stalls, transportation, freshwater, and also the housing service for the tourists. The perception for the facilities expressed by the tourist is among the option of unknown, lack, enough, good, and excellent, which can be shown in Figure 5. It can be observed from Figure 5 that many of the tourists did not know where the hostelry, because of they go home straightly after finish playing in the beach. Thus, the freshwater availability in order to washing their hand are already considered good and also the restaurant are assumed to be adequate even on the weekend or holiday. However, the worship

places, trash bins, and electrical installations are need to be improved and to be kept clean. The food stalls around the beach has provided a menu of seafood, grilled fish freshly [11] from the local fishermen. The tourism management and strategies depend on the situational factors, including social aspect, resources, and facility impact. If some tourism already has adequate facilities, the action on the environmental impacts must be immediately sought for the solution in the short period of time [12]. The Tourist Facilities Perception of beach infrastructure facilities is presented in Figure 5.

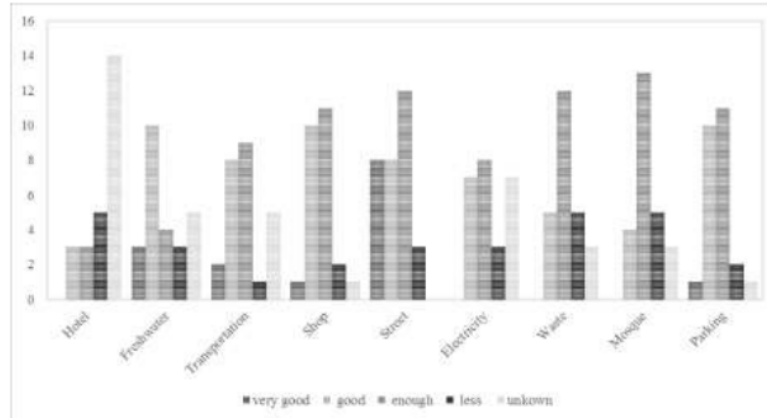


Figure 5. Graph of Tourist Facilities Perception of Beach Infrastructure Facilities

### 3.1.5. Tourist Respondents' Perception of Beach Scenery

The tourists are interested with the beautiful condition of Jatimalang Beach, the natural beauty of the hill and the potential of fisheries. Furthermore, they concern about the seawater, sand, and the coastal plants including the coconut trees and spruce. The sand in Jatimalang Beach is a vast area and unfortunately it is not being maximized yet. The condition of the sand area is wide, flat, close to the tourist area, abundant sunshine, and shallow water surface [13]. Figure 6 mentions about the attractiveness of Jatimalang Beach for tourists.

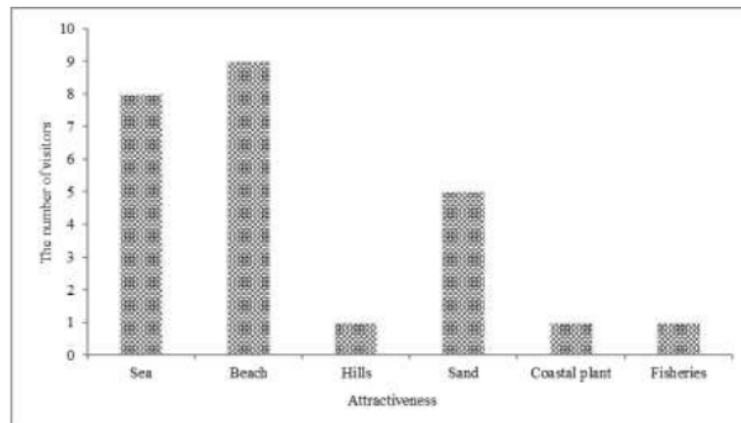
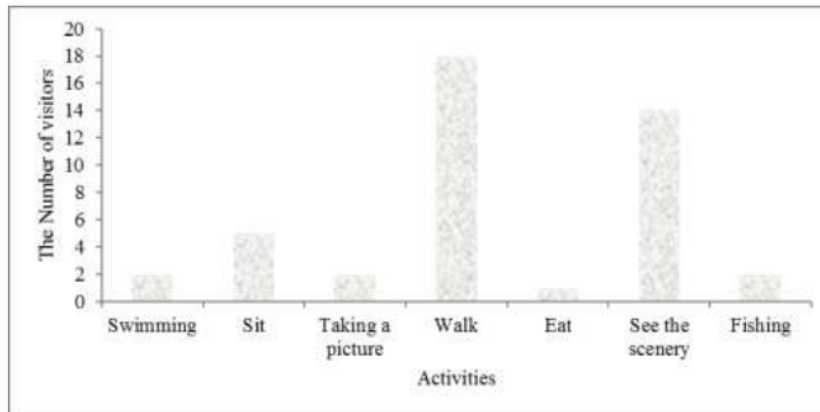


Figure 6. Graph of Attraction of Jatimalang Beach for Tourists



### 3.1.6. Tourist Respondents' Perception of the Activities

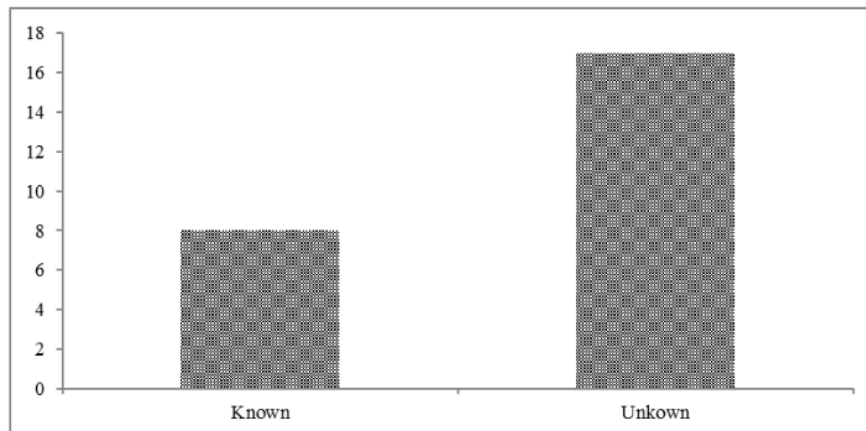
Many activities done by the tourists on Jatimalang Beach, they like to have a walking around enjoying scenery, swimming, taking photos with their friend, or just relaxing by sit on the sand. Also, the fishing activities are carried out by some community to express their hobby or fulfill the daily economic needs [14]. Tourist perceptions of activities carried out on the beach are presented in Figure 7.



**Figure 7.** Graph of Tourist Respondents' Perception of the Activities

### 3.1.7. Tourist Respondents' Perception of the Activities

Based on the Figure 8 which explains about the ecotourism perception, many tourists did not understand the meaning of ecotourism, yet they are willing to be invited to run the activity and to protect the environment. The participation from the tourists and the residents around the beach has a big effect for the development of the local tourism. Thus, the understanding of the environment education, the ecotourism matter, and the landscape of tourism object will have a significant impact on the public participation. The importance of the environment education can play a big role on the ecotourism development [15]. The public opinion that agrees on the tourism development can drive the government to control and take action on how to develop and embrace the other tourists and stakeholders in participating in the advancement of the ecotourism of Jatimalang Beach.



**Figure 8.** Graphic of Tourist Perceptions of Ecotourism

### *3.2. Discussion*

The concept of sustainable marine ecotourism can be defined as a concept that can be used as an effort to increase the income of coastal communities and driven to be a better integration between the people and the tourism zone. This situation can be performed by using the society as the starting point and the first line to do the activity, in a concept of Once Stop Coastal Tourism. This concept can be used as a tourism policy strategy in some region to improve the welfare, the life quality, and the independency of coastal communities in order to optimize the poverty alleviation efforts in Indonesia. The management should prioritize the empowerment of the surrounding community so that the sustainability and the preservation of the biological environment can be conducted. The One Stop Coastal Tourism is based on the survival of the biological environment according to the 2015 Millennium Development Goals of point 7a [16]. This concept can be organized by empowering the social capital of coastal communities in developing coastal tourism areas, developing e-coastal tourism in an integrated manner with a private-public partnership system, constructing the facilities and infrastructures of the tourism object, as well as the easy access and innovations variety of the coastal area facility. Moreover, the implementation of private-public partnership in the coastal tourism industry that leads to the economic empowerment by highlighting the local culture wisdom towards the nature is also important. The ecotourism has proven to be an effective environmental conservation method [17].

This ecotourism management has the positive impact to the society, namely the increase of the public job and the economic business opportunity for the surrounding residents by selling the foods, drinks, souvenirs, becoming the tour guide, or even renting homestay to the tourists. These opportunities will provide additional income for the society and can directly improve their welfare. Also, the government income as the development of the tourism activities in Jatimalang Beach can also be improved from the increasing the taxes and the entrance fees from the tourists visiting the beach. This will later develop the economic condition for the Purworejo Regency. In addition, the information from by the visited tourists can be more quickly spread with the development of tourism activities by increasing the public infrastructures.

The local government should be leaning towards to the environmentally related policies. Thus, for this study, the Purworejo government has been working on these policies, as they seeks to develop several ecotourism object areas around Jatimalang Beach. The policy analysis is one of the important administrative method in planning and developing the coastal tourism. The policy as the useful activities that must be followed by the subject in handling a certain problem [18]. The ecotourism management must meet at least three criteria, namely providing a countable conservation value, involving the community, and giving the benefit and maintenance for themselves [19]. The tourism subject on Jatimalang Beach has already involved the community, as it can be seen that the community has begun to maintain their own food stalls and their efforts to preserve the environment, although it must be monitored continuously by the government.

### **4. Conclusion and Recommendation**

This study emphasizes on the management of Jatimalang Beach with the sustainable marine ecotourism development by collection the people perception on many aspects, including the beach facilities and infrastructures, ecotourism awareness, and environmental sustainability management. Therefore, the conclusion can be drawn from the analysis that the perception of the coastal area of Jatimalang Beach in Purworejo Regency from the tourists stated that it has a good environmental quality with a beautiful natural scenery. This will provide convenience and relaxing effects for the tourists. However, the facilities around the beaches and also the cleanliness of the coastal area are need to be improved for the sustainable tourism purposes.

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