Study Social Economy Green Tree Conservation Area (*Chelonia mydas*) as a Daily Ecowism in Pangumbahan, Sukabumi District, Indonesia. Case Study of Green Turtle Conservation Areas for Local Communities

Vetthy Fatimah\(^a\), Atikah Nurhayati\(^b\), Isni Nurruhwati\(^c\), Indah Riyantini\(^d\)
Faculty of Fisheries and Marine Sciences, Padjadjaran University, West Java 45363, Indonesia
\(^a\)\(^d\) E-mail address: vetthyvetthy@gmail.com, nurhayati_atikah@yahoo.com, isni04@yahoo.com, indah@unpad.ac.id

**ABSTRACT**

This research was conducted in Pangumbahan Village, Ciracap District, Sukabumi Regency, West Java Province. The implementation starts from August 2018 until March 2019. The socio-economic study of the green turtle conservation area (*Chelonia mydas* (Linnaeus, 1758)) as a marine ecotourism for local communities is carried out to know the potential of conservation areas in terms of the social and economic aspects that are generated in local communities. The method used in this research is the case study method in Pangumbahan Village by collecting primary data and secondary data. The sampling method used was purposive sampling and data processing using Ms. Excel. Based on the research that has been done, it is known that even though the impact has not been felt by the whole community, the Pangumbahan Village community hopes that Pangumbahan Beach Turtle Beach Park area can be developed because it has the potential to provide more benefits to them.

**Keywords:** Socio-Economy, Turtle Conservation, Ecotourism, Local Communities, *Chelonia mydas*
1. INTRODUCTION

The population of Green Turtle (Chelonia mydas (Linnaeus, 1758)) is decreasing annually, therefore this species is categorized as a rare species and is protected in the IUCN Red Data Book which is included in CITES APPENDIX I (Convention on International Trade in Endangered Species). One of the habitats that become a conservation area for green turtles is the Turtle Beach in Pangumbahan Beach, Sukabumi, West Java. The performance of the success of a conservation area can be measured from three important perspectives namely ecological, economic and social. Efforts to preserve and save turtles that are in line with the economic development of the community can be done through the development of eco-conservation based on turtle conservation and the community. Ecotourism is a journey carried out by a person or group of people from one place to another with the aim of enjoying the natural environment and its contents with various available facilities. Ecotourism is also one form or type of nature-based tourism. The various benefits offered by the concept of ecotourism are that tourists not only travel in nature, but they will also learn something from nature and do various tourism activities that are very environmentally friendly, in addition to economic benefits and local community development. Efforts to find out the potential of the Pangumbahan Beach Turtle Beach Park are seen from the social and economic perspective, it is necessary to conduct research on the socio-economic study of the existence of turtle conservation areas as maritime ecotourism in Pangumbahan, Sukabumi for local communities.

2. RESEARCH METHODOLOGY

2.1. Research Place and Time

Figure 1. Map of Research Location.
The research was conducted in August 2018 - March 2019, covering the stages of data collection, data analysis and final report writing. The research was carried out in Pangumbahan Village, Ciracap District, Sukabumi Regency with questionnaires and interviews with the Pangumbahan Village community.

2. 2. Research Method

The method used in this research is the case study method in Pangumbahan Village by collecting primary data and secondary data. The case study method is an approach by focusing attention on a case intensively and in detail.

2. 3. Data Collection Techniques

The technique used in obtaining data from data sources (respondents) used in this research is observation, questionnaires and interviews.

2. 4. Determination of Respondents' Techniques

The selection of respondents is done by purposive sampling method, which is a method where the researcher determines the respondent himself chosen because there are certain considerations. The criteria for respondents to be sampled are people who are socially or economically active in the Pangumbahan Beach green turtle conservation area.

2. 5. Data analysis method

The data obtained were analyzed descriptively qualitatively and quantitatively. The quantitative data obtained in this research is the data from the respondents' questionnaire (Pangumbahan Village community) which is processed using the Microsoft Excel program. While the qualitative data obtained through observation and in-depth interviews. The combination of qualitative and quantitative data is processed and analyzed by being presented in the form of narrative texts, graphs, tables, column charts or charts, then drawing conclusions from all data that has been processed.

3. RESULTS AND DISCUSSION

3. 1. Overview of Research Locations

Pangumbahan Village is administratively part of the Ciracap District, Sukabumi District, West Java Province. This village is a coastal village and a forest periphery village with a total area of 1,916 hectares. The boundary in the northern part is Gunung Batu Village, in the eastern part, Ujunggenteng Village, in the southern part, namely the Indonesian Ocean and in the West, the Cikepuh Wildlife Reserve Forest. Pangumbahan Village is 18 km from Ciracap District (Capital District) with a travel time of 1 hour, 76 km from Sukabumi District (Capital District) with a travel time of 3 hours, 270 km from Bandung City (Provincial Capital) with a duration of 8 hours, and 290 km from Jakarta City (Capital of the Country) with a travel time of 8.5 hours. Pangumbahan village consists of 9 neighborhood units (RW) and 28 neighborhood units (RT) and is divided into 4 hamlets namely Ciburial Hamlet, Jaringao, Waluran and Pangumbahan. Before 2008, Pangumbahan Village was still part of Gunung Batu Village, but in 2008 it was defined as the definitive village.
through the Regional Regulation (Perda) of Sukabumi Regency Number 10 of 2008 concerning
the breakdown of Batu Mountain village into Gunung Batu village, Pangumbahan village and
Ujung village Genteng, Ciracap District.

The topography of this region is lowland with an altitude of 0-28 meters above sea level
(asl), the average daily temperature between ranges from 26 °C-32 °C with an average rainfall
frequency of 3,650 mm per year.

Demographically, the population of Pangumbahan Village tends to remain with mutations
born, die, move to come and move away. At the end of December 2018 there were 4612
residents of Pangumbahan Village with 1409 family heads.

For more details, the population of Panglahan Village can be seen in Table 1 below:

**Table 1.** Number and Percentage of Population in Pangumbahan Village in 2018.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Population (soul)</th>
<th>Total percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>2301</td>
<td>49</td>
</tr>
<tr>
<td>Female</td>
<td>2311</td>
<td>51</td>
</tr>
<tr>
<td>Total of</td>
<td>4612</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Profile of Pangumbahan Village 2018.

![Education Level of Pangumbahan Village Community](image)

**Figure 2.** Education Level of Pangumbahan Village Community
The education level of the population in this village is still very low. There were 107 illiterate people, 1,300 had attended school but did not graduate from elementary school / equivalent, 2,416 people graduated from elementary school, 180 people graduated from junior high school (SMP) and only 77 people graduated from high school (SMA). For tertiary education graduates there were 9 diploma-equivalent II graduates, one diploma III education, one bachelor's degree (S1) as many as 12 people and two S2 (S2).

There are no definite data about the distribution of the population according to ethnicity in this village. Even so, clues about ethnic dominant can be seen from the use of local language. In everyday life Sundanese is used by every citizen who supports the language, so ethnic Sundanese are the dominant ethnic group. Even so, from the information of the informants who were met in the field there were also some ethnic migrants who lived and settled in this village, for example Javanese, Makassarese and several other ethnic minorities. While in terms of religion, Ciracap Subdistrict data in 2018 shows that the majority (99%) of the population of Pangumbahan Village are Muslims and there are only three people registered as Protestants.

3. 2. Socio-Economic Conditions of Local Communities

No data or information was obtained which stated exactly when Pangumbahan beach tourism began. However, the rapid development of Pangumbahan tourism is related to the determination of the turtle conservation area as an ecotourism area in 2008. In addition, this development was triggered not only by the disclosure of information about the region's coastal tourism potential, but also information about the rare ecotourism potential of green turtle conservation. The existence of a turtle conservation area as ecotourism in Pangumbahan Village has caused a change in social and economic conditions for local communities.

3. 3. Social Conditions of Local Communities

3. 3. 1. Community Behavior in Pangumbahan Village

In the past, the people of Pangumbahan Village were known as people who were familiar with turtles. Even some people depend on reptile animals for their lives. The behavior of the Pangumbahan Village community is assessed based on their knowledge, attitudes and behavior. The results of the questionnaire indicate that 100% of respondents know the definition of turtles, but only 50% of all respondents who understand the benefits of turtles or for what turtle conservation activities are carried out. Some respondents even said that turtles are biota that are useful for meeting human needs which can be utilized to the fullest, including selling and consuming their eggs. This can be proven that until now there are still people who are looking for turtle eggs. The eggs will later be sold or consumed by themselves.

People who often hunt sea turtles are called fans. Fans usually take turtle eggs to meet family needs and to buy rice. Fans sell turtle eggs for Rp. 3,000 per month. The activity of taking turtle eggs is done so that they get money quickly and without capital.

This community knowledge creates a bad attitude towards ecosystem sustainability. This attitude is indicated by 73% of all respondents never helping conservation activities, the rest never even visited turtle conservation even though the distance from the house to turtle conservation was no more than 100 m. The results in the field indicate that the behavior and behavior of the people in the research location are closely related to the knowledge they have.
Figure 3. Behavior of the Pangumbahan Village Community.

This can be seen from the indifferent attitude of the community with the existence of conservation activities in Pangumbahan. This fact indicates that people's behavior in maintaining their environment is still very lacking. In addition, this condition is also motivated by a low level of community education, which is that most people graduate from elementary school so that the community does not have sufficient skills to look for other alternative jobs and also the ownership of agricultural land is very small.

3.3.2. Community Social Institution in Pangumbahan Village

The social institutions contained in social institutions that play a role in community life after the development of maritime ecotourism activities are community monitoring groups that work with the government (Pangumbahan Beach Turtle Beach Park management) to supervise the conservation area. The purpose of the establishment of this community watchdog group is to foster the community through the management and law enforcement activities of turtle conservation efforts.

The formation of a community watchdog group in Pangumbahan Village only functioned to provide socialization to the community. There have been no community activities focused on discussing the sustainability of Pangumbahan Beach Turtle Beach Park, so that local people cannot convey their ideas or aspirations to the management.

In the activities of interacting all people always interact with other communities, but with tourists, the results of research show that not all Pangumbahan Village communities interact with tourists. Only 73% of the total respondents interact with tourists. This happens because some people do not have tourists. 100% of all respondents who interact with respondents always uphold the prevailing norms.

In interacting with each other the Pangumbahan Village community always upholds the norms, including religious norms, decency, politeness and legal norms.

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3. 3. 3. The Social Process of the Pangumbahan Village Community

One of the social processes that occur in the Pangumbahan Village community is cooperation. The form of cooperation that is carried out is usually in the form of mutual help when someone is injured, helping each other if one of the residents holds a celebration or mutual cooperation in the construction of a house of worship. Another activity is the activity of cleaning up the beach from garbage. This activity is usually initiated by the village on every Friday, but not all residents take part. This is because information is not conveyed to all residents. The following is a graph of the social processes that took place in Pangumbahan Village.

Lack of community role in discussions related to ecotourism management because not all people have a high interest in ecotourism. Only a few people often hold discussions such as community leaders and interested parties.

The conflict that occurred at the research site was between the Pangumbahan Village community and the community involved in the management of Pangumbahan Beach Turtle Beach Park as a Daily Worker (THL). The Pangumbahan Village community considers economic inequality with THL. The community feels that THL's economic life has improved since it was involved in the management of Pangumbahan Beach Turtle Beach Park.

The peak of the conflict occurred in 2013 between the Sukabumi District Marine and Fisheries Service as the manager of Pangumbahan Beach Turtle Beach Park and the community (Pangumbahan Village community, supervisory community groups, turtle conservation groups, and turtle egg seekers). The community considers that the management of Pangumbahan Beach Turtle Beach Management carried out by the Marine and Fisheries Service Office of Sukabumi Regency is not in accordance with the existing regulations and there is still theft of turtle eggs by insiders. The community asked to be included in the management of turtle conservation, they felt that they had only been used as spectators and were not involved.

Figure 4. Pangumbahan Village Community Social Institution

<table>
<thead>
<tr>
<th>Activity</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interact with other people</td>
<td>100%</td>
<td>0%</td>
</tr>
<tr>
<td>Interact with tourists</td>
<td>73%</td>
<td>27%</td>
</tr>
<tr>
<td>Uphold the Norms that exist</td>
<td>100%</td>
<td>0%</td>
</tr>
</tbody>
</table>
3.3.4. Perception of the Pangumbahan Village Community

**Figure 5.** Social Process in Pangumbahan Village

**Figure 6.** Perception of the Pangumbahan Village Community
Public perceptions of maritime ecotourism development programs are generally good or agree. There are only a few people who disagree with the Pangumbahan Beach Coastal Turtle Ecotourism development program. The community considers that although the current involvement of the community in marine ecotourism activities is very small, it will provide good economic opportunities for the future.

3. 4. Economic Conditions of Local Communities

3. 4. 1. Livelihood of Pangumbahan Village Community

According to the 2018 Profile of Pangumbahan Village about population distribution based on livelihoods, it was confirmed that the number of productive age (18-56 years) in the population of Pangumbahan Village was 2,440 people. Of the total 910 people are residents who have permanent jobs while 1,530 other people do not have permanent jobs.

Of the population who have permanent employment, as many as 40% work in the agricultural sector, both as land owners, tenants and farm workers. Even though Pangumbahan Village is geographically located as a coastal village, only 85 people living as fishermen are recorded, or only 0.018%. The rest is divided into several other types of work such as civil servants, craftsmen, traders and mechanics. The following is a diagram of the distribution of community livelihoods in Pangumbahan Village.

![Distribution of Community Livelihoods in Pangumbahan Village](source: Profile of Pangumbahan Village 2018)
Based on information from informants in the field, not all the people of Pangumbahan Village who are coastal communities make the sea a source of livelihood. Even though they live in coastal areas, most of the people choose the agricultural sector to become jobs. The use of marine resources is only used as a side job to fill in leisure time. The benefits of the turtle conservation ecotourism activities in Pangumbahan Village are the trigger for the capital owners to build villas around the coastal area to support ecotourism activities. In many points Pangumbahan Village has villa buildings, inns, restaurants and several entertainment venues built to support the ecotourism activities. According to the information obtained, the owners of the capital that built the buildings were mostly not native to Pangumbahan Village but from Jakarta, Bogor and Bandung, even some of them belonging to foreign people. There were no data on the number of villas in Pangumbahan Village, but observations showed that more than 50 buildings in villas, inns, restaurants and entertainment venues. Even though there were only 19 inns and 7 villas recorded in the village office.

3.4.2. Community Income in Pangumbahan Village

The existence of ecotourism indeed adds to the income of the people of Pangumbahan Village, but does not have much influence on the economy of the local community. Communities that do not have enough capital to build lodging or eating places utilize the status of Pangumbahan Village which is the location of ecotourism by becoming a motorcycle taxi driver, tourguide, or making small stalls. Even so, the increase in income has not been obtained by all community groups due to the limitations of their economic level.

The amount of rupiah that is earned every month from work as a carpenters, tourguide or from a warung is very uncertain. The income of the community was greatly influenced by the number of tourists who visited Pangumbahan Beach Turtle Beach Park. Travelers who come are not necessarily the amount and time. The number of tourists on holidays usually increases while on weekdays the ecotourism area is empty of visitors.

The rates received by the OJEGs are adjusted to the distance traveled while the tariff received by the tourguide ranges from Rp. 100,000 to Rp. 200,000 in one trip. The other income that can be obtained by the local community in Pangumbahan Village is by allowing tourists to stay at the residents' houses when all inns or villas have been filled by other tourists. The costs to be incurred by tourists when staying in a people's house range from Rp. 100,000 to Rp. 200,000.00 for each person. This time usually occurs when an increase in tourists during a long holiday.

3.4.3. Life Level of Pangumbahan Village Community

Viewed from the settlement of Pangumbahan Village, as many as 59% of the houses are permanent with ceramic or cement floor walls, but there are still houses with bamboo walls. Only a small part of the community whose condition is still traditional walls (wooden walls with wooden floors). The ownership status of the house that is occupied is the house itself. The majority of the people built houses on land owned by their parents first.

Ownership of valuables referred to in this research is tv, motorbikes, cars and livestock. The ability of people to buy these valuables is not because of the addition of ecotourism businesses, but because they need the items in question. For example, the informant who owns a motorbike needs a motorbike for transportation because there is no public transportation in Pangumbahan Village.

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4. CONCLUSIONS

Based on the results of research conducted on the socio-economic study of Green Turtle Conservation Areas for local communities, it can be concluded that seen from the social and economic aspects, although the impacts have not been felt by the entire community, the Pangumbahan Village community hopes that the Coastal Sea Turtle Park area Pangumbahan can be developed because it has the potential to provide more benefits for them.

Suggestion

1. There needs to be an increase in community knowledge about conservation by implementing socialization activities from the management to all levels of society
2. Resolution of conflicts between the Pangumbahan Village Community and the government
3. Developing the Pangumbahan Beach Turtle Beach Park in view of the social and economic benefits caused

References


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Picture 1(a). Turtles in quarantine.

Picture 1(b). Turtles in quarantine.
Picture 2(a). Turtles released in the afternoon.

Picture 2(b). Turtles released in the afternoon.
Picture 3(a). Turtles that have been laying eggs.
Picture 3(b). Turtles that have been laying eggs.