Mangrove Ecotourism Development in Letvuan Village
Southeast Maluku Regency

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Abstract. This study aims to develop the potential of mangrove forest ecotourism in Letvuan village, Hoat Sorbay District, Southeast Maluku Regency through identification of community and tourist perceptions. The results showed that the mangrove forest in Letvuan village has the potential of tourist sites in the form of boating while enjoying the natural beauty of mangrove forests and as a cultural tourism place where the Teb Tut king cemetery is one of the initiator of Larvul Ngabal customary law in the Kei Islands. Community perception is very supportive in developing ecotourism with the hope that it will empower local communities in ecotourism activities, and can preserve local arts and culture. Recommended ecotourism development strategies, namely: (1) complementing the infrastructure supporting ecotourism activities such as roads and bridges. (2) intensive promotion. (3) synergizing ecotourism with Kei traditional culture.

1. Introduction
The purpose of developing water conservation areas is to harmonize the economic needs of the community with the desire to conserve natural resources. In its development, the waters conservation area has been utilized for various purposes such as a place of research, nature protection, species conservation and genetic diversity, tourism activities, environmental education activities and protection of specific natural or cultural elements.

Aquatic conservation areas and ecotourism are a mutually supporting entity which the concept of ecotourism development is in line with the mission of conservation area management (Yulianda et al. 2010). Ecotourism is a strategy in developing conservation areas, both of which are a symbiosis of mutualism, that is, ecotourism requires conservation areas and conservation areas require ecotourism (Drumm and Moore (2005). Mangrove forests have functions such as preventing abrasion, protecting against wind, preventing sea water intrusion, and as an energy producer (Ghufran and Kordi 2012). However, in the last few years mangrove forests have been converted into non-forest land such as agriculture and fisheries.

One area of mangrove forest that is converted into non-forest land is a mangrove forest area in Letvuan village, Hoat Soarbay district, southeast Maluku regency, which has a mangrove forest along 1 miles along the coast. Rehabilitation and management of mangrove forests needs to be done to overcome the problem of mangrove forest destruction by involving many parties, including the Letvuan village community, local government, and other stakeholders. The condition of a forest is very dependent on the socio-economic conditions of the surrounding communities. Perceptions, attitudes, and behavior of the surrounding community largely determine the condition of a forest area today and in the future. One form of mangrove forest management is the management and development of mangrove forest ecotourism.
Mangrove forest ecotourism in Letvuan Village has the potential to be managed and developed because the mangrove forest in Letvuan Village has a natural landscape that is able to attract the attention of the community. Mangrove forest ecotourism in Letvuan Village can be developed with management efforts and a systematic program plan so that the Letvuan Village Mangrove Forest area develops into a leading tourist attraction in the environmentally sound Southeast Maluku Regency. Therefore it is necessary to conduct research to identify the potential value of mangroves as attractions in Letvuan Village.

2. Methodology
This study was conducted in Letvuan village, District of Hoat Soarbay, Southeast Maluku Regency from July to August 2019. The research used was descriptive research. Data analysis is done by collecting and compiling data into tabulations. The results of the analysis are then made in a descriptive qualitative interpretation in accordance with the research objectives.

Data collection was carried out through three methods, namely interviews, observation, and literature study. Interviews were carried out in a structured manner with 80 respondents and unstructured interviews with related parties, namely the head of Letvuan village, customary leader, and the Development Planning Agency of southeast Maluku district. Observations were made to observe the condition of the Mangrove Forest in Letvuan village and a literature study was used to support research activities.

The identification of problems in the development of the area is done through a qualitative descriptive SWOT (Weaknesses, Opportunities and Threats) analysis method. SWOT analysis is the systematic identification of various factors to formulate a company's strategy. This analysis is based on logic that can maximize strengths and opportunities, but can simultaneously minimize weaknesses and threats (Rangkuti, 2005).

The targets of this research are the people of Letvuan village and visitors to Letvuan Village. 80 respondents consisted of 40 people from Letvuan village and 40 people were visitors. Determination of the number of respondent samples taken based on a minimum of 30 survey research standards (Singarimbun and Effendi 1987). The selection of respondents was carried out by the method of purposive sampling, namely the method of taking samples chosen deliberately for a particular purpose.

The process of preparing an ecotourism development strategy plan through three stages, namely: the stage of data collection, the stage of analysis, and the stage of decision making. At the data collection stage, it is divided into two, namely external data and internal data. External data is obtained from the outside environment, while internal data is obtained from inside.

SWOT matrix used to compile strategic development factors. This matrix can clearly illustrate how external opportunities and threats faced can be adjusted to the strengths and weaknesses they have (Rangkuti, 2005). Data from unstructured interviews, observations, and literature studies are processed and analyzed descriptively. Types and data processing can be seen in Table 1.
Table 1. Types and data collection techniques

| Data Types  | Data                                                                 | Data Collection Technique | Data Source    | Data Processing |
|-------------|----------------------------------------------------------------------|----------------------------|----------------|-----------------|
| Primary     | 1. General description Letvuan village Covers accessibility          | Observation, Interview    | Visitor Community | Descriptive Analysis |
|             | 2. Potential resource ecotourism includes forest potential mangrove Letvuan village, tourism potential which can developed |                            |                |                  |
|             | 3. Characteristics, perception, motivation, and interests community Letvuan village against development forest ecotourism mangrove at Letvuan village |                            |                |                  |
|             | 4. Characteristics, perception, and interest a visitor to mangrove ecotourism development in Letvuan village |                            |                |                  |
| Secondary   | 1. General description Letvuan village include location, land use, climate, and social economy society | Studi literature          |                | Descriptive Analysis |


3. Results and Discussion

3.1 Community and Visitor Perception of Ecotourism Development

One effort to achieve success in the development of an area is to involve the local community in activities. This is necessary because they are the ones who will directly get the impact of these activities. Besides the need for involvement of the local community is to foster a sense of ownership of existing tourist attractions so that their use is felt directly by them, especially to increase income. Community involvement in the development and management of attractions will have a positive impact on the sustainability and preservation of the ecosystem around the object.

In table 2 it can be seen that the majority (35 respondents) of the community stated that they did not know what was meant by ecotourism. Only (6 respondents) know the function of attractions and (3 respondents) who know the impact that will result from the existence of attractions. But after explaining the understanding, function and impact that arise then they understand about ecotourism. In addition, 40 respondents strongly supported the development of the Letvuan mangrove forest tourism object.

| No. | Description                      | Yes (Person) | No. (Person) | Amount |
|-----|----------------------------------|--------------|--------------|--------|
| 1.  | Knowledge:                       |              |              |        |
|     | a. The meaning of nature tourism| 35           | 40           |        |
|     | b. The function of tourist attraction | 6       | 34           | 40     |
|     | c. Impact arising                 | 3            | 37           | 40     |
| 2.  | Development of tourist objects    | 40           | 0            | 40     |

Letvuan village community expects in developing mangrove ecotourism, the community was involved especially in its management. The Letvuan village community also hopes that the existing Letvuan village infrastructure can be improved by the government, to support the development of ecotourism in Letvuan village, particularly access to bridges and roads as well as the need for maintenance of Teb Tut
king grave which is one of the originators of the Larvul Ngabal customary law which is near Mangrove forest location so that the traditional culture of the area is well preserved.

Recreation is the most chosen destination for visitors (40 respondents or 80%) because of the desire to enjoy the natural beauty of the Letvuan village mangrove forest. The interesting thing is the existence of the Teb Tut king grave, who was one of the originators of the Larvul Ngabal customary law, so that many visitors were enthusiastic about asking about the history of the grave.

Table 3. Destination of visitor arrival

| No. | Arrival Purpose | Respondents | Percentage (%) |
|-----|-----------------|-------------|----------------|
| 1   | Recreation      | 40          | 80.00          |
| 2   | Businesses      | 0           | 0.00           |
| 3   | Research        | 10          | 20.00          |

Table 4. Responses and visitors suggestions

| No. | Responses and visitors suggestions |
|-----|-----------------------------------|
| 1   | Need for facilities and infrastructure (public toilets, rubbish bins, roads and bridges |
| 2   | government attention in developing natural and cultural attractions |
| 3   | Need for tour guided |

3.2 SWOT Analysis of Ecotourism Development in Letvuan Village

In accordance with the existing conditions and potentials and responses from the local community and visitors, SWOT (Strengths, Weakness, Opportunity, and Threats) analysis was carried out. By SWOT analysis all aspects related to ecotourism are grouped into two namely internal groups and external groups. Internal groups are strengths and weaknesses, while external groups are opportunities and threats.

Based on information and research at the location, a description of SWOT analysis is obtained as follows:

1. Strengths
   a. It has beautiful tourism potential and customs that are still maintained by the people of Letvuan.
   b. The people are very friendly, open and ready to accept tourists.
   c. Support from the local community in preserving nature around the Letvuan village region.
   d. The maintenance of the tomb of Raja Teb Tut, one of the originators of the Larvul Ngabal customary law, which is near the mangrove forest location
   e. Support from the Southeast Maluku Regency Government especially in preserving historical sites

2. Weakness (weakness)
   a. Infrastructure in the form of roads and bridges which is the main access to the Letvuan village mangrove forest
   b. Signs and prohibitions for tourists are not yet available.
   c. Public transportation to get to the ecotourism location is still lacking.
   d. Still weak promotion for tourists.
   e. The unavailability of proper supporting facilities for site cleanliness, such as garbage bins and public toilets.

3. Opportunities
   a. Safe and conducive conditions will cause attraction for tourists.
   b. The community has begun to know the effects of damage to the excessive use of natural resources.
   c. Community attention to the preservation of nature is increasing, so it is expected to make ecotourism a target where they overcome back to nature.

4. Threats
   a. Ecotourism development will certainly have a negative impact on both the region and the socio-cultural community, such as the existence of environmental pollution from motor vehicle fumes of tourists and the presence of foreign cultures that are accidentally exhibited by foreign tourists.
   b. Seaweed farming activities around mangrove forests have the potential to cause sea water pollution.

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3.3 Letvuan Village Ecotourism Development Strategy
Based on the results of SWOT research and analysis, the chosen strategies in the development of
ecotourism in Letvuan village are:
1. Completing the infrastructure to support ecotourism activities such as: roads, bridges, cleaning
facilities, and others.
2. Conduct intensive promotion to the community both nationally and internationally.
3. Making specific policies in the development of ecotourism.
4. The development of ecotourism packages such as: introduction of flora and fauna types, the history
of Raja Teb Tut's tomb, Kei art and culture packages include: entertainment stage, traditional dance
performances.
5. Synergize ecotourism with Kei art and traditional culture.
6. Empowering local communities in ecotourism activities.

3.4 The Concept of Mangrove Ecotourism Development in Letvuan Village
The development of ecotourism is focused on the use of mangrove ecotourism in Letvuan village with
the concept of directives as follows:

| Tabel 5. The concept of ecotourism development in Letvuan village |
|---------------------------------------------------------------|
| **Tourist attraction** | Mangrove Ecotourism in Letvuan Village |
| **Development theme** | The development of ecotourism based on art and culture of the Kei community in a sustainable manner with the principles of natural resource conservation. |
| **Development component** | |
| 1. The development of the ecotourism package includes: introduction of flora and fauna types, the history of the Teb Tut king grave |
| 2. The development of the Kei arts and culture package includes: the entertainment stage, traditional dance performances. |
| **Tourism facilities and services** | 1. Supporting facilities: visitor center, changing rooms, souvenir stalls, food stalls, restrooms, toilets. |
| | 2. Information and communication facilities: tour guides, leaflets, booklets, tour guides. |
| **Accessibility** | 1. Making entry tickets in collaboration with the Regional Revenue Service |
| | 2. Construction of roads and bridges |
| | 3. Adequate parking area |
| | 4. Making of signs and prohibitions |
| **Conservation** | Protection of endangered species |

4. Conclusions
Letvuan village's community perception strongly supports the development of ecotourism with
expected that the community will be involved in its management so that it can increase business
opportunities and increase income. In addition, the community can at the same time preserve local arts
and culture and reduce the destruction of forest areas. The perception of visitors to the mangrove forest
Letvuan village attractions is very supportive in the development effort, especially in the improvement
of supporting infrastructure such as bridges and sanitation facilities.

Recommendation for Letvuan village ecotourism development strategy according to SWOT analysis, namely: (1) completing supporting infrastructure for nature tourism activities, especially
ecotourism, such as: roads, bridges, sanitation facilities, and others. (2) conducting intensive promotions
to the community both nationally and internationally. (3) making specific policies in the development
of ecotourism. (4) development of ecotourism packages such as: introduction of flora and fauna species,
history of the Teb Tut king grave, Kei art and culture package. (5) synergizing ecotourism with Kei traditional arts and culture, and (6) empowering local communities in ecotourism activities.

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