

RESEARCH ARTICLE

Ecotourism Impacts on the Livelihood of Local Communities in Central Buton Island of Indonesia

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Abstract

Ecotourism provides scope for non-consumptive use of natural resources by involving the people living in and around natural areas. Central Buton Island is located in South-East Sulawesi in Indonesia. The major threats to these reserves are selective logging, illegal hunting for meat and trade, pet trades on monkeys and birds, and conversion of forestlands for agricultural production. The present study identifies the ecotourism development impacts on the livelihood of local communities. Both quantitative and qualitative methods were used for data collection in order to obtain factual information about the actual benefits of ecotourism to livelihood and to understand the social circumstances in the study areas. This study has shown that ecotourism can contribute to people's livelihood by providing an array of economic benefits through income and employment. This result demonstrates that ecotourism jobs generate more income than traditional occupations in the region. Ecotourism operations in the area have also achieved remarkable success in natural resource conservation. These achievements include the discovery and naming of numerous species in science, exposing the scientific value of the forest in the regions, attracting global funding, and drawing the attention of the central government to the area. The policymakers should plan and manage ecotourism projects through community participation, training, and local government involvement in improving the livelihood of people in the study areas. Moreover, effective policy supports are essential in ecotourism development to ensure economic benefits for locals, conservation of natural resources, and attract global funding attention for the valuation of forests.

Key-words: Buton Island; Ecotourism; Livelihood; Local Communities.

Introduction

The profile of ecotourism as a conservation and development strategy over the last few years has been on the increase. It provides scope for non-consumptive use of natural resources by involving the people living in and around natural areas. The governments of many developing countries, richly endowed with natural resources, consider ecotourism as a strategy of generating foreign exchange to boost their economies (Schevynes, 2002). Far from altruistic sentiments, many tourism operators and companies label their operations as ecotourism just to get a share of the burgeoning market phenomenon referred to as 'green-washing' (Wood, 2002). The unprecedented growth of conventional mass tourism and the considerable negative impacts it has caused in many destination countries have led to the canvassing of alternative forms of tourism that have fewer impacts on the

environment (Eber, 1992). Ecotourism is considered a befitting alternative to conventional mass tourism, a means of turning remote regions rich in natural resources into a 'viable productive bases' and a tool for achieving sustainable development (Barkin, 1996). It is expected to help in improving environmental awareness as well as means of fostering global co-operation.

The ecotourism activity must be environment-friendly, socially acceptable, and economically viable for sustainability to be guaranteed. It tends to shift emphasis from preservation to conservation and from consumptive use to non-consumptive exploitation (Munt and Mowforth, 1998). It should generate enough income to make people value their resources, and from the visitors' perspective, it should sustain their interests by offering a rewarding and fulfilling experience. Local people should be involved in planning, control, and management activities of ecotourism. These activities should be substantial enough to complement their livelihood options and constitute an incentive to value natural resources. Ecotourism has been viewed not only as a development strategy but also as a tool of poverty eradication in many countries in the world. This is because of its perceived benefits in the areas of employment, the balance of payments, regional development, and foreign exchange earnings (Hall, 1994). The Quebec summit declaration in 1992 recognized ecotourism as a vehicle of economic development, especially in the Least Developed Countries (LDCs) (Fennell, 2003). Moreover, ecotourism is one of the few strategies for economic diversification because it capitalizes on the assets available to the poor, such as their cultural and natural heritage. It also provides small-scale labor opportunities better than all other economic sectors apart from agriculture (WTO, 2002). Local people could participate in providing goods and services to tourists in ecotourism sites. They need minimum skills, little capital, minimum special technical expertise, and foreign language proficiency in this regard (Ashley and Carney, 1999). Women, for example, can engage in the sale of souvenirs such as handicrafts or serve as food vendors (Goodwin, 1996). Women engage in the sale of fuelwood and vegetables to campers in Namibia (Scheyvens, 2002). Ecotourism maintains close interaction between tourists and locals over a long period in a small area. Ecotourism has been seen not only as a conservation strategy but also as a way of making the concept of sustainable development operational. These benefits can attract economic value to the environment and thus give an incentive to conservation (Butler, 2000).

The ASEAN countries are giving priority to ecotourism development in this region to enhance the local community's empowerment and benefit-gathering. Ecotourism development is able to ensure conservation of natural resources, environmental well-being, and sustainable development in the local areas in a meaningful manner (Dowling and Weiler, 1997). Teh and Cabanban (2007) identified some strategies to develop ecotourism in the marine sites. The strategies are conserving marine diversity, reducing misuse of natural resources, and ensuring the support of local communities to maintain the resources. They suggest these strategies through their study on Pulau Banggi of Sabah in Malaysia. Yusof and Rahman (2011) recommended several guidelines to increase the satisfaction of tourists towards ecotourism activities in a site. The guidelines are reusing and recycling the resources, conservation of natural resources, integrated approaches with the communities to develop the environment, and exchanging opportunities for local culture. Bhuiyan et al. (2012) identified that local communities supported ecotourism activities for their well-being. Their study on Sekayu Recreational Forest in Malaysia shows that ecotourism provides positive impacts on the local environment and the livelihood of communities. Through a study on a National Park in Vietnam, Luong (2024) emphasizes biosphere values, environmental beliefs, and environmental well-being of the tourism stakeholders to ensure successful ecotourism development in an area. Subongkoda et al. (2025) highlighted that a balanced combination between community participation, tourism components, and environmental factors is essential for ecotourism development. The researchers identified that tourism components and environmental factors have a significant relationship with the community participation for ecotourism development through a study on the community leaders in Thailand.

The challenges of ecotourism development are maintaining environmental quality, preserving the natural resources, ensuring tourists' satisfaction, and providing benefits for the local communities to improve their livelihood. Excessive uses of natural resources due to ecotourism development reduce the quality of recreational activities in ecotourism sites. Yacob et al. (2009) revealed that some ecotourism activities, such as snorkeling and scuba diving, create negative effects on natural resources. Their study on marine parks in Malaysia suggested that increasing awareness, conservation of marine resources, park management, and benefit sharing with the local communities are necessary for ecotourism development in the marine parks. Jaafar and Maideen (2012) revealed that ecotourism sites face difficulties in maintaining a balance between the environment and tourism activities due to excessive use of natural resources. Their study on Timor and Redang Island in Malaysia suggested that conservation of marine resources and environmental awareness help to maintain sustainability in ecotourism sites. Several studies (Teh and Cabanban, 2007; Yacob et al., 2009; Yusof and Rahman, 2011; Bhuiyan et al., 2012) show that local communities provide their support and positive efforts towards the ecotourism development in any sites to ensure well-being for their livelihood. Ross and Wall (1999) identified through their study on North Sulawesi, Indonesia that locals are willing to play a role in natural resource protection, and ensure positive impacts from ecotourism activities for long-term viability. Ni'am et al. (2021) emphasized the importance of nature conservation for market-oriented ecotourism expansion from the context of the community perspective. The study highlighted the self-managed, experienced, and benefit-sharing role of local communities for reducing conflict with wildlife and natural resources through ecotourism activities. Thys et al. (2016) highlighted on effective conservation and management of ecotourism resources through the behavioral intention of local communities to satisfy the tourists.

Central Buton Island is located in South-East Sulawesi in Indonesia. The island was the most important pre-colonial kingdom of South-East Sulawesi, with its old headquarters in Wolio. The island received the backing of the Dutch against Makassar and Temete in the 17th century and later came under direct Dutch control. The island was given limited autonomy in 1906 by the Dutch colonialists. The two rainforest reserves located in the region offer a rich natural setting under a favorable political atmosphere. The forests of Central Buton are categorized into three: national reserves (which include the Lambusango and Kakenauwe nature reserves), protected area forests, and limited production forests. The Lambusango and Kakenauwe nature reserves jointly cover an area of 25,163 hectares, and they are controlled by the provincial conservation agency. Their reserve status is backed by the national legislation because of their biological significance. About 1.7 million hectares of forest are converted to different uses every year, and 20% of the forests of South Sulawesi have been lost in the same period (Malleson, 2005). The major threats to these reserves are selective logging, illegal hunting for meat and trade, pet trades on monkeys and birds, and conversion of forestlands for agricultural production. Consequently, the management scheme was built on community participation in managing the district-controlled forests via granting village contracts in return for conservation. Ecotourism could be an alternative or complementary strategy to the village contract by virtue of the fact that it involves a non-consumptive and non-extractive pattern of utilizing resources. The present study identifies the ecotourism development impacts on the livelihood of local communities.

Materials and Methods

Methods

The study was conducted at Labundo-Bundo (Opwall's Forest Base) in Central Buton Island, South-east Sulawesi. Both quantitative and qualitative methods were used for data collection in this study in order to obtain factual information about the actual benefits of ecotourism to livelihood and to understand the social

circumstances in the study areas. The quantitative techniques of structured questions in the survey were further completed by qualitative interviews that were conducted at some selected households that the researchers considered important in the communities. Quantitative techniques try to find out factual evidence deemed relevant to get the information required. Qualitative techniques, on the other hand, are carried out to understand some specific social phenomena (DeVaus, 2002).

Household survey

The Household survey has been used in this study to collect primary data from the respondents. Household surveys are useful in facilitating the investigation of the range of assets and capital as well as livelihood options available to households, especially in developing countries. It also allows the acquisition of a large volume of information about a given population within a very short period of time (Yansaneh, 2003).

Profile of villagers

The villages were selected because of their proximity to the two forest reserves of Lambusango and Kakenauwe (Figure 1). The selection was also done to enable the comparison of the effects of ecotourism on the livelihood of local communities. The selection is also expected to enable the investigation of changes in the attitude and behavior of local people to ecotourism based on the degree of exposure. The total population of Labundo, Waoleona, Wakangka, and Lawele is 408, 915, 1220, and 3050, respectively. Most of the villagers in Labundo, Wakangka, and Lawele are farmers (>80%) and fishermen (>60%) in Waoleona.

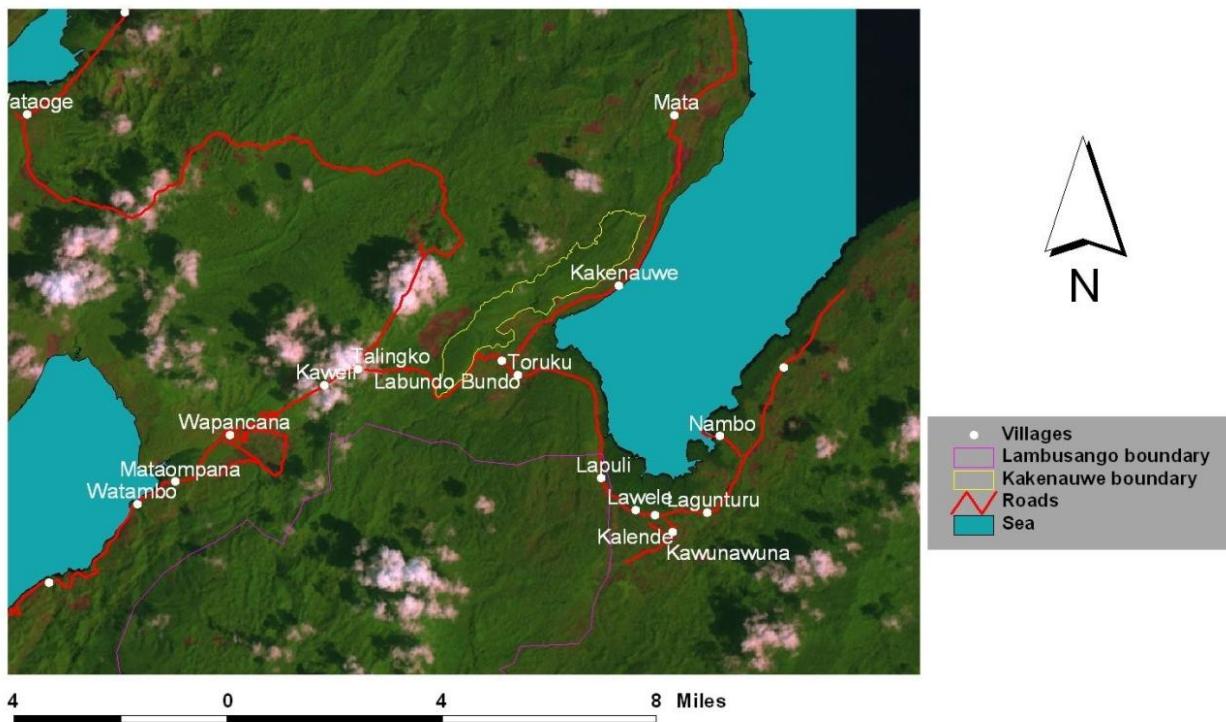


Figure 1: Map of Buton Island

Sampling and questionnaire

The goal of any sampling strategy in the quantitative survey is to get a representative sample, which can capture the general characteristics of the population (DeVaus, 2002). Efforts were made to ensure all the occupational groups, genders, and age categories were interviewed. To ensure this, the respondents were not only interviewed in their homes but also in their firms, workshops, and schools. The qualitative sampling was done on the basis of the appropriateness of the respondents in providing the required information, as well as their access to the information required. Random probability sampling was used in the household survey because of its simplicity and the fact that the population is concentrated in a given geographical area. The limited variation and number of the population and time constraint informed the choice of the sample size. The survey was carried out in four villages, namely: Labundo-Bundo, Waoleona, Wakangka(Wapancana), and Lawele. These villages are famous as ecotourism attractions due to their suitability for expanding tourist activities as well as ensuring benefits for locals. Moreover, environmentally friendly situations of these four villages are helpful to reduce the negative impacts of tourist activities. A total of 160 households were surveyed (forty from each of the four villages). The questionnaire consists of 47 questions in four sections. These questions are structured to elicit information on the general demographic profile, means of livelihood, tourism knowledge, and environmental knowledge.

Results and Discussion

Most of the respondents interviewed are male (60%), the majority are married (83.8%), and the average age is 40 years. Both husbands and wives jointly contribute to family income in 73.1% of cases in all the villages. Most of the respondents are self-employed (78.8%), predominantly engaged in farming occupations (57.5%). Although there is an array of occupations in the study area, many respondents said they do not have any alternative occupation (51.3%). More than half of the households in all villages except Lawele do not have distant relatives to support them in case of need. However, people rely on close families and neighbors (68.8%) for supporting some work as casual laborers on farms (8.1%), yet others seek government loans (7.5%) at a small interest rate. The majority of respondents in Labundo (60%) consider themselves powerless in case of economic shocks, and only 20% of them feel secure. The people of Lawele feel more secure in economic crises than all other villages, with 45% of respondents, while 52.5% of the households in Wakangka are comfortable. It is surprising that despite additional sources of income through ecotourism in Labundo, the people feel powerless economically. This means, despite a need for an alternative livelihood strategy, ecotourism may not be sufficient in fulfilling the economic needs of the people, but could be a good complement.

Table 1 below summarizes the major problems facing the four villages based on the responses of respondents. Lack of access to credit facilities to expand the farming operation and or to start a trading business appears to be the most pressing concern of households in the four villages. Although poverty was not considered to be a major problem, however, unemployment has been identified as a serious community problem in all the villages. This result demonstrates a lack of government intervention in many facets of people's lives. Although it will be difficult for any ecotourism project to make a serious impact on all the problems identified above, however, through properly planned community development activities, the severity of the problems can be minimized. Ecotourism activities are taking place only in Labundo village at the moment. However, respondents in all the villages covered by this study expressed their opinions and expectations about coming to the area. Some of the good things the locals like about ecotourists include their ability to adapt and interact with the locals, their personalities and polite nature, language, their help with conservation, and making the community popular. However, there are a lot of negative feelings towards the tourists as well. Although 51.3% of the respondents

refused to make any comments, a lot of them find visitors' lifestyles and the seasonal nature of their visits objectionable.

Table 1: Community problems in the study area

Community problems	Labundo	Waoleona	Wakangka	Lawele
Lack of credit	5	11	13	14
Health	1	4	1	0
Roads	17	0	1	0
Unemployment	15	9	6	17
Poverty	0	2	1	0
Inflation	0	5	12	6
Declining land productivity	0	6	3	-
Lack of education	-	-	-	3
Total	38	37	37	40

Source: Survey data

The respondents were asked to express what they expect from ecotourists and ecotourism to the community, to the family, and at present levels. The results revealed interesting answers that could be useful for planners of an ecotourism project in the region. At the community level, the residents expect tourists to help them with their core occupations- farming and fishing by providing them with equipment (51.3%). They also want visitors to give them credit (14.4%), provide them with education (25.6%), medical assistance (4.4%), and sports (3.8%). This is a high level of expectation and further demonstrates the absence of government interventions in addressing the pressing needs of the communities in the study area. The respondents were asked how they would help visitors coming to their area, and 40.6% said they would strive to satisfy their needs. A good number (34.4%) would be hospitable, and yet many others (8.8%) would guarantee their security. Based on hospitality, it would be safe to generalize that all the communities would treat their visitors very well. The enthusiasm and euphoria accompanying volunteers' visits to neighboring villages are very noticeable.

Household average monthly income was used as a measure of economic benefits instead of household expenditure. The average monthly income of the people of Labundo and Waoleona was Rp 376,666.67 and Rp 360,256.41, respectively. Lawele had the highest income of Rp 501,351.34, followed by Wakangka with Rp 401,714.29. This result reveals that despite five years of ecotourism operation in the village of Labundo, the income level of the villagers is not greater than some of the neighboring villages. This could be attributed to the livelihood options available in Lawele and Wakangka, which are greater than in Labundo and Waoleona. The residents of Lawele and Wakangka have the opportunities of engaging in paddy cultivation as well as fishing; a lot of civil servants are living there also. On the other hand, the people of Labundo rely on farming only, and those in Waoleona on fishing. The slight differences between the last two could be attributed to opportunities provided by ecotourism operations taking place in Labundo. Based on this, therefore, the contribution of ecotourism to household incomes in the region could be said to be insufficient. This finding is similar to that of Bookbinder et al. (1998) in Nepal. The results show that not all the villagers are satisfied with their income levels, with Labundo residents surprisingly requiring the highest monthly income (Rp. 1,161,538.46). It is not known whether this has anything to do with changing tastes and lifestyles as a result of ecotourism operations in the village (Figure 2).

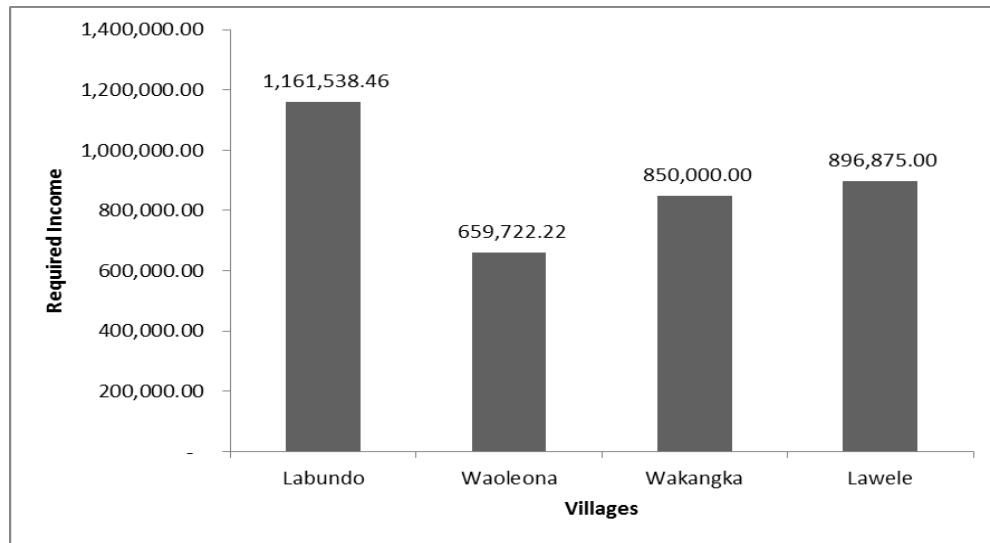


Figure 2: Household average monthly income of study areas

The income from ecotourism and other occupations was compared in Labundo to ascertain the extent to which ecotourism activities constitute viable livelihood options. The results show that only civil servants, like teachers and pensioners, earn higher incomes than ecotourism-related jobs. The average monthly income of a civil servant is Rp. 1 million, for instance, and a tour guide earns Rp. 0.9 million and a porter Rp. 0.48 million. Traditional occupations like farming and fishing earn only an average of Rp. 0.3 million a month (Figure 3).

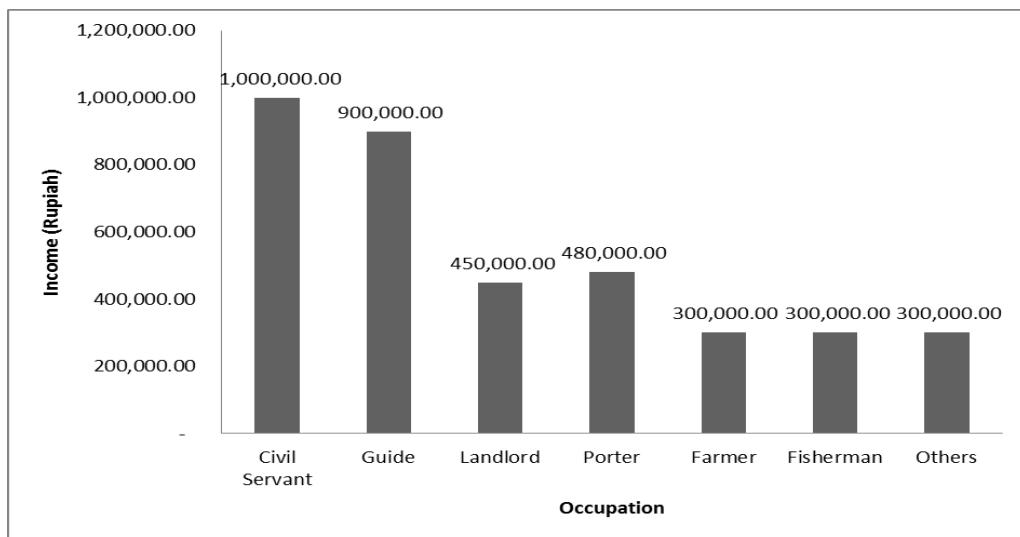


Figure 3: Income from the occupations

This result demonstrates that ecotourism jobs generate more income than traditional occupations in the region. A lot has been said about the seasonal and, therefore, unstable nature of incomes from ecotourism, a situation that has led to widespread anxiety about relying on it as a sustainable economic development strategy. However, the fact that most of the livelihood options available to local people are equally seasonal in nature, a lot of them

even more variable than ecotourism, has been largely ignored. To buttress this point, cashew, for example, is harvested only once a year and earns only a paltry Rp. 241,600, on average, to the farmer. On the other hand, a guide earns Rp. 900,000 every month out of the three months ecotourism operates in the region, meaning that a guide earns Rp. 2.7 million in a year (Figure 3).

Information gathered through interviews revealed that the ecotourism project supports about 94 jobs in the Labundo base alone. Out of these, 44 are temporary and 50 are permanent. Unlike many ecotourism projects in other parts of the world, where the number of jobs for outsiders is greater than for locals, the reverse is the case in Labundo, as 73 jobs out of 94 go to the residents, and outsiders hold only 21 jobs. There are a number of indirect employment opportunities as well as in the areas of accommodation, transport, and security services. About 25 households out of 51 rent out part of their homes to volunteers during the ecotourism season. Households earn Rp. 30,000 per night, and most houses host up to four volunteers at any given time. This constitutes a viable source of income to a very remote rural area that is far away from government attention. Many households that own 'microlite' buses also earn significant income from vehicle charter. The vehicles are chartered at Rp. 50,000 to 100,000 a day. Many residents also benefit by working as security personnel to ensure the safety of volunteers. Other indirect economic benefits include increased profits to traders and foodstuff sellers in Labundo village during the ecotourism season. This result indicates that if ecotourism could be extended to the other villages, it could reduce unemployment significantly. Considering the fact that the threat to the natural resources in the area is partly caused by unemployment, a successful community-based ecotourism project could minimize the level of threat (Figure 4).

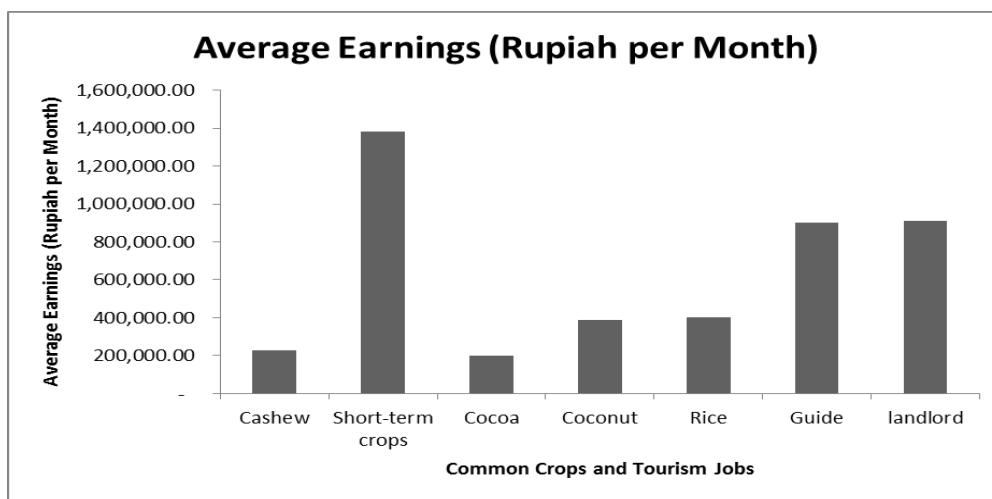


Figure 4: Average earnings from common crops and tourism jobs

The comparison of earnings from tourism activities and traditional jobs of study areas revealed that ecotourism is suitable and offers potential income opportunities for the local communities due to high outcomes as well as a sustainable livelihood option.

A lot of community development efforts were conducted in Labundo over the last five years. Although most of these interventions are executed occasionally, nevertheless, they help the residents significantly. Some of the community development efforts executed by the tour operator include the donation of building materials such as cement, school supplies, and sports equipment. Significant community assistance is of free medical services in

the area. This medical service extends to the neighboring villages as well. There are a number of tangible conservation benefits occurring in the region from existing activities. The entrance fees paid yearly to the two forest reserves (Lambusango and Kakenauwe) help the conservation agency (KSDA) to carry out its duties more effectively and also give economic value to the reserves. KSDA rangers are also supported financially to improve their surveillance of protected areas. Other benefits include conservation awareness to local schools through quiz competitions and the production of posters and pamphlets.

A number of benefits of ecotourism to the region are intangible but substantial. This is reflected in the pride exhibited by residents of Labundo. Although, difficult to gauge but it has been observed that many people of Labundo are proud of their English language skills. In the area of sports, a combined residents-volunteers team is normally formed to engage teams from other villages. This further gives the local people a tremendous sense of pride. Community cohesion is also improved remarkably as the residents cooperate to make the volunteers feel safe and comfortable. The sense of pride can, therefore, be enormous in a situation where the communities themselves host the project. Residents of Waoleona, Wakangka, and Lawele are always eager to host visitors just like the people in Labundo. Improved community cohesion can nurture an atmosphere of mutual support and reduce intra-village and inter-village conflicts.

Conclusion and Recommendations

This study has shown that ecotourism can contribute to people's livelihoods by providing an array of economic benefits through income and employment. Ecotourism operations are making a significant impact on people's livelihoods. This is because the people in the village have few options to diversify, and the majority of them consider their families powerless in case of economic shocks. The low household income in Labundo, even with the significant injection of tourism funds into the village, indicates how vulnerable the village will be without ecotourism. This study has established that people in Labundo rely on incomes from ecotourism for the satisfaction of two important household needs: feeding and housing. Findings from this study show that the average income households generate from renting their houses amounts to Rp. 900,000 per month. This study, therefore, has established that, unlike general beliefs, ecotourism jobs are more rewarding and stable than most of the existing livelihood options in the area. Other benefits resulting from ecotourism include community development interventions such as medical services, infrastructure building, and education, enhancement of community pride and cohesion, and cultural exchanges between visitors and residents. Ecotourism operations in the area have also achieved remarkable success due to natural resource conservation. These achievements include the discovery and naming of numerous species in science, exposing the scientific value of the forest in the regions, attracting global funding, and drawing the attention of the central government to the area. Environmental awareness among the villagers has also been improved as a result of activities such as school quizzes, publications, and conservation education efforts. There are also no indicators to gauge whether current practices are not causing negative consequences to the environmental and social fabrics. Despite the existence of rules to guide the behavior of visitors, some violations were observed, and these are exacerbated by the failure of the villagers to create awareness among the tourists about the importance of respecting their traditional norms and values.

The scope of ecotourism in improving the livelihood of people in the study area, it is important to plan and manage ecotourism projects effectively. The necessary recommendations in this regard are as follows;

Community-based ecotourism: A new community-based ecotourism project could be integrated into the Lambusago forest management project, which can provide scope for the local communities to be involved in forest protection. Ecotourism could complement the village contract and licensing strategies designed to allow

communities surrounding the production forest area to benefit economically by allowing them sustainable exploitation of the forest resources.

Training: The tourism department should provide the training required and activate the numerous plans and strategies it has for the development of the sector, such as marketing, monitoring, and regulation.

Government involvement: The local people may not have sufficient skills and knowledge. This means that they could do little to guide the activities sustainably. The forest departments and other government organizations should be involved, therefore in setting up indicators and guidelines for the nature-based activities to be conducted under ecotourism development. They should also be the monitors and enforcers of conservation rules in the ecotourism development process.

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