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# The role of the stakeholders in sustainable ecotourism management at Malela Waterfall of Indonesia's West Bandung

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**Abstract:** The purpose of this study is to address the issue of low local participation in ecotourism management in Indonesia, specifically at the Malela Waterfall ecotourism site in Cicadas Village, Rongga District, West Bandung Regency, West Java, Indonesia. The research method is action research, which includes observation data gathering, in-depth interviews, and Focus Group Discussions. The findings of the study show that by carrying out the process of developing social infrastructure, namely development that prioritizes strengthening human resources in carrying out social service functions in ecotourism activities such as skill training of residents in the field of ecotourism, massive ecotourism outreach, and strengthening social communities—Non-Governmental Organizations (NGOs) and youth organizations as ecotourism actors. This type of development serves to raise awareness and participation among local inhabitants in Malela Waterfall ecotourism in West Bandung Regency. This promotes harmony and mutually beneficial partnerships among all Malela Waterfall ecotourism stakeholders. Furthermore, increasing community participation benefits the well-being of residents in the tourist region.

**Keywords:** citizen participation; local wisdom; organization management; sustainable ecotourism; social infrastructure

## 1. Introduction

The development of ecotourism frequently needs communities, cities, regions, or countries to consider their own identity and then promote it as a commodity that they hope will attract tourists to “live their experience.” Culture is now packaged and sold to tourists as ancient locations, religious ceremonies, and folk practices. Even people’s daily lives have been turned into commodities to be sold to tourists (Kennedy et al., 2013). One of the missions of the National Tourist Office (NTO) is to develop tourism as an important means of encouraging economic development and international trade, but in the reality of world development, the processes and activities carried out experience socio-cultural conflicts. (Robinson, 2008).

Therefore, managing socio-cultural conflicts or the negative impacts of ecotourism is an important thing for developing and developed countries to consider (Suana, 2020). In addition, the people who best know the important elements of ecotourism, such as green areas, wildlife landscapes, forests and specific activities and understand how these elements work are people in regularly placed Indigenous communities (Lasso, 2021). However, private operators or planners rarely ask Indigenous people about their visits to the area. As a result, the growing tourism industry does not match people’s needs or use resources to their best advantage, instead creating unnecessary social pressure on Indigenous communities (Phelan,

2020).

In many cases, in developing countries, ecotourism is considered more than just nature-based tourism (Choi, 2020). Ecotourism is only labeled as a marketing tool to appear environmentally friendly and can attract people from developed countries to travel to developing countries to experience their “natural environment”. Ecotourism has developed rapidly since the 1990s. For example, the number of trekkers in Nepal increased 25.5 percent between 1980 and 1991. Visitors to Kenya increased by 45 percent between 1983 and 1993, with about 80 percent attracted by wildlife, and nature tourism in Honduras increased by 15 percent in 1995 alone (Scheyvens, 1999).

For many rural communities, ecotourism is seen as creating new jobs, new business opportunities and skills development, as well as giving them the opportunity to gain greater control over the use of resources in their region. However, there are very real dangers in accepting ecotourism critically and regarding it as a common good for any destination (Cater, 2017). This is because ecotourism destinations and the less developed tourist areas sought by ecotourists are increasingly vulnerable to cultural disruption and degradation. Therefore, the promotion of “ecotourism” to the native population of developing countries produces several positive and negative impacts. In involvement or participation proper, Butler and Hinch claim that local people are involved in ecotourism development because they are motivated by economic interests, income generation, for example, through the creation and operation of enterprises, through self-help, employment as guides, and through the production of goods and services and accommodation providers (Butler and Hinch, 2007).

However, it is very unfortunate that the development of ecotourism rarely involves local communities where ecotourism takes place. In fact, in the development of ecotourism, the role of community participation is very important because: First, socio-cultural elements have become products or targets under ecotourism (for example, services such as accommodation, restaurants, transportation and recreation combined with culture such as folklore, heritage, monuments). The result of this product is the culture or identity of the community, but at the same time, the culture or identity of this community and the environment can face negative impacts from ecotourism development (Salazar and Graburn, 2014). Second, the word “tourism” was introduced or recognized as a factor in economic development. That is why the term “sociocultural” was absent from much of the tourism literature during the 1960s and 1970s. Mainstream theories of development have largely focused on economic processes of material transformation. They pay little attention to the ecological, cultural and socio-political context in which the economy operates (Kadt, 2016). This has contributed to the dominance of economic policies in the political arena, with governments often paying attention to the impacts of such policies on culture and nature. Proponents of alternative development want to change that situation and thereby give a new meaning to development (Cohen, 2012).

This is coupled with the fact that in developing ecotourism, residents often need help to reap benefits from the existence of these tourist locations. In ecotourism, three main elements are interconnected, namely ecotourism, protected areas and local communities. Nepal (2002) has provided three different scenarios based on the relationship between three main elements: ecotourism, national parks or protected areas, and local communities in the context of ecotourism development. In this

scenario it is often a lose-lose-lose scenario: All three players are negatively affected. In this scenario, environmental conditions decline, tourists are prohibited from visiting national parks, and local communities do not receive any economic benefits. Tourism and parks are only able to meet the needs of local communities. Local communities are becoming hostile to tourists and causing a severe impact on the park by engaging in unsustainable activities.

Therefore, this research will reveal the participation of local communities in ecotourism management. This research is important to emphasize that the involvement of residents is very important in ecotourism development, especially to absorb labor and strengthen other economic qualities. When ecotourism can be absorbed optimally, it will cause village residents to be economically and socially independent (Lelloltery, 2018).

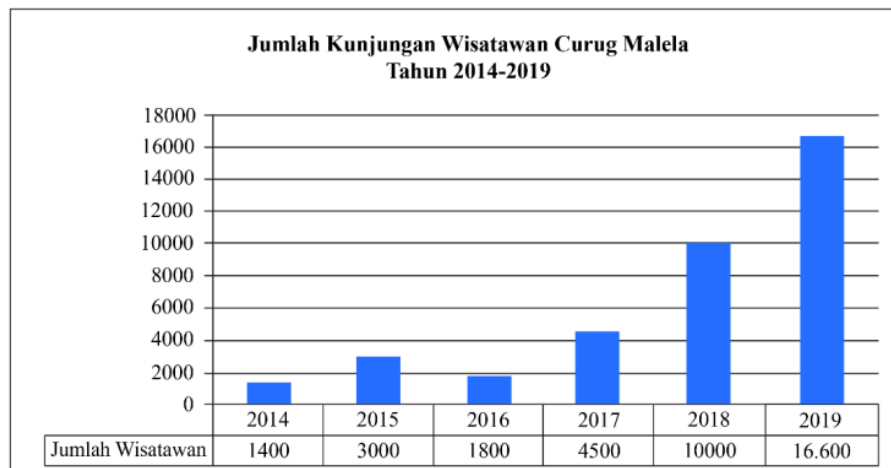
West Java, as one of the regions that focuses on tourism development, still needs to improve, especially in increasing the level of participation of its citizens in ecotourism development. Even though the number of tourists visiting West Java in 2019 reached 68,256,265 people, that is, there was an increase from the following year of 5,012,116 people, but there are still a number of problems (Open Data Jabar, 2021). West Java is known as a major tourism area and has abundant natural tourism such as mountains, forests, rivers, beaches, lakes and protected forests, which are important assets for developing nature-based tourism or ecotourism. Terms such as green tourism, adventure tourism, mountain tourism, natural history tourism, ecotourism and animal tourism are generally defined as travel to natural areas and participation in nature-related activities without damaging the environment and to promote the conservation of natural resources and are used by the private sector and government agencies to promote ecotourism (Towner, 2018).

This research focuses on the case of ecotourism in West Bandung Regency, especially Malela Waterfall ecotourism, West Bandung Regency. West Bandung Regency is a region that has diverse tourist destinations. According to data from the West Bandung Regency Tourism Office, there are 28 tourist destinations spread across eight sub-districts in West Bandung Regency. With data on tourist visits of 6,634,998 domestic tourists and 36,656 foreign tourists in 2018. Of the many tourist destinations it has, West Bandung Regency has great potential to support the economy and advance tourism in West Bandung Regency. In 2019 West Bandung Regency is focusing on developing three tourist destinations, one of which is Malela Waterfall Tourism (Disparbud Kbb, 2021).

Malela Waterfall is the newest favorite destination in the West Bandung area. This is because in terms of the number of visits, this ecotourism destination is always increasing in number. Most visitors are amazed by the natural nuances presented at Malela Waterfall, coupled with the beautiful conditions and fresh air. The following data shows that visits to Malela Waterfall are very high from year to year.

From **Figure 1**, it can be concluded that the Malela Waterfall Tourism experienced a slight decrease in the number of visitors from year to year in the last few years before it was rehabilitated, and then the Malela Waterfall Tourism experienced a very significant surge in visitors in the last few years because it had been rehabilitated by the Malela Waterfall Tourism management, namely the West Bandung Regency Tourism and Culture Office. However, the involvement of residents

around Malela Waterfall could be much higher. Various factors cause this: first, the need for more expertise and human resource skills around Malela Waterfall. Second, residents' disinterest in Malela Waterfall ecotourism. Most residents around Malela Waterfall work as farmers and are reluctant to switch to new jobs, such as selling souvenirs or getting involved in other tourism projects at Malela Waterfall. This causes many traders and ecotourism officers to come from immigrants and marginalize residents. These two problems have resulted in a lack of residents being involved in developing ecotourism at Malela Waterfall.



**Figure 1.** Number of tourist visits at Malela Waterfall.

Source: KBB DISPARBUD Database (2021).

## 2. Literature review

Ecotourism, also known as ecological tourism, is a type of tourism that focuses on protecting and maintaining the local environment and culture (Izwar, 2020). This concept refers to travel that prioritizes sustainability, educates tourists, provides benefits to local communities, and minimizes negative impacts on the environment and local communities. There are several main principles of ecotourism: First, increase awareness and understanding of environmental and cultural issues: Ecotourism aims to educate tourists about the importance of sustainability and how they can contribute. Second, provide positive benefits for local communities and the environment: Ecotourism must provide economic and social benefits for local communities, including employment, education and improved infrastructure. Third, maintain and protect natural resources: Ecotourism must focus on the conservation and protection of the environment and biodiversity. Fourth, minimize impacts: Ecotourism must strive to minimize the negative impacts of tourism, both on the environment and local communities. Fifth, sustainable design and operation: Ecotourism must be designed and operated in a way that supports long-term sustainability, not just short-term profits (Sirakaya et al., 2001).

Ecotourism is an important part of the tourism industry, which aims to create a more sustainable and responsible tourism model (Andarani, 2018). What this means is that ecotourism is an important component in the tourism industry which focuses on creating a more sustainable and responsible tourism model. In contrast to conventional tourism, which only pursues economic profits without considering environmental and

social impacts, ecotourism seeks to achieve a balance between economic profits, environmental preservation and benefits for local communities. Some of the main intentions of more sustainable and responsible ecotourism are (Murphy, 2011): environmental conservation, benefits to local communities, education and awareness, respect for local culture, and support for conservation. With a sustainable and responsible approach, ecotourism seeks to achieve harmony between tourism and environmental and social sustainability so that tourism destinations can survive and provide long-term benefits for all parties involved.

Therefore, in this research, this definition is used as a study framework to evaluate the development and sustainability of ecotourism, especially in the case of the Malela Waterfall area. This is because the concept of ecotourism is a form of tourism, which is still often used synonymously with sustainable tourism, which is in accordance with the larger concept of the principles of sustainable development in general (Ceballos-Lascurain, 2008; Ziffer, 2007).

Ecotourism is a form of tourism that focuses on visits to natural areas, such as national parks, wildlife sanctuaries, and other protected areas, with the aim of supporting conservation and promoting sustainable tourism practices. The concept of ecotourism has evolved, and various stakeholders and global initiatives have shaped its narrative. Ecotourism emerged in the 1980s in response to the need for sustainable tourism practices. Initially, ecotourism was defined as a way to channel tourism revenues into conservation and development efforts (Soulard et al., 2024). Various global bodies have provided definitions for ecotourism. For example, the International Ecotourism Society (TIES) defines it as “responsible travel to natural areas that conserves the environment, supports the well-being of local people, and involves interpretation and education” (Kunchambo and Little, 2023).

Ecotourism is characterized by a nature-based focus, educational aspects, and sustainability criteria, which include economic and social sustainability (Arunachalam et al., 2023). It emphasizes the importance of ecological principles to minimize its negative impact on the environment. This includes responsible travel practices and the protection of natural and cultural resources (Miller and Torres-Delgado, 2023). This approach involves local communities in the planning, implementation, and management of ecotourism activities. This approach ensures that local communities directly benefit from tourism and are empowered to manage their tourism businesses. Ecotourism aims to provide economic benefits to local communities through the creation of direct income and employment (Dubos, 2017). This helps support local welfare and promotes sustainable development (Ratta, 2020). Ecotourism also focuses on preserving cultural heritage and encouraging cultural understanding. It encourages visitors to appreciate and respect local traditions and customs. The United Nations World Tourism Organization (UNWTO) has developed guidelines for ecotourism, which emphasize the importance of minimizing negative impacts on the environment and supporting conservation efforts (Arintoko, 2020). These guidelines aim to ensure that tourism contributes to the objectives of protected areas without damaging them (Abrahams and Bama, 2023). Ecotourism involves collaboration between various stakeholders, including local communities, government agencies, tour operators, and Non-Governmental Organizations (NGOs) (Lee and Jan, 2019). This collaboration is important to ensure that all parties work towards the common goal of sustainability

and community benefits (Grum and Kobal Grum, 2020).

### **3. Materials and methods**

In this research, the method used is the Action Research method, namely a method that starts from existing reality or in a natural setting that focuses on observation and natural atmosphere. In the context of digital preservation is the back up process. The research design used in this research is a qualitative research design, with an Action Research approach. Action Research is a research activity that combines various scientific disciplines collaboratively (Miles and Huberman, 2013). This research involves many elements, especially government, academics, mass media, communities and business people. Apart from that, a process of mentoring the community is also carried out to realize the ecotourism development process, especially in building social infrastructure or social capital in facing the development of Malela Waterfall ecotourism.

This study is a case study that explores the socio-cultural aspects of the Malela Waterfall ecotourism project. Case studies are used because they can make a particular locus as a description to understand a broader phenomenon (Kelly, 2023). Therefore, community participation around the Malela Waterfall ecotourism location in Rongga District, West Bandung Regency, West Java is a bridge to understanding similar phenomena in a broader context. Data collection was carried out through observation, in-depth interviews, Focus Group Discussions and documentation studies. Non-participant observation was carried out for two months, namely September to October 2023 by observing community participation in the Malela Waterfall ecotourism project. During the observation, the author tried to understand the context of the problem and look for evidence that the results of the interview could confirm. Observations were carried out simultaneously and were carried out by observing various activities in the Malela Waterfall area, village offices, community meeting places, and community leaders' residences. Meanwhile, in-depth interviews were conducted with 15 informants who were selected purposively from customers, village government officials, Perum Perhutani, and the local community. This in-depth interview was conducted by asking open-ended questions related to the experiences, daily events, feelings, thoughts, and actions of the local community and local government towards Malela Waterfall ecotourism. During the interview, we recorded their responses and expressions. Overall, this in-depth interview was conducted in the same time frame along with the observation. Interviews were conducted both scheduled and spontaneously in different places. To avoid ethical violations, it was ensured that the informants did not mind if their identities and opinions were published. All interviews were conducted in Indonesian to be translated for publication. Furthermore, a documentation study was conducted by collecting and studying documents, both personal and official. These documents are compiled from facts stored in the form of letters, archives, photos of activities, and so on, which collectively describe the participation of the Cicadas Village community and data from the media covering the participation of the Cicadas community. In the final stage, all interpreted data will be verified using triangulation techniques by returning to the location, looking for additional information and confirming the interpretation, which will then

be presented as the results (Campbell et al., 2020). Internal and external stakeholders in Cicadas Village, Rongga District, West Bandung Regency, West Java, Indonesia provided data on social infrastructure development.

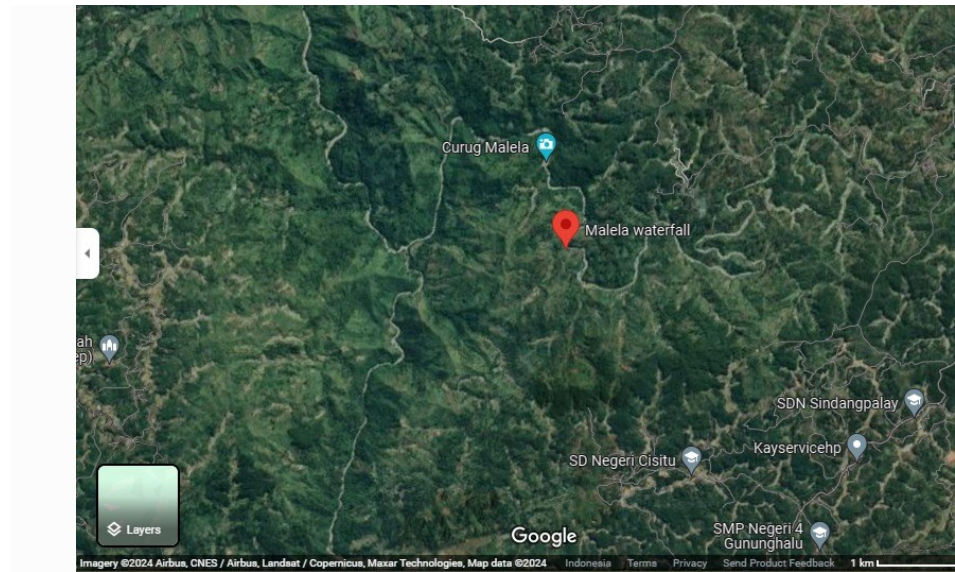
The in-depth interviews in this study were characterized by open-ended questions to encourage detailed responses, probing and follow-up questions to dig deeper, and a semi-structured format that allowed for flexibility. These interviews were conducted one-on-one, creating a comfortable environment, and lasted longer (30 minutes to an hour or more) to gather rich data. These interviews were highly interactive, with both interviewer and participant actively engaged in the conversation (Rogošić and Baranović, 2016). For example, after an answer to the question, “How do local people contribute to the sustainability of ecotourism in Malela Waterfalls?” a question such as, “How do local people contribute to the education process and awareness-raising activities related to ecotourism in Malela Waterfalls?” followed. These interviews provided researchers with rich and nuanced data that could reveal hidden insights, unmet needs, and underlying motivations. This process involved careful transcription, coding, and interpretation.

The indicators sought for data are derived from the Community Based Ecotourism (CBET) theory. CBET emphasizes the active role of local communities in planning, implementing, and managing ecotourism activities (Lee and Jan, 2019). This approach supports community empowerment and ensures that local communities directly benefit from tourism (Djuwendah et al., 2023; Marzo et al., 2023; Sobhani et al., 2022).

## **4. Results and discussion**

### **4.1. Malela Waterfall as a tourist attraction**

The location of Malela Waterfall tourist attraction is located in Manglid Campong, Cicadas Village, Rongga District, West Bandung Regency, bordering Cianjur Regency in northwest Bandung. As shown in **Figure 2**, the Malela Waterfall is located in Manglid Campong, surrounded by other waterfalls in the region. The Malela Waterfall tourist attraction is approximately 50 m high, up to 70 m wide, and the river is 20–70 m wide. Climate Conditions of the tourist attraction Wana Malela Waterfall Tourism Included in agro-climatic zones B1, B2 and B3 have wet months for 7 to 9 months. The condition of the land in the Malela Waterfall tourist area is red and brown latosol and yellowish red latosol. The slope of the slope is very steep > 40 (46.5%), and the presence of protected areas, cultivation areas, agricultural areas and non-agricultural cultivation areas make the water area a tourist attraction. The Malela Waterfall tourist attraction is located in an area under the management of Perhutani. Therefore, Malela Waterfall, which is said to be a new attraction, has become the talk of the town for tourists who come to visit the Malela Waterfall tourist area and is increasing every year (Desa, 2023).



**Figure 2.** Map of Malela Waterfall and surrounding Waterfalls.

Source: Google earth, 2024.

Training and education are key components in this process. Local communities can be provided with training on various aspects of ecotourism management, from basic knowledge about ecology and sustainability to technical skills such as tourism management and marketing. Formal or non-formal education can also be an important part of this effort by offering courses or study programs that focus on ecotourism. Therefore, researchers then conducted training in collaboration with the relevant government in holding it. The main topic of the training carried out at the Cicadas Village Hall on 2 May 2023, was training on tourism management, tourism marketing management and tourism environmental sustainability management. The training was entitled “Strengthening the Ecotourism Management of Malela Waterfall through Local Community Participation”. This training process is in collaboration with the Rongga District government, Cicadas Village, Karang Taruna, Tourism Awareness Group (Pokdarwis), Non-Governmental Organizations (NGOs), Forestry, and Nusantara Plantation (PTPN VIII).

#### **4.2. Planning the Waterfall**

The West Bandung Regency regional administration, Rongga sub-district, Forestry, Nusantara Plantation, and people collaborated on the Malela Waterfall tourism strategy. In general, this planning did not have a flow and was clearly documented. However, it has been verbally acknowledged that the core of Malela Waterfall tourism planning is to empower residents and related parties to improve community welfare. However, because the planning was not properly recorded, it gave rise to the problem of a minimal evaluation process for tourism development. Therefore, so that the Malela Waterfall tourism development plan can be evaluated, the researchers suggest that a tourism planning process for Malela Waterfall be created both in the short term and in the long term. The planning stage was then mutually agreed upon when training was held, especially in plans for the first six months from May 2023. Therefore, researchers then conducted training in collaboration with the relevant government in holding it. The training activities conducted at Cicadas Village



Hall can be seen in **Figure 3**.



**Figure 3.** Malela Waterfall ecotourism management training event.

Source: Personal documentation, 2023.

Some of the main topics in this training process are tourism management, tourism marketing management, and tourism environmental sustainability management. It is hoped that these topics will be useful for developing human resources for the residents of Malela Waterfall ecotourism. Researchers collaborated with West Bandung ecotourism experts and practitioners including Ahmad Suardi, an academic and advisor for ecotourism development in West Bandung.

The first topic discussed and applied to the management elements of Malela Waterfall is tourism management. This is done to ensure that ecotourism at Malela Waterfall is managed well. Training in tourism management aspects is very important. This may include topics such as tourism planning and operations, risk assessment and mitigation, and maintenance and improvement of the quality of tourist sites.

The following is a description of the Malela Waterfall tourism planning produced in the Malela Waterfall ecotourism management training forum in Cicadas Village, Rongga District, West Bandung Regency. **Table 1** presents the detailed tourism planning model developed for Malela Waterfall.

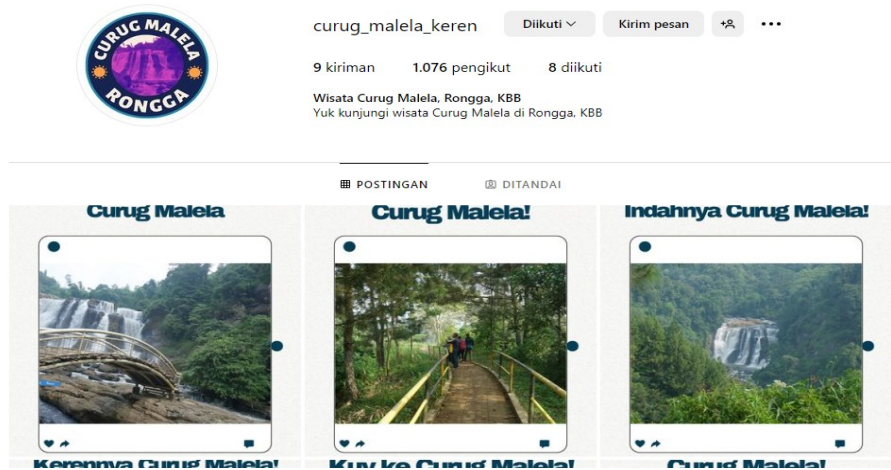
**Table 1.** Malela Waterfall tourism planning model.

| No. | Time      | Planning                          | Follow-up  |
|-----|-----------|-----------------------------------|--|
| 1   | May 2023  | Preliminary Research and Analysis | SWOT analysis  |
| 2   | May 2023  | Society Participation             | Strengthening the role of the Tourism Awareness Group (Pokdarwis), Youth organization, residents, village government, Forestry, Nusantara Plantation, and West Bandung Regency government through intense coordination and communication as well as division of tasks in the field.                                      |
| 3   | June 2023 | Goal and Vision Setting           | The aim and vision of Malela Waterfall tourism is not only economic empowerment and income but also natural preservation. The vision and tourist destination of Malela Waterfall will also expand its reach not only to West Bandung but West Java and nationally through outreach with the massive use of social media. |
| 4   | June 2023 | Mapping and Zoning                | The mapping and zoning of the Malela Waterfall still needs to be improved. For example, there is no safety zone for storms, strong winds and other tourist safety zones. Moreover, the access route is very steep and dangerous. Another solution is to create signposts, road access, etc.                              |

**Table 1. (Continued).**

| No. | Time  | Planning                      | Follow-up   |
|-----|---|-------------------------------|---|
| 5   | July 2023   | Capacity Development          | The field team, Pokdarwis youth group and residents, in collaboration with the regional government, were trained in developing tourism management at Malela Waterfall by inviting instructors from the West Bandung Tourism Office.       |
| 6   | June 2023   | Marketing and Promotion       | The team began the task of initiating and creating social media accounts for the promotion of Malela Waterfall, especially on Instagram   |
| 7   | July 2023   | Management of the environment | The joint team also started planning the nature conservation process, especially in overcoming the problem of visitor waste, natural sustainability due to tourist visits, etc. The team provides rubbish bins and checks them regularly. |
| 8   | July 2023   | Tourism Product Development   | On the other hand, especially women are starting to work on developing typical tourist products for Malela Waterfall, namely t-shirts, bags, stickers, and photo and printing services.   |
| 9   | August 2023-September 2023  | Infrastructure Planning       | The team also proposed a process for improving road infrastructure for regional and central governments.  |
| 10  | Evaluations will begin in August 2023 and will be held in the following months. | Measurement and Evaluation    | Planning is agreed upon by holding regular evaluations once a month.  |

The results of the planning process are then implemented well. As illustrated in **Figure 4**, the Instagram account created for the Malela Waterfall promotion has gained a significant following. For example, this can be seen from the existence of a new social media account that focuses on developing information and promotion of the Malela Waterfall, which the team and the Cicadas Village Youth Organization have created. Due to good socialization and promotion, the account has been followed by 1000 followers on Instagram social media. This shows that there is good follow-up regarding the results of the training and agreement on planning the ecotourism development of Malela Waterfall.



**Figure 4.** Instagram of Malela Waterfall, which Karang Taruna initiated.

Source: (explorerongga, n.d). [https://www.instagram.com/curug\\_malela\\_keren/](https://www.instagram.com/curug_malela_keren/)

Promotional events are the most important thing in ecotourism development. This is especially supported by the presence of developments in digital technology so that promotional events can be accelerated with the presence of social media. This also happened in the development of Malela Waterfall ecotourism carried out by residents

and in collaboration with the relevant government.

Promotion is an important tool in the marketing strategy of every tourist destination, including ecotourism. In this context, promotion plays an important role in increasing the visibility of tourist destinations. In this increasingly digital and connected world, tourists have many choices of destinations they can visit. Therefore, a tourist destination needs to stand out and attract the attention of potential tourists. This is where promotions come into play. An example of promotional content on Instagram is shown in **Figure 5**.



**Figure 5.** Promotional post for Malela Waterfall on Instagram.

Source: (explorerongga, 2021).

Through various promotional tools, both offline and online, tourist destinations can introduce themselves to the public. This can take the form of advertisements on television, radio, or print media, posts on social media, articles and blogs on the internet, or even collaborations with influencers and travel bloggers. Promotion helps tell the story of a tourist destination, highlighting its uniqueness and appeal, as well as the services and facilities on offer. That way, more people will know about the destination. They may be interested in finding out more and ultimately decide to visit.

The promotion also allows tourist destinations to reach a wider audience. With the right promotional strategy, tourist destinations can reach not only local tourists but also tourists from outside the city or even from abroad. However, it is important to remember that promotions must be conducted responsibly and sustainably. The goal is not only to attract as many tourists as possible but also to ensure that these tourists will appreciate and maintain the sustainability of the destination. Therefore, messages about preserving the environment and local culture must always be part of the promotional strategy. Thus, promotion not only helps increase the visibility of tourist destinations but also contributes to the development of ecotourism that is sustainable and beneficial for all parties.

Apart from that, promotional events in ecotourism are important because: first, they increase visibility. Promotion helps increase the visibility of tourist destinations. Through promotions, more people will know about the destination, including its

unique features, attractions and services offered. Thus, more tourists may be interested in visiting. explain further. Second, attract tourists. Effective promotions can attract tourists by conveying the value and unique experiences they can get from visiting the destination. This could include natural beauty, cultural richness, exciting activities and adventures, or opportunities to learn and grow. Third, build a positive image. Promotion can also help build a positive image of a tourist destination. This includes an image as a destination that is tourist-friendly, values sustainability and is committed to providing quality experiences.

In this case, for example, it was experienced by a resident named Ismail. He came to Malela Waterfall through the information he got on social media. He comes from Cianjur, West Java, but even though his house is far from the waterfall location, he can get information about Malela Waterfall from social media. The good information and reviews from residents who had visited there made Ismail want to come and visit. When interviewed by researchers, he explained that technological developments must be utilized to support the promotion of ecotourism everywhere. This can be proof that ecotourism marketed on social media is safe and suitable for tourists to visit. He added that there should be no ecotourism that is bad in the eyes of the public but is still visited and endangers tourists. According to him, “social media helped me decide to visit here. I am happy because there are so many reviews and testimonials about Malela Waterfall on social media, such as Instagram and YouTube. That’s why it’s important to use it for promotional events. The increasing number of visitors to Malela Waterfall can be seen in **Figure 6**. And most importantly, through social media, we can gain a positive image of the tourist attractions we visit.” (Ismail, Traveler, June 2023).



**Figure 6.** Documentation of residents’ visits to Malela Waterfall.

Source: Visitor documentation, 2023.

This is true where the presence of social media, apart from being a promotional medium, will also have an impact on its attraction to potential tourists. The experience of visiting a tourist attraction shared on social media will stimulate other potential

visitors to come and experience the tourist attraction. In line with that, many tourists also do this when they visit Malela Waterfall. They revealed that their experience of being able to get to this tourist attraction was due to reviews and experiences of other people shared on social media. However, strengthening human resources is about more than just education and training. It also involves empowering local communities and increasing their capacity to participate in decision-making and management of ecotourism. This can involve establishing and strengthening local community organizations, establishing networks and partnerships, and developing leadership capacity.

The development of social infrastructure, such as education and training facilities, tourist information centers, and other infrastructure that supports ecotourism activities, is also important in this process. This infrastructure can assist in the provision of services and learning opportunities, as well as facilitate the participation and involvement of local communities. Overall, strengthening human resources in carrying out social service functions in ecotourism management is a complex and ongoing process. This involves efforts to prepare local communities to play an active and effective role in ecotourism management and to ensure that they have the necessary knowledge, skills and resources to do this. In this way, they can contribute significantly to the sustainability and success of ecotourism, as well as receive the economic and social benefits that come from this activity. Apart from that, the existence of collaboration between elements of government, local communities, academics and the media has resulted in the penta helix process as described in the theoretical framework section. This collaboration has formed a bond of solidarity to mutually build each other so that the vision of achieving sustainable ecotourism at Malela Waterfall runs optimally.

#### **4.3. Increasing participation through strengthening social ties**



**Figure 7.** Meeting and training with youth organizations of Cicadas Village.

Source: Personal documentation, 2023.

Strengthening communities such as NGOs and Karang Taruna is also important. This community can function as a platform for the exchange of knowledge and experience, as well as for coordination and collaboration in ecotourism management. NGOs and Karang Taruna play a major role in the development of Malela Waterfall

ecotourism. **Figure 7** shows the training sessions conducted with Cicadas Village youth organizations. This is because, from the planning process, both of them were directly involved in ecotourism, so their role was large. Apart from that, NGOs and Karang Taruna are actors in developing ecotourism based on local community participation, namely: local understanding, public trust, and community involvement.

Considering these reasons, it is very important to involve NGOs and Karang Taruna in ecotourism management. Not only can they help ensure that ecotourism management is sustainable and benefits local communities, but can also contribute significantly to the success and sustainability of ecotourism initiatives. NGOs and Karang Taruna in their role in local understanding regarding the objective situation and conditions of the existence of Malela Waterfall itself. Second, this local institution knows the ins and outs of the social conditions of the community around Malela Waterfall. NGOs and Karang Taruna also play a role in determining the involvement of residents in the development of Malela Waterfall ecotourism. Therefore, these two institutions are the main actors in its management. According to a Karang Taruna activist, “After we received training and provision from the University of Padjadjaran (UNPAD) and the team, we then gathered others and worked on several plans that had been agreed upon. The results are many, including us carrying out massive promotions on social media. We work together with big accounts too, so many tourists are interested” (Asep, chairman of Karang Taruna, June 2023).

NGOs and Karang Taruna often form strong personal relationships with community members. The members of these organizations live in the same community, so they can build close ties with the community, understand the issues they face firsthand, and build trust through personal interactions. This also happened to the Cicadas Village Youth Organization, where they were very close and actively communicated. This profit is utilized so that it can boost the tourism potential of Malela Waterfall. In sociology, personal relationships are known as mechanical social solidarity (Durkheim, 2014). Every member of society has interconnectedness and relationships that strengthen each other. “It is natural for village NGOs and also Karang Taruna to gain the community’s trust, especially in managing the Malela Waterfall, because they are filled with potential young people who are very united and want to advance their region. Based on the training and motivation of the characters, we just need to direct them, and then after that, they move. It proved successful. I really appreciate that they deserve to be trusted as actors of change” (Ahmad Amir, Head of Cicadas Village, May 2023).

Public trust in NGOs and Karang Taruna is usually based on a history of achievements and positive work results. If this organization has succeeded in achieving positive and real changes in society, it will increase public trust in them. Therefore, when NGOs and Karang Taruna have a high level of trust from the community, they can be more effective in implementing programs and projects that benefit the community. Support and active participation from local communities’ help increase the chances of success in achieving desired development and social goals. Although NGOs and Karang Taruna play a major role by being the main actors in ecotourism, they are also supported by the participation of residents in the development of ecotourism. Residents are involved as parking attendants, tour guides, motorbike taxi service providers, food providers, etc.

#### **4.4. Optimizing the environmental sustainability of Malela Waterfall in ecotourism**

Optimizing environmental sustainability in ecotourism, especially in areas such as waterfalls, involves various strategies and actions aimed at protecting the natural environment, promoting conservation, and ensuring that tourism activities do not damage valuable natural resources. The following are several steps taken to optimize environmental sustainability at Malela Waterfall in ecotourism: First is visitor management. Controlling the number of visitors to the waterfall at any given time can help prevent environmental damage and stress on the local ecosystem. This technique can involve a booking system, limiting the number of visitors, or planning visits at certain times. This is also what the managers of Malela Waterfall do. Due to the steep terrain and poor road access, the management does not allow the number of tourists to increase at the same time. According to the Head of Pokdarwis, Unang, he explained that if there are already 100 visitors in the waterfall area, then visitors who enter the area will be detained at post 3 leading to the waterfall. This is done not only for safety reasons but also to preserve the environment around the waterfall. If there are too many visitors at the same time, there is a possibility that the grass, weeds, trees and supporting facilities will quickly become damaged and damage the environment. Therefore, limiting visitors is the solution. Another effort made by the management is the use of timed tickets. Visitors are given tickets with a certain time window for their visit to Malela Waterfall, namely from 08.00 to 14.00 Jakarta Time. This allows for managing visitor flow and preventing too many visitors on-site at the same time. This effort was quite successful because it involved all management elements, especially the agreement of the local community and the government as management support. Another effort is through access restrictions. In some cases, certain parts of a destination may have restricted access to protect fragile ecosystems or during periods of ecosystem recovery. This also happens at Malela Waterfall, where not all access is open to visitors, such as rare plant areas and pine gardens, etc., so that tourists' irresponsible efforts do not pollute them.

The second is environmental education. Providing information and education to visitors about the importance of environmental conservation and how they can help. This could be through information boards, brochures, guided tours, or workshops. In the case of Malela Waterfall, education for visitors is carried out every day by the management team. Education initially focused on the discipline of disposing of waste properly to visitors. Examples of written educational materials used at Malela Waterfall are shown in **Figure 8**. Education is also focused on efforts to keep plants, rocks and water sustainable, that is, not polluted by destructive attitudes toward nature. The management team is usually deployed to continue to pay attention and control visitors so that they do not throw rubbish carelessly.



**Figure 8.** Form of education in written form.

Source: Personal documentation, 2023.

Third is waste management. Ensure there is an effective waste management system in place, such as sufficient rubbish bins, recycling facilities, and environmental clean-up programs. Visitors should be encouraged to pick up their trash and leave the environment in the same or better condition than when they arrived. This waste management effort is carried out by managers and residents for waste produced as a result of tourist visits. The management has provided rubbish bins at various crucial points. Then, the resulting waste is sorted and used. Organic waste is usually processed and used as fertilizer for residents' crops, while inorganic waste is sorted and sold, especially cardboard, plastic bottles and paper, while the rest is burned in the compost that has been provided. This waste management ensures that ecotourism continues to prioritize nature conservation.

Fourth is responsible infrastructure development. Build and maintain infrastructure such as trekking trails and other facilities in a way that minimizes impact on the environment. Materials and construction methods must be selected, taking into account their impact on the environment. The final effort made by managers assisted by researchers is responsible development. The development referred to is the construction of access (roads), supporting facilities and other facilities. All of them were built with environmental sustainability in mind. For example, building roads using old routes so as not to cut down trees. The construction of other facilities also uses environmentally friendly materials such as wood and bamboo. The construction of supporting facilities is also carried out on a small scale rather in accordance with visitor needs.

By taking these steps, ecotourism managers can ensure that Malela Waterfall and its surrounding environment are maintained and can be enjoyed by future generations. This not only helps protect natural beauty and biodiversity but also safeguards the health and well-being of local communities and visitors. Therefore, ecotourism has great potential to provide economic, social and cultural benefits for communities and regions. However, if not managed well, ecotourism can also have negative impacts on the environment, such as habitat damage, pollution and pressure on natural resources.

Various studies have shown that environmental sustainability must be a top priority in ecotourism development. For example, Towner (2018), research states that the reason ecotourism must uphold natural sustainability is because it is for the



preservation of natural resources. Ecotourism relies heavily on the beauty and uniqueness of nature, which is the main attraction for tourists. Preserving natural resources is important to ensure that future generations can also enjoy and appreciate the natural environment.

Furthermore, there is research from Marlina (2020) dan Wahono (2019) that sustainable ecotourism is to reduce the negative impacts of tourism. The negative impacts of tourism, such as environmental damage and pressure on natural resources, can be reduced if ecotourism activities focus on environmental sustainability. For example, by limiting the number of visitors, implementing environmentally friendly practices, and educating tourists about the importance of environmental conservation. It is understood that sustainable ecotourism is an adaptation and mitigation of climate change. Through environmentally friendly activities, ecotourism can contribute to climate change adaptation and mitigation efforts. For example, by protecting and restoring forests, which function as carbon sinks.

For tourists and ecotourism elements, a sustainable tourism environment will increase environmental awareness. Ecotourism can be an effective tool for increasing awareness and understanding of environmental issues. Visitors can learn firsthand about the importance of environmental conservation and how they can contribute. Ecotourism must uphold sustainability because it is for long-term sustainability. By focusing on environmental sustainability, ecotourism can ensure that tourism activities remain viable and sustainable in the long term. This creates long-term value for both local communities and tourists. In conclusion, the various studies above show that environmental sustainability must be a priority in ecotourism development. By prioritizing environmental conservation and environmentally friendly practices, ecotourism can provide long-term benefits for society, the environment and the economy.

#### **4.5. Cross-stakeholder collaboration**

Stakeholders are individuals or entities who have an interest in an organization or project. They can influence or be influenced by the decisions of the organization or project. According to R. Edward Freeman (Freeman, 2010), a stakeholder is “any group or individual who can influence or be influenced by the achievement of organizational goals”. Other experts say that stakeholders are “individuals or groups who have one or more types of relationships, claims, or interests in the company, in what the company does, and in how the company appears” (Weber and Lawrence, 2014). In other words, stakeholders are individuals or groups who have an interest or claim in an organization or project, and the decisions or actions of the organization or project can affect them.

Stakeholders play an important role in various aspects of an organization or project. Here are some of the roles: first, get support and resources. Stakeholders are often important resources, whether in the form of funds, labor, or knowledge. For example, investors provide funds, employees provide labor and expertise, and suppliers provide goods or services. Second, it helps in decision-making. Stakeholders have various perspectives and knowledge that can assist in decision-making. For example, customers can provide feedback about products or services, which can help

organizations improve their offerings. Third, influence on policies and regulations. Some stakeholders, such as governments or advocacy groups, can influence policies and regulations that affect an organization. Fourth, provide legitimacy. Stakeholders can provide legitimacy to an organization or project. For example, approval from the government or local community can help validate an organization's goals or methods.

Effective stakeholder management is critical to the success of an organization or project. This involves identifying stakeholders, understanding their interests and influence, and developing strategies for communicating and collaborating with them. Ecotourism is a form of tourism that focuses on sustainability, conservation, and understanding and appreciating nature and local culture. Stakeholders play an important role in ecotourism (Drake, 1991). The following are several important roles of stakeholders in ecotourism: government, local communities, tourists, tourism entrepreneurs, Non-Governmental Organizations (NGOs), scientific advisors and academics. By considering the interests and perspectives of these various stakeholders, ecotourism can become more sustainable and profitable for all involved.

In developing the management of Malela Waterfall itself, collaboration between stakeholders was carried out. The stakeholder concept used is collaborative stakeholder. The term "collaborative stakeholders" refers to a group of stakeholders who work together in a business or project to achieve a common goal. This cooperation can take various forms, such as sharing resources, sharing knowledge, or coordinating actions (Brandon, 1993). In a business context, collaborative stakeholders can include various entities, such as companies working together on joint projects, companies and their suppliers, companies and their customers, or companies and governments or non-governmental organizations.

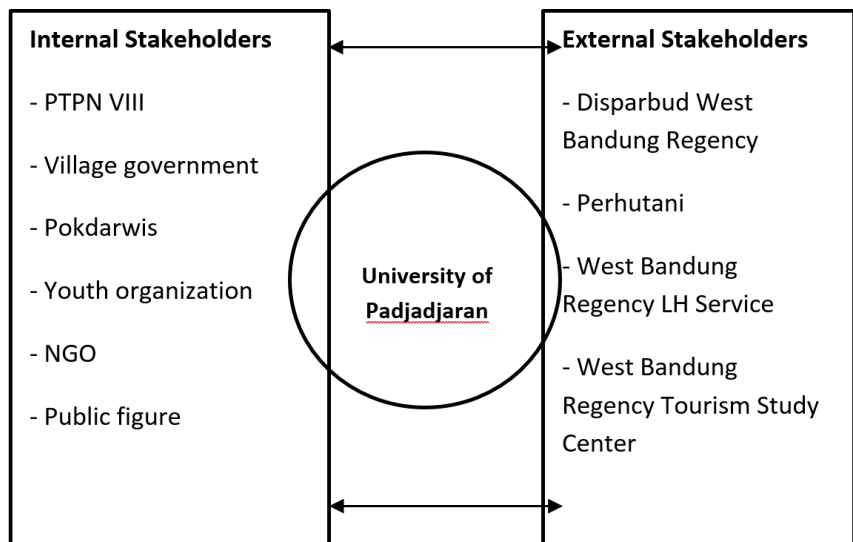


Figure 9. Pattern of cooperation between stakeholders.

The benefits of this collaborative approach include increased efficiency, increased innovation, and increased ability to achieve broader or more complex goals. In addition, collaboration between stakeholders can help build better relationships and increase mutual understanding of the issues and challenges faced (Sukuryadi, 2021). However, collaboration between stakeholders can also pose challenges, such as resolving conflicts between stakeholders, coordinating actions between stakeholders,

and negotiating the distribution of benefits and burdens between stakeholders. Therefore, it is important to carry out effective stakeholder management in projects or collaborative ventures. The pattern of cooperation between stakeholders is illustrated in **Figure 9**.

However, collaboration between stakeholders can also pose challenges, such as resolving conflicts between stakeholders, coordinating actions between stakeholders, and negotiating the distribution of benefits and burdens between stakeholders. Therefore, it is important to carry out effective stakeholder management in projects or collaborative ventures. In internal collaboration, there was nothing other than bringing together all local elements, both government and community, to help develop the ecotourism management of Malela Waterfall. This internal collaboration also involved researchers as part of it. The parties involved are PTPN VIII, which had a tea dispute close to Malela Waterfall. Apart from that, it also involved village government as a key element in ecotourism development. The village was the local government that oversees the needs of all lines of ecotourism. Youth organizations and NGOs were also involved, especially so that these two local institutions became the main actors in ecotourism. Lastly, collaboration also involved community leaders as providers of advice and input in ecotourism development. One of the collaborations developed together was the sustainable ecotourism literacy outreach activity at Malela Waterfall. This activity involved all these elements and also the community. The literacy socialization activities for Malela Waterfall management can be seen in **Figure 10**. The aspect encouraged in this activity provided understanding and training about Malela Waterfall ecotourism management that is sustainable in nature conservation and economically profitable.



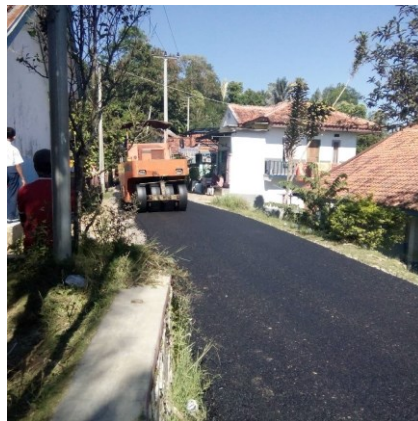
**Figure 10.** Socialization of literacy on the management of Malela Waterfall.

Source: Personal documentation, 2023.

In this activity, researchers introduced Malela Waterfall ecotourism which is safe, comfortable and profitable through the involvement of all parties through a massive managerial and promotional process. Collaboration produces several points, namely as follows:

- 1) Joint agreement to manage Malela Waterfall as best as possible, which still involves all related elements, including local government, regional government, residents, private sector and other elements.
- 2) The management of Malela Waterfall continues to pay attention to environmental sustainability as well as surrounding norms and customs.
- 3) Collaboration to repair and build facilities and infrastructure to support Malela Waterfall ecotourism.
- 4) Collaboration to protect and care for the nature around Malela Waterfall.
- 5) Collaboration creates safe, comfortable and enjoyable Malela Waterfall tourism.

Apart from that, collaboration with the government also helps improve facilities and infrastructure at Malela Waterfall, especially road repairs. Together with the local government of West Bandung Regency and all parties, in early August 2023, the main road to Malela Waterfall was successfully repaired in an effort to increase the presence of tourists who came to the waterfall. The improvements made to the main access road are shown in **Figure 11**. The impact is, of course, an increase in the standard of living of residents in the surrounding areas. Road access is an important point to create safety and comfort for visiting tourists.



**Figure 11.** Improvements to the main road to Malela Waterfall.

Source: Personal documentation, 2023.



**Figure 12.** Promotional brochure for Malela Waterfall.

Source: Cicadas Village Youth Organization Media, 2023.

Collaboration also produces better promotional media than before. Thanks to training and outreach, Karang Taruna members were trained to use digital tools and graphic design applications to create tourist brochures and pamphlets. **Figure 12** presents an example of the promotional brochure created for Malela Waterfall. If the tourist brochures and pamphlets are good then this could be the main reason that attracts tourists to come to Malela Waterfall.

Thus, through this stakeholder collaboration, things that have become the main focus of the development of Malela Waterfall ecotourism have been achieved, such as promotional media, ecotourism literacy, management agreements and even the construction of road infrastructure. If there is no collaboration, then it is likely that these points will not be implemented well. Therefore, collaboration is the main pillar in the development of ecotourism, especially at Malela Waterfall in the future.

#### **4.6. Local residents' participation in ecotourism**

The development of social infrastructure has a significant impact on residents' participation in ecotourism (Warburton, 1999). Social infrastructure includes various facilities and services that support the social and economic life of society, such as education, health, transportation and other public facilities. For example, Costa Rica is a country known as a popular ecotourism destination. Local governments have invested in social infrastructure development, including environmental education in schools, improving health facilities, and building roads and bridges to facilitate access to ecotourism areas (Quesada-Román, 2020). As a result, residents in many communities in Costa Rica now actively participate in the ecotourism industry, either as ecotourism business owners, tour guides, or workers in the industry. This happens because of the existence of good and adequate social infrastructure.

The first impact is increased community involvement. The development of social infrastructure can also encourage community involvement in ecotourism management. For example, in various parts of the world, there is much development of community centers or public spaces that can provide a place for residents to gather, discuss and make joint decisions about managing ecotourism in their area (Garrod et al., 2001; Hill and Gale, 2009; Murphy, 2011). Another impact is that increasing access and mobility, namely through the construction of transportation infrastructure such as roads, bridges and transportation terminals, can help increase residents' access to ecotourism sites and make it easier for them to participate in this industry. For example, with better access to transportation, residents can more easily take tourists to ecotourism sites or send local products to tourist markets. For example, if a village in the interior has great potential for ecotourism because of its natural beauty and unique culture, but it is far from a big city and road access is difficult, it will be difficult for tourists to visit it. In this situation, building adequate roads or bridges can facilitate access and movement between villages and cities so that more tourists can visit the villages.

This also happened to the Malela Waterfall tour. Its location is remote and in a remote area, making access to the location very difficult, plus the road conditions could be better, so initially few tourists were visiting. However, after the road access was repaired and four-wheeled vehicles could enter, the number of tourists slowly started to increase, and even at the end of July 2023, there would be an influx because

the road access had been repaired. This increased access not only benefits tourists but also residents. With better access, residents can more easily act as tourist guides, transport local goods or products to tourist markets, or even start small businesses such as accommodations or restaurants to serve tourists. Many residents are now becoming more innovative in providing various tourist needs due to the existence of these good roads. Thus, the development of transportation infrastructure can help encourage residents' participation in ecotourism and help them exploit the economic potential of this industry.

Another impact of the development of research infrastructure is increased knowledge and skills for residents and tourism managers. The following are some of the impacts of training and education on Malela Waterfall ecotourism: First, environmental conservation. Through training and education, local communities and tourist guides around Malela Waterfall can better understand the importance of environmental conservation. They have been taught about the importance of maintaining the authenticity of nature, limiting the ecological footprint of tourists, as well as efforts to maintain the ecosystem around the waterfall. With a better understanding of conservation, they can become pioneers in protecting the natural environment from damage and degradation.

Second, improving service quality. Through training, tour guides and ecotourism service providers at Malela Waterfall can be given the knowledge and skills to provide better services to tourists. This training can include good communication skills, speaking a foreign language, introducing unique local nature and culture, and adapting to tourists' needs and preferences. Third, local economic empowerment. With training and education, local communities around Malela Waterfall can be empowered to get involved in the ecotourism industry. Skills training such as tourism guidance, culinary arts, handicrafts or culinary businesses can help create jobs and increase the income of residents. Fourth, increasing tourist awareness. Apart from local communities, training and education can also be directed at tourists. Tourists can be given an understanding of ecotourism ethics, the importance of maintaining cleanliness, and how to interact with the environment and local communities by respecting their culture and customs. Fifth, the introduction of tourism potential. With education, local people can better understand the tourism potential of Malela Waterfall. They can learn about how to manage tourism sustainably, identify business opportunities, and utilize natural resources wisely without damaging the environment. With good training and education, ecotourism at Malela Waterfall can develop sustainably, providing benefits to local communities and tourists, as well as preserving nature and local culture. This is also supported by the existence of medium-term planning for ecotourism development.

This impact has been proven to be recognized and felt by residents where the training carried out in Cicadas Village is useful in upgrading the residents' knowledge and skills. For example, in promotions carried out on social media, previous promotions on social media were irregular, not massive and very modest. Meanwhile, after the training process was carried out, residents were better able to design brochures for promotions carried out on social media. Residents who initially couldn't create social media accounts are now able to create their accounts, such as the Instagram account @curug\_malela\_keren. In less than a month, this account has been

followed by more than 1000 followers. This shows that the training that has been carried out has proven to be useful for residents.

## **5. Conclusion**

The community's socioeconomic status is extremely poor, both economically and educationally. As a result, the existence of Malela Waterfall ecotourism significantly improves the lives and economic status of the residents of Cicadas hamlet. This was also observed after the study was undertaken in which inhabitants' level of living gradually improved. Many locals who were not previously involved in Malela Waterfall ecotourism are now working as guides, homestay providers, sellers, culinary suppliers, camp rental providers, and souvenir vendors. All of this has helped make people's lives better. Also, efforts to build social infrastructure in the Malela Waterfall area have been carried out in this research where several things have been done: first, strengthening human resources through training and education; second, increasing participation through strengthening the Cicadas Village Youth Organization; third optimizing environmental sustainability and collaborating with various stakeholders. This infrastructure development effort has proven successful in strengthening the ecotourism development of Malela Waterfall. In addition, efforts to increase local community participation in the Malela Waterfall area have also been carried out through managerial structuring and development of Youth organization as an ecotourism actor, which also involves all elements of the community. Starting from planning to making promotional brochures and arranging road infrastructure as infrastructure so that citizen participation increases. It was inferred that building the management of Malela Waterfall ecotourism through cross-stakeholder collaboration has been carried out through two types of collaboration, namely internal collaboration and external collaboration. Internal collaboration involves residents and related elements in indigenous areas. Meanwhile, external collaboration involves outside elements such as regional government and academics in higher education so as to produce real policies and efforts in developing ecotourism. A concrete example of this collaboration is the process of improving the road to Malela Waterfall as the main access.

This research has shown success regarding community development in the ecotourism environment at Malela Waterfall, Cicadas Village, Rongga District, West Bandung Regency. Its success was carried out through a process of mentoring and training of human resources as well as collaboration of all elements of ecotourism. However, despite the success of this research, it still has shortcomings, namely in terms of external collaboration, where there are no private parties who are willing to collaborate in developing Malela Waterfall ecotourism. If there were private parties involved, perhaps the facilities and infrastructure could be further improved and make it more reassuring for the tourists who come. Therefore, in the future there needs to be collaboration with the private sector in advancing Malela Waterfall ecotourism.

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**Limitation and study forward:** This study is still limited to environmental communication studies. Therefore, studies from other sciences can also enrich studies like this. Likewise, this study is a case study. Comparative studies of various cases so that generalizations can be made are very possible for further studies of the locus of this problem.

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