

# HOW TO DEVELOP ECOTOURISM IN IJEN BANYUWANGI CRATER?

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#### Abstract

Tourism is an important part in supporting the development of social, economic, cultural, and even regional political life. Ijen Crater is listed as the largest crater in the world and one of the tourism industries in Banyuwangi City with high tourism potential in the East Java region, Indonesia. The purpose of this study is to find the right formula to develop ijen crater tourism and maintain nature conservation. The research method uses the AHP (Analytic Hierarchy Process) approach. The results of the analysis obtained that cooperation strategies with stakeholders 0.37%, community empowerment strategies 0.315%, regulatory improvement strategies 0.186% and management management strategies 0.129%. Stakeholder cooperation is an important priority because it is useful to be able to create relationships by building good communication in running the wheels of the ecotourism industry. This study can ultimately be useful for mapping strategies in developing ecotourism in Ijen Crater, Tamansari Village, Banyuwangi, Indonesia.

Keywords: Eco-tourism; Ijen Crater; Banyuwangi

#### INTRODUCTION

Ijen Crater nature tourism is one of the nature conservation areas and is an active basalticandesitic composite volcano located within the Ijen caldera in the eastern region of Java Island, Indonesia (Scher et al., 2013; Spica et al., 2015). Preservation is sought by the installation of 9 permanent seismometers around the crater, making it the most monitored volcano in Indonesia (Spica et al., 2015). This is done to read the signals generated and prevent the eruption of Ijen Crater which is harmful to the surrounding environment (Berlo et al., 2014). Ijen Crater is recorded as the largest crater in the world, the color of the turquoise crater with a very wide depth of 200 m is a tourist attraction (Zen & Wulandari, 2016). Ijen Crater has become a tourist destination that has been built by the Banyuwangi Regency government with the concept of ecotourism (ecotourism) to boost the regional tourism industry sector (Rahayu et al., 2017). In addition, ecotourism in Banyuwangi has great potential because of the geographical conditions adjacent to Bali, so tourists have the opportunity to stop at Ijen Crater.

Ijen Crater Tourism Park is one of the tourism industries in Banyuwangi City with high tourism potential in the East Java region. This is based on the increase in Banyuwangi tourist visits which have continued to increase significantly since 2013. Banyuwangi tourism in 2013 has been visited with a total of 1,068,414 visitors consisting of 1,057,952 domestic visitors and 10,462 foreign visitors. Meanwhile, in 2019, total visitors increased by a total of 5,408,676 consisting of 5,307,054 domestic visitors and 101,622 foreign visitors, in other words there was an increase of 80.2% or 4,340,262 visitors over the last six years (Banyuwangi Regency Government, 2020).

Ecotourism of Ijen Crater has been able to increase the activity of the Banyuwangi tourism industry since 2011 (Fitroh et al., 2017). This significant development occurred because the pattern of ecotourism became one of the fastest growing things in the tourism industry around the world (Jaafar & Maideen, 2012). Globalization encourages regional ecotourism to become more advanced and develop rapidly (Cheng et al., 2017; Wen & Ximing, 2008) Technological advances that cultivate in the community facilitate global access in connecting the ecotourism sector with visitors (Edwards et al., 2017; Shu & Scott, 2014) Ecotourism development in supporting the regional tourism industry requires appropriate steps to prioritize objects based on AHP or Analytic Hierarchy Process (Abdel-Basset et al., 2017; Mu et al., 2017)

Studies on the use of the Analytic Hierarchy Process approach have been carried out, such as the work of Tian, Peng, Zhang, Zhang, & Wang,(2020) which states that the use of AHP and Picture Fuzzy Promethee II Methods has been able to design the tourism environment in detail. The work of Kim et al., (2017) states that there are differences in views based on core competencies between tourism practitioners and academics who have studied the tourism industry through the AHP approach. In addition, Wang et al., (2022) examined the efficiency of tourism management using the AHP model approach and Gray Theory Analysis. It's just that of the many studies on AHP, there has been no study that discusses specifically about AHP to develop community-based regional ecotourism, and is a novelty in this study. The purpose of this study is to find the right formula to develop ijen crater tourism and maintain nature conservation

### METHOD RESEARCH

The research approach uses AHP (Analytic Hierarchy Process). Analytic Hierarchy Process in a broad perspective, becomes an in-depth study that is able to examine the priorities of tourism development strategies, to be able to find the right formulation through evaluative stages so that the data obtained is in the form of scientific and practical data (Su et al., 2017). In this case, the people of Tamansari Village, Banyuwangi have a big share as a community that moves the wheels of industry so that mature steps are needed in taking the priority scale of the Ijen Crater ecotourism development strategy.

Priorities become important as meeting regional needs and even increasing the country's foreign exchange (Goeldner & Ritchie, 2006). This research data was obtained through focus group discussions. There are 9 community representatives in the FGD representatives, namely community leaders, ulama leaders, heads of local MSMEs, heads of tamansari villages, tourism offices, Natural Resources Conservation Center (BKSDA), heads of groups of tourism-aware community organizations, academics, banks (Bank Negara Indonesia). The FGD was conducted in January 2020. People elected to the FGD are those who have positions, have experience in their respective fields and have influence on their regions

## **RESULT AND DISCUSSION**

The results of this study were obtained through a group discussion forum with nine experts who are figures from Tamansari Village. These nine figures were taken based on their respective roles in driving the Ijen Crater ecotourism system, including community figures, religious figures, heads of Village MSMEs, Tamansari Village Heads, Tourism Offices,

BKSDA, Heads of Tourism Awareness Groups, Academics from the Banyuwangi State Polytechnic, and Bank Employees. The nine experts were then given the opportunity to exchange opinions in finding formulations in the development of Ijen Crater ecotourism. The following is the data on the results of the FGD that has been carried out.

The nine exspert agreed that the community-based ecotourism development strategy of Tamansari Village based on the results of data processing from the analysis of AHP (Analytical Hierarchy Processes) was implemented based on 5 (five) criteria and 4 (four) alternatives. The five criteria are (1) Geography, (2) Social and Culture, (3) Infrastructure, (4) Attraction, and (5) Economy, while the four alternatives are (1) Stakeholder cooperation strategy, (2) Management management strategy, (3) Regulatory improvement strategy, and (4) Community empowerment strategy. In the preparation of AHP, there are important points discussed in the FGD, including the following:

Attractiveness is the top priority where it is in line with what was stated by the head of MSMEs in Tamansari Village

"Banyuwangi can be organized in mapping city governance both in the fields of culinary, souvenirs and so on to create attractiveness so that if it is crowded, the economic level of the surrounding community will be better than before, MSMEs also need to play a role so that there is a connection between entrepreneurs and the government in developing ecotourism".

Ahmad Sidik as Chairman of MSMEs in Tamansari Village revealed that attractiveness is a priority so efforts are needed to increase attractiveness such as improving city governance to improve the performance of ecotourism development through visitor attraction. One of the strategies in developing the ecotourism sector can also be through stakeholder cooperation This was also affirmed by the Head of Tamansari Village:

"I will try to make example spots first for the community, I also plan to make policies and governance that are in accordance with the indigenous people of the village".

According to Riza (Head of Tamansari Village), making interesting spots needs to be created, especially to increase the attractiveness of local people to enliven and visit ecotourism objects. Efforts to increase visitor attraction can be done with local marketing or local marketing to the surrounding community in order to have an impressive impact on the attraction to the wider community further. Efforts to increase attractiveness through the development of the tourism sector by creating unique and attractive spots have a positive impact on the existing ecotourism industry sector (Shimada, et al., 2014; Proyrungroj, 2020), especially for Ijen Crater Ecotourism.

Infrastructure development in attracting local communities helps disseminate information about the ecotourism industry of Ijen Crater

"Adequate infrastructure development while making beautiful spots and entertaining spots need to be built to support so that they can invite people to come and travel".

The opinion expressed by Riza as the Head of Tamansari Village is an idea needed to meet one of the criteria that support AHP such as adequate infrastructure development. The development will not only affect the form of tourism, but also on improving the standard of living and benefit of the surrounding community.

"Efforts to raise this sector can encourage the socio-cultural life of the community which is also useful for the benefit of the community in general, as well as the economic standard of living of the surrounding community"

According to Sanusi (community leader of Tamansari Village), the social and cultural conditions of the community will certainly be a consideration in the process of developing Ijen Crater ecotourism where it will become a magnet for visitors. The uniqueness of tradition and productive community conditions can also encourage the realization of ecotourism development. This is also reinforced by the opinion of Hambali as a scholar figure of Tamansari Village who explained that symptoms in the community will become new characteristics that will be able to become tourist attractions, and if Ijen Crater ecotourism becomes a tourist sector that is crowded with visitors can be realized, then the standard of living of the community will increase.

Furthermore, in preparing for progress in the field of ecotourism, financial fundaments are also needed that can support the sustainability of the tourism industry. As stated by Putri Indah Lestari (Bank BNI):

"The economic sector is needed to support the sustainability of the industry, therefore as a working relation, Bank BNI provides convenience with loans with low interest rates to the people of Tamasari Village, one of which can be useful for the development of MSME businesses".

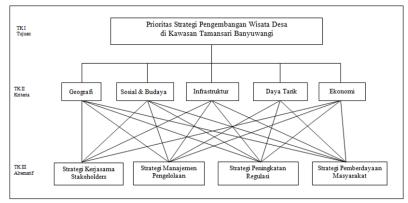
The financial foundation from an economic point of view can be useful to support the running of the Ijen Crater ecotourism industry, where the people of Tamansari Village can freely develop their competence and role in building MSMEs to jointly develop Ijen Crater ecotourism.

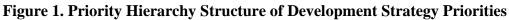
"I suggest that security facilities and other facilities (infrastructure) in tour guide providers, service and beverage providers and souvenir service providers need to be held as often as possible socialization or coaching".

Siti Masruroh as an observer and academician of the Banyuwangi State Polytechnic said that the construction and procurement of supporting facilities was deemed necessary. The procurement of security facilities needs to be improved where there are security standards that need to be applied so as to provide comfort for visitors. Then the need to provide services in building productive resources as well as in producing souvenirs, so that socialization and guidance are needed for the people of Tamansari Village

## **Results of the Analytic Hierarchy Process**

The hierarchical structure of development strategy priorities can be seen in the following figure:



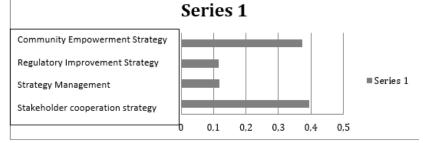


The results of the AHP analysis from experts show that the 'Attractiveness' criterion is a priority criterion to be developed with a Consistency Ratio (CR) = 0.02 (CR < 0.1). The CR value in this analysis is qualified, so it can be concluded that the priority of choice given by experts is consistent and worthy of being used as a reference.

Thus, improving the quality of infrastructure of main and secondary tourist attractions in the Banyuwangi tamansari area that considers social and cultural elements in accordance with the geography in the Banyuwangi tamansari area needs to be improved. With the improvement of infrastructure quality, it is expected to increase tourist visits which has implications for improving the economy of the people of Banyuwangi. The priority of development criteria can be seen in the figure below.

## AHP results based on geography criteria

The priority of development strategy based on geographical criteria shows that 'Stakeholder Cooperation Strategy' is a development strategy priority with Consistency Ratio (CR) = 0.0001 (CR < 0.1). This shows that preference comparisons are consistent. The results of AHP analysis based on geographical criteria can be seen in the figure below:





# AHP results based on social &; cultural criteria

The priority of development strategy based on social & cultural criteria shows that 'Stakeholder Cooperation Strategy' is a development strategy priority with Consistency Ratio (CR) = 0.009 (CR < 0.1). This shows that preference comparisons are consistent. The results of AHP analysis based on social &; cultural criteria can be seen in Figure below

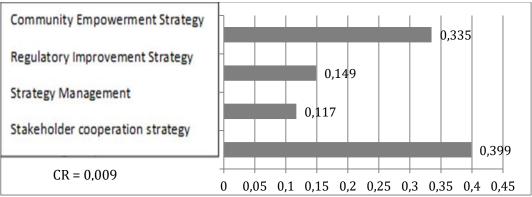


Figure 3. Development Strategy Priorities Based on Social &; Cultural Criteria

# AHP results based on infrastructure criteria

The priority of development strategy based on infrastructure criteria shows that 'Community Empowerment Strategy' is a priority development strategy with Consistency Ratio (CR) = 0.004 (CR < 0.1). This shows that preference comparisons are consistent. The results of the AHP analysis based on infrastructure criteria can be seen in the figure below.

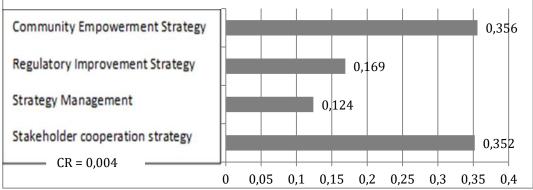


Figure 4. Development Strategy Priorities Based on Infrastructure Criteria

# AHP results based on attractiveness criteria

The priority of the development strategy based on the attractiveness criterion shows that the 'Stakeholder Cooperation Strategy' is a development strategy priority with a Consistency Ratio (CR) = 0.007 (CR < 0.1). This shows that preference comparisons are consistent. The results of AHP analysis based on attractiveness criteria can be seen in Figure below

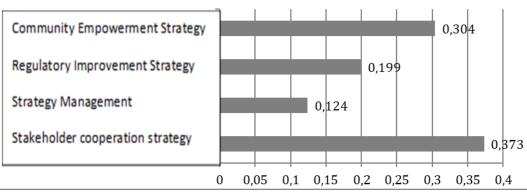


Figure 5. Development Strategy Priorities Based on Attractiveness Criteria

### AHP results based on economic criteria

The priority of development strategy based on economic criteria shows that the 'Stakeholder Cooperation Strategy' is a development strategy priority with a Consistency Ratio (CR) = 0.01 (CR < 0.1). This shows that preference comparisons are consistent. The results of AHP analysis based on economic criteria can be seen in Figure below

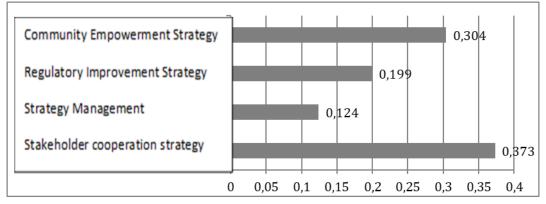


Figure 6. Development Strategy Priorities Based on Economic Criteria

## AHP results based on all criteria

The priority of the development strategy based on all criteria shows that the 'Stakeholder Cooperation Strategy' is a development strategy priority with a Consistency Ratio (CR) = 0.01 (CR < 0.1). This shows that preference comparisons are consistent. The results of AHP analysis based on all criteria can be seen in Figure below

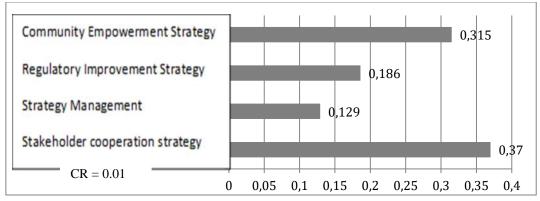


Figure 7. Development Strategy Priorities Based on All Criteria

The results of the AHP analysis based on all criteria in the priority development strategy have been consistent. The comparison of preferences has been consistent and the selection of experts as respondents has been correct. The main purpose of the AHP analysis is to have a functional hierarchy with the main input of human perception, the selection of experts is proven to have the ability to understand the situation faced by the tourism industry in Banyuwangi, the experts also have a comprehensive understanding in comparative assessments related to the development strategy of Tamansari Village Banyuwangi.

The Ijen Crater Ecotourism development strategy triggers cooperation with stakeholders as the first priority. In this case, stakeholders are divided into three groups, namely primary stakeholders, key stakeholders and secondary or supporting stakeholders, each of which plays a role in the development of the ecotourism sector. The role of stakeholders can be in the form of policy determinants, facilitators, coordinators, implementers, facilitators, and accelerators (Nugroho, 2014). As for the reality on the ground, what is meant in this study stakeholders include the government as implementers or policy determinants, the community as implementers of development and development, the private sector and mass media who play a supporting role.

Cooperation of stakeholders is an important part of the ecotourism development strategy of Ijen Crater. Cooperation of stakeholders such as local governments encourages the acceleration of the development of the tourism industry through relationships that give birth to policies to support the ecotourism development system (Koens, et al., 2018; Kuščer &; Mihalič, 2019). The need to build a relationship, stakeholder cooperation that can have a significant impact on the establishment of connectivity to achieve goals (Miočić, et al., 2016), and be able to create relationships by building good communication in running the wheels of the ecotourism industry (Gyrd-Jones &; Kornum, 2013).

### CONCLUSION

Stakeholder cooperation is a priority for community-based ecotourism development strategy in Tamansari Banyuwangi Village, while the other three development strategies can be used as supporting strategies in the development of Tamansari Banyuwangi Village, Although it is a supporting strategy, empowerment is the second priority, this is very appropriate for community-based ecotourism development.

The high expectations of domestic and international tourists to be able to enjoy the beauty of Ijen Crater Natural Tourism with the beauty of its blue fire certainly requires greater stakeholder support to offer a grand design and appropriate and sustainable policies. However, before entering the policy level, the existing condition of Ecotourism will be conveyed with several criteria, namely to improve the economy of the people of Tamansari Village, the need for the development of tourist attractions, pay attention to the socio-culture of the local community, improve infrastructure and geographical conditions of Tamansari Village.

Ecotourism development also needs to consider community empowerment in playing its role as actors and drivers of tourism. Community independence in driving their own tourism in their area, making ideas, and striving to continue to preserve tourism potential that has been going on is a form of empowering rural communities. Community empowerment can be realized through active community participation facilitated by empowering actors and self-motivation from the community itself. The people of Tamansari Village also need to be instilled in self-awareness of the importance of improving their quality in order to maintain the quality performance of the Ijen Crater tourism ecosystem.

The community-based ecotourism development plan in Tamansari Village by utilizing the Ijen Crater Nature Park has great potential to be developed further into the main tourism destination in Banyuwangi Regency, of course, requires thought and support from stakeholders. Tourism development of ijen crater must involve all elements involved. Be it the community, business actors, tourism offices, village governments, security forces. The more parties who work together to build tourism, the easier it is to achieve the goal of making ijen crater tourism the prima donna of tourists. Stakeholder cooperation ultimately becomes the first and foremost priority because each stakeholder still plays their respective roles and if done with good cooperation and consolidation, it will further encourage the development of Ijen Crater Park Ecotourism. The limitations of this research data are based on the results of the FGD. Results of research data processed from experts. In the future it may be conducted research with larger respondents who are in the field. Whether it's tourists or MSME actors.

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