

Feasibility Study Curug Lawe Secepit as Eco-Tourism Destination in Ngesrepbalong Village Kendal Regency

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Abstract:

Ngesrepbalong Village, located in Limbangan District, Kendal Regency, is one of the buffer villages in the Gebugan Gunung Ungaran protected forest and nature reserve (CA) conservation area which is located at an altitude of 600-1200 MDPL with a diversity of ecosystem types and unique landscapes. Until now, a number of natural objects have become a tourist attraction in the village, one of which is Curuglawe Secepit. So that in an effort to develop the area as an ecotourism destination, it is necessary to carry out a feasibility study or feasibility study, both in the inventory of existing tourism objects and in assessing appropriate resources for tourist attractions. Feasibility study research activities on tourism objects in Ngresepbalong Village were carried out by interview surveys and filling out questionnaires by respondents with a total of 204 respondents consisting of Pokdawrwis Gunungsari, Ngresepbalong Village Officials, Community Leaders, MSME Actors, Visitors and the general public. The assessment was carried out on four aspects, namely tourist attraction, accessibility, accommodation and supporting infrastructure. The survey results show that the aspect of tourist attraction is relatively high and the supporting infrastructure for tourism is currently sufficient. Relatively high natural tourist attraction, one of which is uniqueness related to high natural resources such as waterfalls, caves, flora and fauna and various other uniqueness. Meanwhile, for the aspect of accessibility and accommodation, for now it is not so adequate, as for accessibility, it can be seen from the condition of the rocky road/madam to the tourist sites, besides that most of the roads only have a width of about 3 meters. As for the accommodation aspect, it can be seen from the unavailability of adequate lodging within a radius of 15 km from tourist sites, so that these two aspects need to be prioritized to support

the development of ecotourism in Ngresepbalong Village. The assessment of the feasibility level of ecotourism in Ngresepbalong Village shows that the tourism feasibility index produces a value of 85.99 with the category Worth developing, where there are four assessment indicators including aspects of tourist attraction which have medium - high values, accessibility aspects with medium - high values, accommodation aspects with low values. – moderate and aspects of infrastructure with a medium – high score.

Keyword: Eco-tourism, Feasibility Study, Curug Lawe Secepit

1. Introduction:

Ngesrepbalong Village is administratively one of the villages in Limbangan District, Kendal Regency, Central Java. Ngesrepbalong Village, directly adjacent to the natural forest on Mount Ungaran and has a unique landscape so that its biodiversity is quite diverse (Balasubramanian, 2010). Previous research has shown that Mount Ungaran still has biodiversity at the genetic, species, and ecosystem levels (Raharjo, 2010). The results of research on High Conservation Values also show that the Mount Ungaran area has the six criteria set (Dahuri, 2007). This condition makes Ngesrepbalong Village a potential natural tourist destination in Kendal Regency. One of the locations that is currently a tourist destination in Ngesrepbalong Village is Curug Lawe Secepit which is located in Gunungsari Hamlet (Marfai et al., 2016). Curug Lawe Secepit is a waterfall landscape surrounded by protected forests and Perhutani production forests. The unspoiled landscape has a diversity of plants typical of the mountains of Java and is a habitat for several types of fauna. Currently, Curug Lawe Secepit has begun to be known and many visitors have traveled to these attractions. The manager of Secepit Waterfall is Perum Perhutani Kedu Utara together with Pokwarwis (Tourism Awareness Group) Gunungsari Hamlet. The development of this village tourism village is considered appropriate to break the source of the problem that causes pressure on the sustainability of Mount Ungaran's forest. The results of interviews with the Gunungsari Pokdarwis management revealed that tourism management at Curug Lawe Secepit is still being carried out with a mass tourism approach (mass tourism) that has not led to sustainable ecotourism.

At Curug Lawe Secepit tourism objects, there are very few studies related to tourism so that in this study there are not many references related to Curug Lawe Secepit tourism and at this tourist location there has never been an analysis of the level of feasibility. The feasibility of tourist sites will be taken into consideration for managers in developing natural tourism, especially ecotourism (Peng & Dong, 2010). Based on these conditions, it is necessary to conduct a feasibility study or tourism feasibility analysis at the Curug Lawe Secepit tourism object. The data on the results of the feasibility value is very much needed as a basic effort to develop sustainable ecotourism in Ngesrepbalong Village, especially in Curug Lawe Secepit. Sustainable ecotourism or often called conservation ecotourism is a tourism activity that has a responsibility to nature, society, and the surrounding environment (Plaza et al., 2002). Sustainable ecotourism is a concept of developing and implementing tourism activities based on the use of the environment for protection and with the core active participation of the community (Salman & Mohamad, 2020)(Badr, 2022)(Agung & Alit, 2023). The main principles in sustainable ecotourism are: (1) a model of responsible tourism development in unspoiled areas or in areas managed according to natural principles; (2) to enjoy its beauty, it also involves elements of education, understanding and support for natural resource conservation efforts; and (3) having socio-cultural economic functions such as increasing knowledge and income of the surrounding community (Semenuk & Brocx, 2011)(Noor, 2006).

Based on the background and formulation of the problem above, the specific objectives of this study are as follows, (1) Identifying the potential of

ecotourism in Ngesrepsalong Village, especially Curug Lawe Secepit and (2) Analyzing the feasibility of ecotourism in Ngesrepsalong Village, especially Curug Lawe Secepit. This is also related to the vision of UNNES as a UNNES Conservation- minded University, so UNNES must take a role in conservation efforts on Mount Ungaran through education, research, and community service activities. This research is also in line with the UNNES Strategic Plan related to leading conservation research, including protecting, conserving, and utilizing flora, fauna and ecosystems in a sustainable manner.

2. Method:

The method in this study is a combination of direct data collection in the field (Field Research), descriptive, and secondary data. Field research was used to collect quantitative data on the biodiversity of Curug Lawe Secepit using the roaming method and the rapid assessment method (Octavianus, 2020). Descriptive research includes collecting descriptions of words, pictures, and not numbers. While secondary data is more directed at the results of interviews through face- to-face and direct questions and answers between researchers and respondents. In this study, interviews were conducted with three groups of respondents, namely: the community, visitors, and managers of tourist areas. The components that are recorded and assessed according to are:

- a. The 6 points of attraction include natural beauty and uniqueness, the number of prominent natural resources, the integrity of natural resources, comfort, cleanliness and types of natural tourism activities;
- b. The 5th weight of accessibility includes the distance from the city to tourist sites, road conditions, road type and travel time from the city;
- c. Weight 3 of facilities and infrastructure includes supporting infrastructure that is within a 5 km radius from tourist sites.

Objects and tourist attractions are then analyzed according to the criteria of Natural

Tourist Attractions referring to (Mumby, 2005)(Li et al., 2013)(Batubara, 2018). The number of values for one criterion is calculated using the formula: $S = N \times B$

Information:

S = score/value of a criterion

N = the sum of the values of the elements in the criteria B = value weight

Scores were obtained from interviews with respondents using the Linkert scale on each criterion and all scores were added up. Based on the data on the frequency of respondents' answers, the number of scores on each criterion was obtained. Furthermore, categorization is carried out to obtain a criterion score by comparing the frequency score with the total frequency score. The score obtained is then compared with the highest total score of a criterion in order to obtain a feasibility level. The feasibility index of an ecotourism area is as follows.

Tourist Attraction Suitability Index Value :
Criteria score/ Total Criteria score*100%

Criteria:

- a. Feasibility rate > 66.6% : feasible to develop;
- b. Feasibility rate 33.3% - 66.6% : not yet feasible to develop;
- c. Feasibility rate < 33.3% : not feasible to be developed.

3. Result and Discussions:

There are four categories of assessment carried out to identify and analyze the potential and feasibility level of Curug Lawe Sicepit tourist destinations, including an assessment of tourist attraction, accessibility assessment, accommodation assessment and assessment of supporting infrastructure, where each feasibility has a graded weight according to its influence. in the development of ecotourism in Ngresepsalong Village.

3.1 Ecotourism Potential Assessment:

The tourism potential assessment is carried

out to identify and know the ecotourism potential of Ngresepbalong Village, where there are four elements used in the assessment of tourist attraction, including tourist attraction, accessibility, accommodation and supporting infrastructure. The following is a description of the four elements of the assessment of tourism potential at the research site.

a. Tourist Attraction

The first assessment of tourist attraction is related to the uniqueness of natural resources in the region, where the survey results show 72.16% of respondents stated that there are more than 3 unique natural resources that can be developed as ecotourism destinations in the region. Some of the unique natural resources that can be developed as ecotourism destinations include hot springs, caves, waterfalls, flora and fauna as well as various other unique features. The second assessment for the criteria of tourist attraction is related to the sensitivity of natural resources owned, where for this sensitivity is associated with the various values contained in these natural resources. Based on the results, about 35.78% of respondents stated that the natural resources in the area contain about 2 values, namely the value of knowledge and cultural values, where the results of the survey are relatively in accordance with the values contained in the natural resources of ecotourism in the region, namely the knowledge value of various natural resources owned, especially related to biodiversity and cultural/historical values of several buildings that can be developed as tourist destinations such as Japanese Caves.

Furthermore, for the third element related to the variety of natural tourism activities in Ngrespbalong Village, where tourism activities carried out in the area are carried out in the open by utilizing existing natural resources. The survey results showed as many as 51.96% of respondents stated that there are 3-4 natural tourism activities that can be done in the area, including activities to enjoy the scenery, fishing, tracking and camping, besides that there are several other tourist activities that can be done such as swimming in

the waterfall or waterfall. enjoy local products such as coffee and telang tea served at the café around Curug Lawe Sicepit. The fourth assessment is for the assessment of tourist attractions related to the number of prominent natural resources in the area, such as being known to be in the highlands and at the foot of Mount Ungaran, making Ngresepbalong Village a prominent natural resource. Furthermore, for the fifth element of the assessment of tourist attractions related to the cleanliness of the location and its influence from the surrounding environment, being in a highland area with environmental conditions that are still maintained and has high quality makes the Ngresepbalong Village area should be maintained so that the environment is not polluted by maintaining clean air. cool, natural resources and clean environment. Based on the survey results, the majority of respondents (58.33%) stated that the cleanliness of tourist sites was still maintained from the influence of industry, busy roads, residential areas, garbage, vandalism and other pollution, which of course must be maintained so that natural resources in the area are protected. the area will continue to be maintained and not degraded.

The sixth assessment for tourist attractions is related to security around tourist sites, where this security is important to ensure the safety of visitors to tourist attractions in the area. Based on the survey results, about 60.78% of respondents stated that the Ngresepbalong Village area has a high and very high level of security, which is certainly very supportive in the development of tourism objects in the area. Several indicators reflect that the level of security in the area is high, such as the absence of dangerous currents, the absence of illegal logging and encroachment in the forest area, the absence of theft, the absence of trust from the community that interferes with tourism development and the area is relatively free from disease.

Furthermore, the assessment of the last element for tourist attraction is related to the level of comfort in Ngresepbalong Village, especially

around tourist sites, where geographically the area is in the highlands with still dominated by high vegetation cover and far from industrial and trade activities making the Ngresepbalong Village area has a high level of comfort. This can be seen from the survey results as many as 67.16% of respondents stated that the level of comfort in the area is relatively good, several indicators that indicate comfort in the area are good, including the area has cool air, free from disturbing odors, and the absence of public traffic. disturbing, free of noise and air pollution.

b. Accessibility

Accessibility assessment is used to determine the ease with which the tourist attraction is affordable by visitors, so that with easy access makes the tourist location easy for tourists to visit. The location of the tourist destination in Ngresepbalong Village is indeed in a highland area with a fairly uphill road to the location due to the difference in land slope,

especially the area is at the foot of Mount Ungaran with an altitude of about 845 MDPL so it takes more time and energy to be able to access to the area. that location. In general, there are three elements used to assess the accessibility of tourist sites, including road conditions, road types and travel time from the city center.

The first element assessment is related to the condition of the road to the tourist location, where for this condition it is classified based on the distance to the tourist attraction every 5 km radius. In general, the condition of the roads to tourist attractions within a distance of 5 km is relatively good, for roads within a radius of 5 it is already in the form of asphalt and concrete roads, although there are still stone and macadam roads. Furthermore, roads within a radius of 10-15 km have relatively moderate conditions, especially if accessed via Limbangan whose roads are not very good but still in the form of stone roads. As for the road conditions at 10-15 km and above 15 km, the condition is quite good.

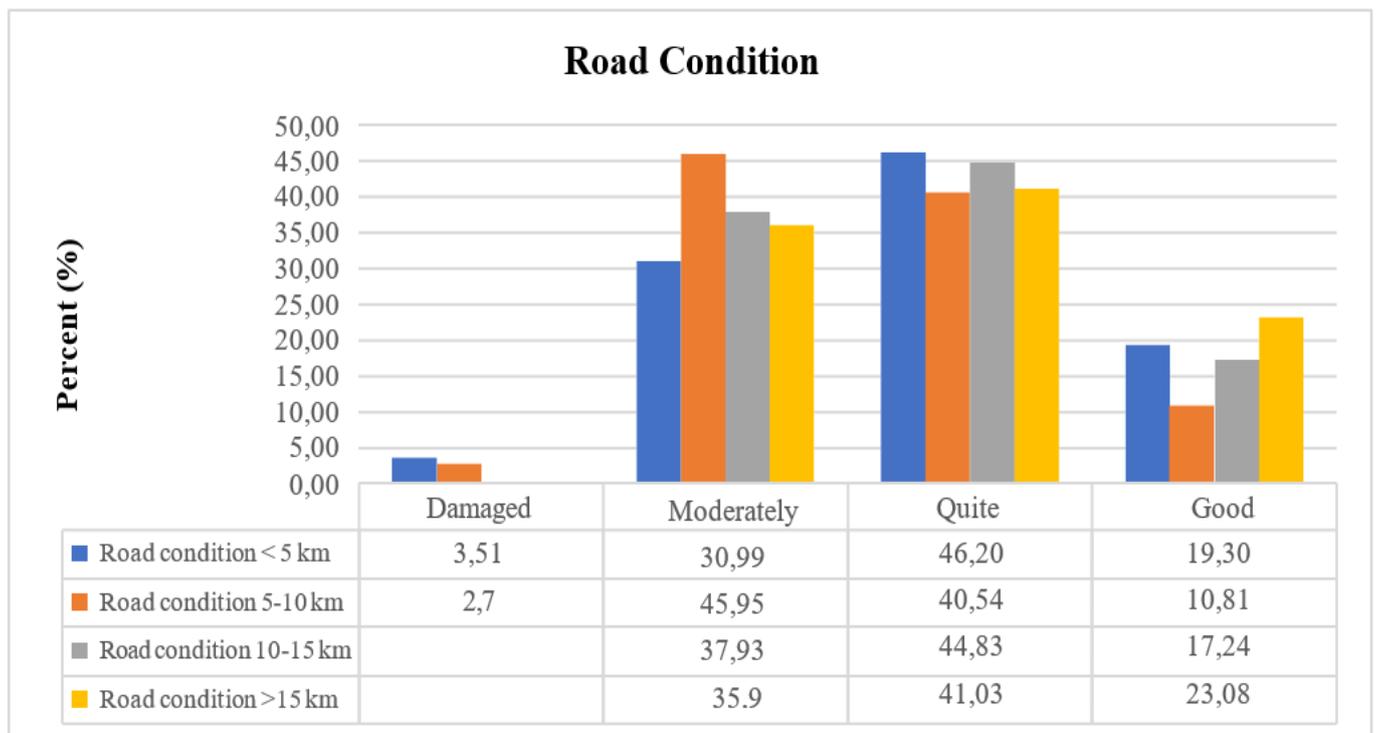


Figure 1. Graph of Community Perception regarding Road Conditions around Tourist Sites

Furthermore, for the assessment of the second element of the accessibility assessment related to the type of road used to access tourist

sites, where this type of road is important to determine the ease of access to tourist sites. Based on the results of the survey, most respondents

(47.55%) stated that the type of road to get to tourist sites was still in the form of stone and macadam roads, this of course made access to get to tourist sites relatively difficult to reach. The assessment of the third element for the assessment of accessibility related to travel time from the city center, which for the city center includes Kendal Regency, Semarang City and Semarang Regency, this is because Ngresepbalong Village is in the middle of the three areas so that visitors are expected to come not only from Kendal Regency is only the existence of its administrative area, but also from Semarang City and Semarang Regency. Based on the survey results, most respondents (86.27%) stated that the travel time from the city center was relatively good, where tourist sites could be accessed in 1-2 hours.

c. Accommodation

The accommodation assessment is carried out to determine the availability of lodging facilities in the tourist area, where accommodation is one that is indispensable in the development of tourism in an area to provide lodging facilities to visitors. There are two elements in the accommodation assessment, namely the availability of lodging and the number of lodging rooms. The assessment of the first element is related to the availability of lodging, where the availability of this accommodation is rated from a maximum radius of 15 km from tourist sites, the survey results show that most respondents (66.67%) state that the availability of accommodation is still low. There are currently no accommodations around tourist sites, because some of the visitors who come are local tourists whose homes are not too far from tourist sites so they don't need to stay overnight. The availability of the closest accommodation can be accessed to the Unnes Campus and Semarang City with the availability of home stays and hotels even though the distance is more than 15 km from tourist sites. Furthermore, the second element of accommodation assessment is related to the number of lodging rooms, based on the results of the previous data survey which stated that the

availability of lodging around tourist sites was still low, of course it also correlated with the number of available rooms which were still very lacking.

d. Supporting Infrastructure

Supporting facilities and infrastructure are elements that complement and support tourism activities, where the availability of these facilities will facilitate tourism activities in the region. There are two elements used to assess the supporting infrastructure, including the availability of supporting infrastructure and the availability of supporting facilities. The first assessment is related to the availability of supporting infrastructure, where this availability is assessed from a radius of 10 km from the tourist attraction. The survey results showed that 65.19% of respondents stated that supporting infrastructure was available and very available, several tourism supporting infrastructures in Ngresepbalong Village such as the electricity network, health facilities (Puskesmas), communication networks, post offices, clean water/drinking water and several supporting infrastructures. other. So for now the available supporting infrastructure is relatively good to support tourism development in that location. Furthermore, the second element of the assessment of supporting infrastructure is related to the availability of supporting facilities, where for this availability is also assessed in radius 10 km from the tourist location. Based on the results of the survey, 51.96% of respondents stated that the supporting facilities were already available and very available. Some of the supporting facilities for tourism activities in Ngresepbalong Village include restaurants, shopping centers, markets, banks, shops, souvenir shops, public transportation and several other supporting facilities. The availability of these supporting facilities is certainly an added value for efforts to develop ecotourism in Ngresepbalong Village.

3.2 Ecotourism Feasibility Assessment:

The assessment of the feasibility level of ecotourism in Ngresepbalong Village is carried out by referring to the parameters of

attractiveness, accessibility, accommodation and availability of facilities and infrastructure. Based on the results of the assessment, it is known that the tourism object feasibility index with a score of

85.99, which is in the category of worthy of development. The following table shows the results of the ecotourism feasibility assessment of Ngesrepbalong Village.

Table 1. Ecotourism Feasibility Assessment of Ngesrepbalong Village

No	Parameters/Criteria	Frequency Score	Criteria Score
1	Attractiveness		
	The Uniqueness of Natural Resources	663	3
	Natural Resource Sensitivity	512	2
	Variety of Nature Tourism Activities	551	2
	Potential Natural Resources	769	3
	Location cleanliness	539	3
	Security Level	754	3
	Comfort Level	693	3
	Total Score		19
	Total Score * Weight (6)		114
2	Accessibility		
	Road Conditions	564.69	3
	Road Type	448	2
	Travel Time from City Center	781	3
	Total Score		8
	Total Score * Weight (5)		40
3	Accommodation		
	Number of lodging rooms	333	1
	Availability of lodging	381	2
	Total Score		3
	Total Score * Weight (3)		9
4	Availability of facilities and infrastructure		
	Ketersediaan Sarana Penunjang	516	2
	Availability of Supporting Facilities	768	3
	Total Score		5
	Total Score*Weight (3)		15
	Total Score		178
	Total Score Criteria		207
	Tourism Object Eligibility Index		85.99

Source: Analysis, 2025

Based on the table above, the aspect of tourist attraction is classified in the medium to high category, with a score of 2-3 criteria. In general, all criteria are in the high category, except for the criteria for sensitivity to natural resources and the variety of natural tourism activities which are in the medium category. This is a limiting factor in the aspect of tourist attraction. In the aspect of accessibility, it is known that the score of the criteria ranges from moderate to high,

where the criteria for road conditions and travel time from the city center are in the high category. Meanwhile, the road type criteria only get a moderate value. This is because some access roads are still in the form of soil and macadam stones, so they have not been supported for the convenience of visitors.

In the aspect of accommodation, the criteria for the number of rooms and the availability of lodging are classified in the low and medium

categories, respectively. This condition is a concern of visitors, community managers and government agencies who are respondents in this study. On the other hand, it can also be interpreted that visitors have an interest in the existence of lodging to support their activities in the tourist area. In the aspect of the availability of facilities and infrastructure, the criteria for the availability of supporting facilities and the availability of supporting infrastructure are scored 2 and 3, respectively, or in the medium and high categories. This shows that the ODTW of Curug Lawe Sicepit has been able to provide facilities and infrastructure to support tourism activities. The potential location of ODTW which is close to the center of the sub-district city, where several supporting facilities are available is one of the factors. On the other hand, the manager of Curug Lawe Sicepit has also been able to provide supporting facilities and infrastructure for the basic needs of visitors, including cafeterias, toilets, information boards, homestays, camping ground and parking services.

4. Conclusion:

An assessment of the ecotourism potential of Ngresepbalong Village shows that indicators of natural tourism attractiveness are relatively high, one of which is uniqueness related to high natural resources such as waterfalls, caves, flora and fauna and various other uniqueness. Meanwhile, other indicators such as accessibility, accommodation and supporting infrastructure are in the medium category which still requires development. The results of the assessment of the feasibility level of ecotourism in Ngresepbalong Village show that the tourism feasibility index produces a value of 85.99 with the category Worth developing, where there are four assessment indicators including aspects of tourist attraction which have medium - high values, accessibility aspects with medium - high values, accommodation aspects with moderate values. low - medium and the aspect of infrastructure facilities with a medium - high value.

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