

Infrastructure Development to Support Tourist Attractions in Citeureup District (Case Study: Hambalang Village and Tajur Village)

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ABSTRACT

Keywords: infrastructure; tourist attraction; importance-performance analysis (IPA) matrix.

The supporting infrastructure for tourism in Hambalang Village and Tajur Village is still inadequate. This is evident from the lack of adequate tourist facilities and infrastructure, such as roads, parking lots, toilets, and other public facilities. The objectives of this research are: (1) To identify the distribution of tourist attractions and their potential to become prominent tourist destinations in Hambalang Village and Tajur Village, Citeureup District, and (2) To determine the needs for supporting tourism infrastructure in Hambalang Village and Tajur Village, Citeureup District. This research uses Likert data analysis techniques, descriptive analysis, and the Miz method to achieve these objectives. The research results show that tourist attractions in Hambalang and Tajur Villages have the highest potential for natural physical tourist attractions, with Agrowisata Via Hambalang (2.25) ranking the highest. Based on the potential for artificial physical attractions, the highest scores are 129 Resto & Coffee (2.53). The infrastructure prioritized for development in Hambalang Village based on the IPA analysis results are (1) Signposts or directions, (2) Gazebos (shelters), and (3) Individual/family seating areas. Meanwhile, the infrastructure prioritized for development in Tajur Village based on the IPA analysis results are (1) Provision of road networks, (2) Signposts or directions, (3) Eating paces, (4) Provision of electricity networks, (5) Provision of clean water networks, and (6) Provision of telecommunication networks. With the right infrastructure development, the tourism potential in Hambalang and Tajur Villages can be optimized, thus attracting more tourists and boosting the local economy.



Introduction

Tourism development is an effort to increase added value in the field of tourism, starting from facilities and infrastructure, tourist attraction objects, to other aspects related to tourism (Pratama & Mandaasari, 2020). Therefore, the development of tourism

infrastructure is indispensable for economic development. The main key to creating an area with a good tourism industry is the realization of visitor comfort (Vuković, 2022).

Infrastructure development is one of the important aspects to accelerate the national development process. According to the Regional Spatial Plan (RTRW) of West Java Province for 2022-2042, the development of tourism infrastructure in West Java Province is focused on 3 (three) main things, namely: improving regional connectivity, developing superior tourist areas, and improving the quality of tourism services (Darussalam et al., 2021). Based on West Java statistical data in 2023 figures, Bogor Regency is ranked first in the potential for tourist attractions and attractions with a total of 41 tourist attractions (Aminah, 2017).

In the Bogor Regency Tourism Development Master Plan for 2020 – 2025, Citeureup District is included in the Regional Tourism Strategic Area (KSPD) Sentul - Cibinong and its surroundings, with the theme of Sports Tourism (Sport) - MICE and the theme of supporting urban recreation (Azkadinitra & Koswara, 2020). The direction for the development of KSPD Sentul–Cibinong as a recreational and urban tourism area, shopping, culinary, and other tourism is by the potential of the region. The potential possessed by the Citeureup District, especially Hambalang Village and Tajur Village, is an opportunity for the development of tourist areas (Astami & Erli, 2015).

The tourism support infrastructure in Hambalang Village and Tajur Village is still inadequate. This can be seen from the lack of adequate tourist facilities and infrastructure, such as roads, parking lots, toilets, and other public facilities (Suswita et al., 2020). Based on the problems that the tourism sector has, especially in the Hambalang Village and Tajur Village areas, it is necessary to develop tourist areas that support adequate infrastructure, the development covers all tourist attractions in Hambalang Village and Tajur Village, Citeureup District so that it becomes a mainstay tourist attraction, especially in terms of income (Kartika & Wahyono, 2019).

Method

Location and Time of Research

This research was carried out from January 2024 to July 2024 in Hambalang Village and Tajur Village, Citeureup District, Bogor Regency which is astronomically located at the coordinates of 6°10' - 6°20' South Latitude 106°40' - 106°50' East Longitude.

The materials used in this study include raster data in the form of SPOT images for the 2021 recording year, mode elevation (DEM) data, and digital data of the Bogor Regency RTRW. The tools used in data collection in this study include Quantum GIS 3.16 software.

Data Collection Methods

The data collection method is carried out by collecting primary and secondary data, namely conducting literature studies from the publication of statistical data by the Central Statistics Agency (BPS), planning documents published by the Bogor Regency Government, and other literature sources relevant to the research topic, while the primary

data collection method is carried out by field observation, questionnaire distribution, interviews, photos, plotting, as well as direct visual observation.

Data Analysis Techniques

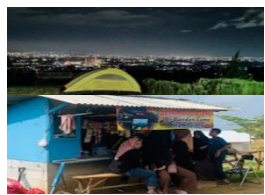


The analysis methods described in this study are adjusted to the research objectives to be achieved, including (1) knowing the distribution of tourist attractions and their attractions that have the potential to become leading tourist attractions in Hambalang Village and Tajur Village, Citeureup District. (2) Knowing the needs of tourism supporting infrastructure in Hambalang Village and Tajur Village, Citeureup District.






Results and Discussion

Natural Tourism Attractions

Hambalang Village is naturally known to have the characteristics of being surrounded by green forests and hills that offer stunning natural scenery, with the expanse of Bogor City and Mount Gede Pangrango in the distance (Santoso et al., 2021)v. Tajur Village naturally has the characteristics of beautiful mountain scenery. The distribution of natural tourism attractions in Hambalang Village and Tajur Village is presented in more detail in Table 1 and Figure 2.

Table 1
Natural Tourism Attractions of Hambalang Village and Tajur Village

Sights	Information	Documentation
Garden Camp Hambalang	<p>Something to see: Garden Camp Hambalang Offers a view of the expanse of Bogor city.</p> <p>Something to do: Garden Camp Hambalang has a large and cool camping area, surrounded by pine trees. Visitors can bring their tents or rent tents provided by the management.</p> <p>Something to buy: Tourists of Garden Camp Hambalang can buy food at the stalls in the camping area, so tourists don't have to worry when they don't bring cooking utensils and food when camping.</p>	
Agrotourism Via Hambalang	<p>Something to see: Hambalang Agrotourism is an educational and recreational tourist attraction located in Hambalang Village, Citeureup District, Bogor Regency, West Java.</p> <p>Something to do: This place offers a variety of interesting activities and rides for visitors, such as camping, gardening, fishing, swimming, flying fox, and outbound.</p> <p>Something to buy: tourists can order food (catering) provided by the management.</p>	
Hambalang Peak	<p>Something to see: Hambalang Hill Peak is one of the popular natural attractions in Hambalang Village, this place offers beautiful natural scenery and cool air.</p> <p>Something to do: Enjoy the natural scenery, camping, and biking.</p>	





Sights	Information	Documentation
Pasir Gadung Waterfall	<p>Something to see: The sand grading waterfall is still natural because it has not been exposed by many tourists, this waterfall is surrounded by shady trees and greenery. The natural scenery around the waterfall is very beautiful and soothing to the eyes, making visitors feel relaxed and peaceful.</p> <p>Something to do: enjoy the natural scenery, play in the water, and take pictures.</p>	
Arioka Earth	<p>Something to see: Bumi Arioka Hambalang has amazing natural scenery surrounded by beautiful mountains, cool and fresh air, friendly and comfortable atmosphere for families.</p> <p>Something to do: The resort offers a natural scenery with a friendly and comfortable atmosphere for families (playground, children's pool, and playroom), other activities for tourists can be hiking, trekking, cycling, fishing, swimming, ATV, yoga, spa, culinary and horseback riding.</p>	
Goa Ciken listens Tajur	<p>Something to see: tourists can see stalagmites, stalactites, flowstones, columns, and a wide variety of other reliefs that have formed naturally over millions of years. Inside the cave, several streams of water taste from natural springs.</p> <p>Something to do: Tourists can feel the freshness of the cave water and listen to the sound of flowing water, explore the cave accompanied by a guide, do tubing in the cave water flow, and take photos of the beauty of the cave ornaments.</p>	
Keraton Tajur Cave	<p>Something to see: tourists can see stalagmites, stalactites, flowstones, columns, and a wide variety of other reliefs that have formed naturally over millions of years. Inside the cave, several streams of water taste from natural springs.</p> <p>Something to do: Tourists can feel the freshness of the cave water and listen to the sound of flowing water, explore the cave accompanied by a guide, do tubing in the cave water flow, and take photos of the beauty of the cave ornaments.</p>	
Curug Leuwiboang Tajur	<p>Something to see: Leuwiboang Waterfall has beautiful natural scenery, is surrounded by hills, and is located right on the edge of the river.</p> <p>Something to do: Tourists can enjoy the beauty of the surrounding nature, fishing, playing in the water, swimming, or relaxing.</p>	

Artificial Tourism Attractions


Artificial tourist attractions owned by Hambalang Village and Tajur Village are the tourist attractions that invite many tourists. The attraction of artificial tourism is considered unique and is an added value for the economic improvement of the tourism sector in

Hambalang Village and Tajur Village, Citeureup District. The distribution of artificial tourist attractions in Hambalang Village and Tajur Village is presented in more detail in Table 2 and Figure 2.

Table 2
Artificial Tourism Attractions in Hambalang Village and Tajur Village

Sights	Information	Documentation
Fathan Park	<p>Something to see: Taman Fathan Hambalang is surrounded by a beautiful natural panorama, including green mountains, beautiful valleys, and refreshing fresh air. Visitors can enjoy this natural view from various corners of the park.</p> <p>Something to do: Taman Fathan Hambalang has many Instagramable photo spots. Visitors can take photos with the background of beautiful natural scenery and the expanse of Bogor city.</p> <p>Something to buy: Visitors can buy food and drinks at several food stalls and cafes in the park.</p>	
129 Resto & Coffee	<p>Something to see: 129 Resto & Coffee offers a relaxed atmosphere with beautiful natural scenery and has a terrace overlooking the beautiful green mountains and valleys.</p> <p>Something to do: Visitors can enjoy the cool and refreshing natural atmosphere while dining. For children, there is a swimming pool. Visitors can enjoy a wide variety of menus, ranging from heavy meals to snacks. The natural scenery and aesthetic atmosphere of the restaurant are interesting photo spots.</p> <p>Something to buy: Visitors can buy food and drinks</p>	
Akasha Hambalang	<p>Something to see: Akasha Hambalang is a luxury resort located in Hambalang, Bogor, West Java. The resort offers a classy stay, and a pampering spa, and is surrounded by the natural beauty of the mountains. This resort is affected by its luxurious and elegant interior design.</p> <p>Something to do: Tourists can dine at the Restaurant, and can enjoy spa treatments,</p> <p>Something to buy: Visitors can purchase the restaurant's food and beverages available</p>	
Tiamo Cafe & Resto	<p>Something to see: Tiamo Cafe & Resto has an attraction in the form of charming natural scenery. You can enjoy the beautiful expanse of green trees and mountains, especially if you choose to sit in the outdoor area. The design of the 2-story industrial building is combined with bright colors, so as to create a contemporary and comfortable atmosphere.</p>	

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Sights	Information	Documentation
	<p>Something to do: Tourists can dine casually. The cozy atmosphere and beautiful scenery are suitable for relaxing and chatting with the people closest to you. The natural scenery and interesting atmosphere of the café make this place a potential photo spot.</p> <p>Something to buy: Visitors can purchase the restaurant's food and beverages available</p>	
<p>Cikondang Swimming Pool</p>	<p>Something to see: Cikondang Swimming Pool is surrounded by a beautiful natural panorama, including green mountains, beautiful valleys, and refreshing fresh air. Visitors can enjoy this natural view from various corners of the pool.</p> <p>Something to do: Tourists can swim freely and enjoy the freshness of the pool water. There is a children's playground equipped with a variety of games, such as swings, slides, and seesaws. Visitors can bring their food and drinks to have a picnic in the available park area. Cikondang Swimming Pool provides seating and a gazebo that can be used to relax and enjoy the natural atmosphere.</p> <p>Something to buy: Food stalls and cafes are selling a wide variety of food and drinks. You can buy swimming equipment, such as swimsuits, towels, and hats at the shop available in the pool area.</p>	

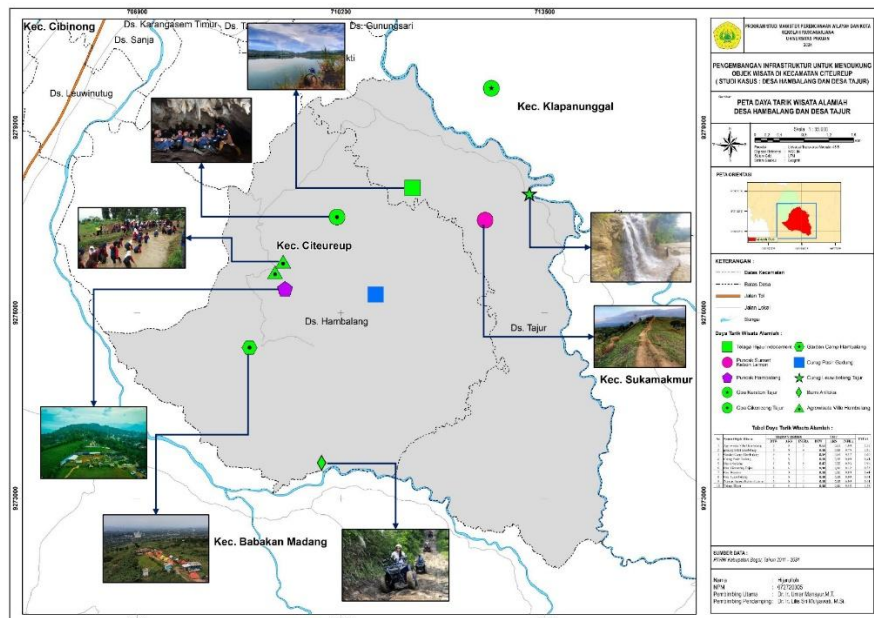


Figure 1
Map of Natural Tourism Attractions of Hambalang Village and Tajur Village

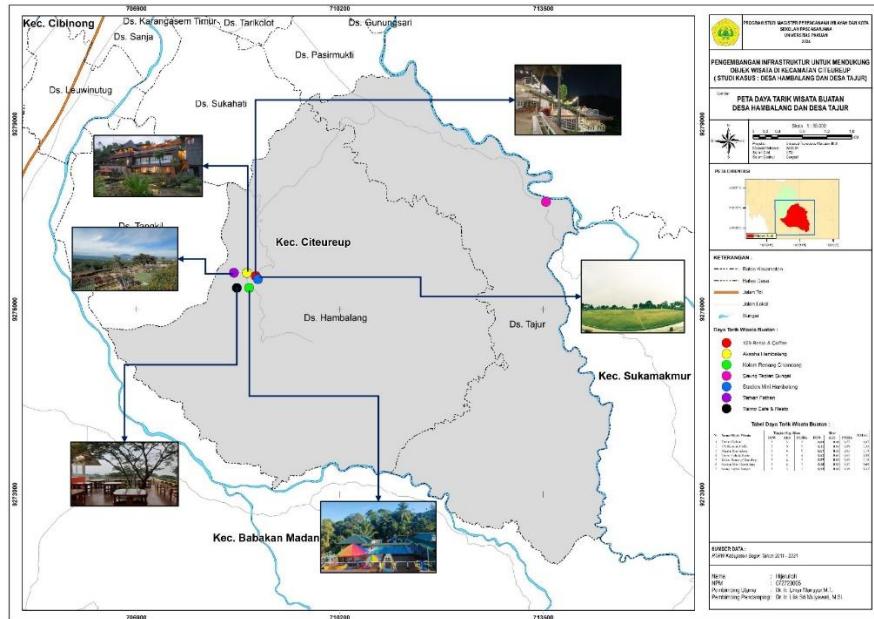


Figure 2
Map of Artificial Tourism Attractions in Hambalang Village and Tajur Village

Physical Potential

Physical potential can be known by performing weighting techniques. The characteristics of the elements assessed will be determined by their ranking so that a class is obtained for each physical factor of the object of research. For the calculation of physical potential, the weight is determined based on the number of variables (Dione, 2017). The variables assessed are tourist attractions, accessibility, and facilities. The assessment criteria based on the physical variables of scoring are carried out by giving a relative score of 1 to 5. Score 1 when the potential factor value is very weak, score 2 when the potential factor is weak, score 3 when the potential factor is moderate, score 4 when the potential factor is strong, and score 5 when the potential factor is very strong. For more details on the potential physical factors, please see Table 3 and Table 4.

Table 3
Scoring Results of Assessment Criteria Based on Physical Potential of Natural Attraction

No	Tourist Attraction Name	Total
1	Agrotourism Via Hambalang	2.25
2	Hambalang Hill Peak	1.91
3	Garden Camp Hambalang	1.60
4	Pasir Gadung Waterfall	0.44
5	Arioka Earth	1.98
6	Goa Ciken listens Tajur	0.72

Table 4
Scoring Results of Assessment Criteria Based on Physical Potential of Artificial Attraction

No	Tourist Attraction Name	Total
1	Fathan Park	1.87
2	129 Resto & Coffe	2.53
3	Akasha Hambalang	2.19
4	Tiamo Café & Resto	1.88
5	Cikondang Swimming Pool	2.19
6	Hambalang Mini Stadium	1.09

7	Palace Cave	0.44	7	River Banks Saung	1.32
8	Goa Euwiboang	0.44			
9	The Peak of the Kebon Lemon Sunset	0.44			
10	Green Lake	1.38			

Based on Table 3. and Table 4, it can be seen that all tourist attractions in Hambalang and Tajur Villages based on the physical potential of the highest total natural tourism attractions are in Via Hambalang Agrotourism (2.25), Bumi Arioka (1.98), and Puncak Bukit Hambalang (1.91). Based on the physical potential of artificial attractions, the highest total is in 129 Resto & Coffe (2.53), Akasha Hambalang, and Cikondang Swimming Pool (2.19). This is because all tourist attractions have been well developed and show that each tourist attraction has a uniqueness that is rarely found in other places and there is a diversity of supporting attractions in addition to being able to attract tourists to visit (Fajriah & Mussadun, 2014).

Knowing the Needs of Tourism Supporting Infrastructure in Hambalang Village and Tajur Village, Citeureup District

After conducting a primary survey using the observation method, it is known that several types of infrastructure and their conditions are available and not yet available in Hambalang and Tajur Villages. Furthermore, an analysis was carried out using SPSS software with IPA (Importance Performance Analysis) tools. This analysis aims to find the value of the gap between the level of performance and the level of importance, as well as divide each infrastructure into 4 priority quadrants. (1) Quadrant I, Infrastructure that must exist and needs to be developed (focus effort), (2) Quadrant II, Infrastructure that needs to improve maintenance performance, (3) Quadrant III, Infrastructure that is not urgent to be developed (medium-low priority), (4) Quadrant IV, Infrastructure that does not need to be developed (possible over-kill). For more details, it is presented in **Table 5**.

Table 5
C-line

No	Variable	Hambalang Village		Tajur Village	
		I	P	I	P
1	Provision of road network	3.67	0.28	4.33	4.33
2	Mode of transportation	1.00	0.40	2.33	3.67
3	Marking or directions	3.67	0.12	1.00	3.67
4	Transport terminals	1.00	0.12	1.00	1.67
5	Provision of information center / TIC (<i>tourism Information center</i>)	1.00	0.18	1.00	3.67
6	Provision of centralized parking lots	3.00	0.20	1.00	3.67
7	Provision of offices/security posts	1.67	0.18	1.00	3.67
8	Provision of health posts	1.00	0.18	1.00	3.00
9	Provision of evacuation points	1.00	0.18	1.00	3.67
10	Provision of toilets/toilets	3.67	0.20	1.00	4.33
11	Where to eat	4.33	0.20	3.00	4.33

No	Variable	Hambalang Village		Tajur Village	
		I	P	I	P
12	Souvenir/souvenir center	1.00	0.09	1.00	1.00
13	Provision of power grid	4.33	0.28	3.67	4.33
14	Provision of clean water networks	4.33	0.28	3.67	4.33
15	Provision of telecommunication networks	4.33	0.28	3.67	4.33
16	Provision of centralized waste shelters	1.00	0.12	1.00	3.67
17	Provision of lodging facilities	3.00	0.21	1.00	2.33
18	Gazebo (<i>shelter</i>)	3.67	0.04	1.00	1.67
19	Individual/family seating	3.67	0.16	2.33	2.33
Sum		50.33	3.73	35.00	63.67
C-line		2.65	0.20	1.84	3.35

From the results of the C-line analysis, it can be concluded that the highest gap in Hambalang Village is found in the variables of feeding places, the provision of electricity networks, the provision of clean water networks, and the provision of telecommunication networks (3.44), and the very low-performance level (1.12), namely the variables of marking or direction, transportation terminals, and the provision of garbage dumps. The highest gap in Tajur Village is found in the road network variable (4.33), while the variable that has a low gap is found in the central variable of souvenirs/*souvenirs* (1). After knowing the value of the gap between types of infrastructure, the following is a science matrix that divides each infrastructure into 4 quadrants. For more details about the science matrix, see Figure 3 and Figure 4.

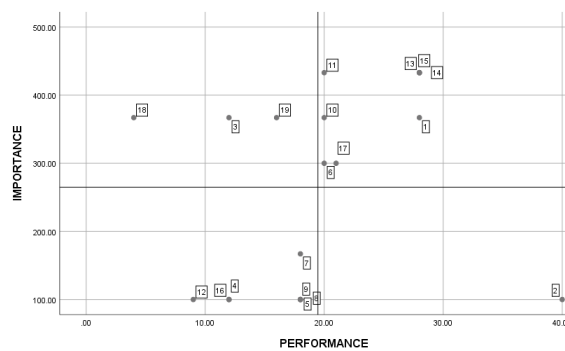


Figure 3
Analysis of the Science Matrix of Hambalang Village

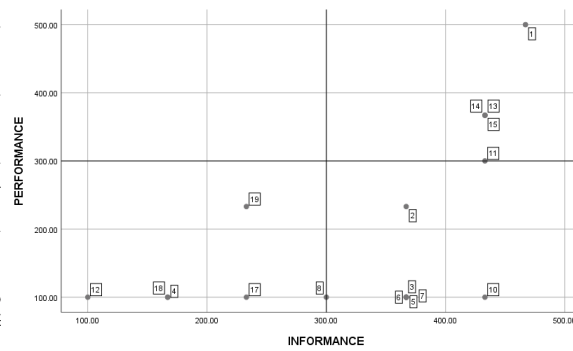


Figure 4
Analysis of the Science Matrix of Tajur Village

Therefore, it can be concluded that the infrastructure that is prioritized to be developed in Hambalang Village based on the results of the science analysis is: (1) Markers or directions, (2) a Gazebo (*shelter*), (3) Individual/family seats. Meanwhile, the infrastructure that is prioritized to be developed in Tajur Village based on the results of

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the science analysis is (1) Provision of the road network, (2) Signs or directions, (3) Places to eat, (4) Provision of the electricity network, (5) Provision of the clean water network, (6) Provision of the communication network. For more details about the infrastructure network map of Hambalang Village and Tajur Village, please see Figure 5.

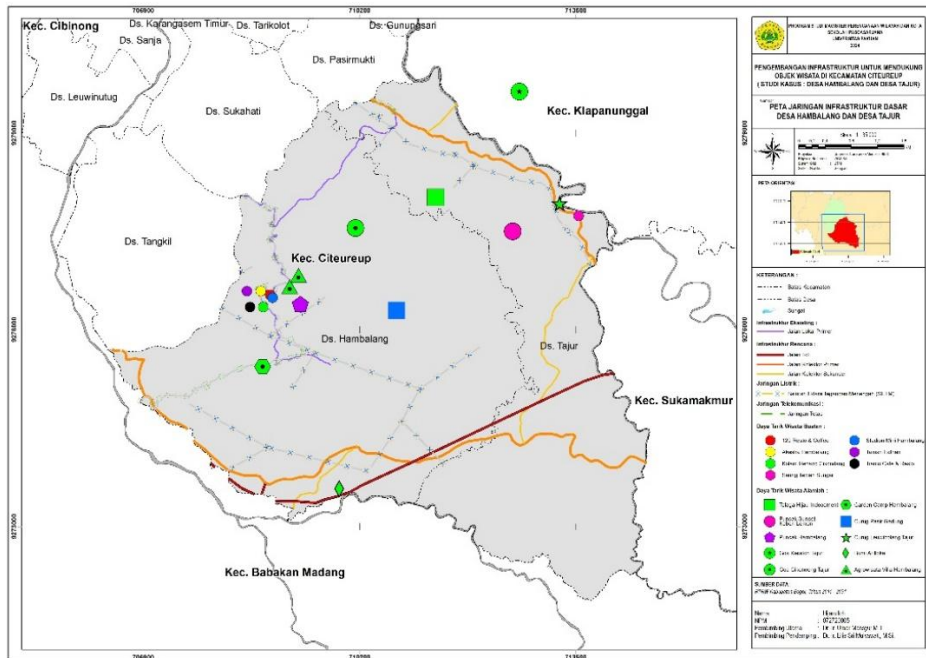


Figure 5
Infrastructure Network Map of Hambalang Village and Tajur Village

Conclusion

Based on the results of the research that has been carried out, several conclusions are obtained as follows: All tourist attractions in Hambalang and Tajur Villages based on the physical potential of the highest natural tourism attractions are in Agrotourism Via Hambalang (2.25), Bumi Arioka (1.98), and Puncak Bukit Hambalang (1.91). Based on the physical potential of artificial tourist attractions, the highest totals are in 129 Resto & Coffee (2.53), Akasha Hambalang, and Cikondang Swimming Pool (2.19). This is because all tourist attractions have been well developed and show that each tourist attraction has a uniqueness that is rarely found in other places and there is a diversity of supporting attractions that attract tourists to visit. The infrastructure that is prioritized to be developed in Hambalang Village based on the results of the analysis is (1) Markers or directions, (2) Gazebo (shelter), and (3) Individual/family seating. Meanwhile, the infrastructure that is prioritized to be developed in Tajur Village based on the results of the analysis is (1) Provision of road network, (2) Markers or directions, (3) Places to eat, (4) Provision of electricity network, (5) Provision of clean water network, and (6) Provision of telecommunication network.

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