

Infrastructure Development and Community Participation: the Efforts to Develop the Archaeological Site and Semedo Museum in Tegal Regency

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Abstract—Infrastructure development is one of the factors that support the development of Semedo Site as an ancient site with the discovery of fossils and artifacts when Pleistosen found since 2005 located in Semedo Village, Kedungbanteng Subdistrict, Tegal Regency. The construction of the Archaeological Museum of Semedo will be open to the general public in 2019 as educational, research, and tourist destinations that will impact the social, economic, and cultural aspects of the community around the site. This study aims to encourage the acceleration of infrastructure development that is being implemented by the government by involving academics and community to support the development of the Archaeological Site and Museum Semedo. The method used in this study using qualitative and quantitative descriptive with data collection techniques conducted through interviews, observation, and data analysis. Based on the results of the analysis, it is concluded that in general the infrastructure tends to influence the condition of community participation in an effort to improve the economic welfare of the community around Semedo Site. So that the acceleration of infrastructure development will encourage the economic growth of the community in Semedo Village and facilitate the access of tourists to the Archaeological Site and Museum Semedo.

Keywords—Infrastructure, Community, Participation, Archeological Site and Museum Semedo

I. INTRODUCTION

The existence of an ancient site area has an important value to reconstruct evidence of past relics that need to be preserved. The Semedo site is one of the archaeological sites that has just been discovered since 2005. The existence of erosion that occurred due to the opening of land that was originally covered with teak forest in the Semedo Site opened up new knowledge about the existence of ancient fossil discoveries. Site location located around teak forest area owned by PT. Perhutani, which is administratively still in Semedo Village, Kedungbanteng District, Tegal Regency, Central Java Province [1]. The existence of fossil discoveries that are

periodically found to provide reinforcement in the Semedo Site area are old. This proves that the Semedo Site is a new site, in addition to the first discovery of the Sangiran Site, Patiayam Site, and other similar sites in Central Java.

Infrastructure development in the Semedo Site area is one factor that supports the existence of an ancient site area. Through various infrastructure being carried out by the Government to support the existence of a Semedo Site area. The Semedo Site area is one of the protected cultural heritage, according to the mandate in the Government Regulation stated in the Law No. 11 of 2010 concerning Cultural Heritage that must be protected [2]. The process of building the Archaeological Museum by the Government is one of the supporters of the existence of a Semedo Site area that stands majestically on an area of 10,582 meters located in Semedo Village. The construction of the Semedo Archaeological Museum which will soon be completed and will be opened to the general public in 2019 as education, research and tourism will have an impact on the social, economic and cultural aspects of the community around the Semedo Site.

However, infrastructure such as the road to the Semedo Site area, accessibility, and supporting facilities as well as the participation of the community around Semedo are still lacking. This is a breakdown in several road points to the Semedo Site area which can be accessed by road from the direction of Slawi City, Tegal Regency. Accessibility to the location of Semedo Village and tourism support facilities for cultural heritage is still not accelerated in its development. Lack of community participation in the awareness of a site and its impact on the social aspects of society in the welfare of the community is still not optimal. So it is necessary to accelerate infrastructure in various fields to support the existence of a Semedo Site area and the Construction of the Semedo Archaeological Museum.

Community participation in Semedo Village is also one of the factors that support the existence of the Semedo Site area and the Semedo Archaeological Museum with government support in accelerating infrastructure towards access to the site area. The role of academics from

universities is also important as a support in the development of research on fossils found around the site area and helps optimize community empowerment to participate in the welfare of the community. Through various community empowerment programs that can be carried out by the participation of rural communities in Semedo Village to support the existence of the Semedo Site and the Semedo Archaeological Museum, it will strike on the social aspects of the community in improving the economy and public awareness of the importance of cultural heritage sites for the nation and state for generations which will come.

II. RESEACRH METHODS

Research method used was a descriptive qualitative approach. In gathering data, interviews and documentation were implemented. To analyze the data obtained from books, journals, institutions, a quantitative approach with data statistics from the BPS (Badan Pusat Statistik) was employed. Qualitative and quantitative methods are often paired with the names of traditional methods and new methods; positivistic method and postpositivistic method; scientific methods and artistic methods, methods of confirmation and findings; and quantitative and intrepitive [3]. This research is conducted in Semedo Village, Kedungbanteng District, Tegal Regency.

The results of interviews obtained from the community with resource persons from the village village and Mr. Dakri's family who discovered the fossils at the Semedo Site revealed that since the discovery of ancient fossils that had been examined by scientists, the truth of the age of ancient Semedo sites was very old and was a newly discovered site.

However, the problem of supporting infrastructure for the existence of the site area is still very poor, the road to Semedo Village is still in the process of renovation. Public participation is still low. The society have not understand yet the importance of a site for the next generation.

The existence of infrastructure conditions that are still not feasible towards the Semedo site in Semedo Village is one of the obstacles to optimize the participation of the Semedo Village community to support the Semedo Site. It requires the cooperation of all parties to be able to optimize the participation of rural communities from Semedo Village.

III. RESULT AND DISCUSSION

A. Development of Fossil Discovery in the Semedo Site

The Semedo site is administratively located in Tegal district, which is about 15 km from the straight line east of Slawi City. Astronomically, this site is at coordinates $06^{\circ} 57' 21.6''$ LS - $109^{\circ} 17' 10.9''$ BT until $06^{\circ} 57' 55.2''$ LS- $109^{\circ} 17' 46.5''$ BT. Physiographically, the Semedo site is located at the western end of the North Serayu mountain range bordering the Bogor Zone mountain range (Sofwan and Siswanto, 2014). The location of the Semedo Site is not far from the east of Slawi City, precisely in Semedo Village, Kedungbanteng District, Tegal Regency [4].

Exploration studies conducted around the Semedo Site area were carried out by the Yogyakarta Archeology Center in collaboration with the Tegal Regency Education and Culture Office in 2005 and 2008 [1]. The purpose of the study is to find out more about archaeological data and their distribution, and to be carried out in the form of surface surveys, mapping and excavations [1]. In additions, the research carried out at the Semedo Site has proven the existence of fossils and they need to be preserved.

Based on research from the Yogyakarta Archeology Center in 2013, palaeontological findings in the form of vertebrate and invertebrate fossils in the Semedo Site are very significant and supported the reconstruction of residential history in the Semedo Site. Recorded identified as many as 1537 fossil pieces consisting of 1331 vertebrate fossils and 207 invertebrate fossils [5]. Some animal fossils are found including familia *bovidae* (buffalo, cow, bull), *cervidae* (deer, deer), *cheloniidae* (turtles), *hippopotamidae* (hippopotamus), *proboscidae* (ancient elephants), *rhinoecerotidae* (rhinos), *proboscidae* (pigs) and from classes of *chondrichtyes* (sharks) and orders of *crocodilian* (crocodiles) found [4].

Some of the most common species found in the identification process at this stage were members of the Proboscidea Order 241 fragments, Bovidae 243 fragments, Cervidae 223 fragments, and Chelonia a total of 196 fragments [1]. Apart from animal fossils, there are also findings of stone fossils found in the Semedo Site. Research from the Yogyakarta Institute of Archeology has obtained at least 114 stone findings. The findings consist of massive and non-massive tools made of stone and not even in the manufacture. Stone tools in the form of chopping tolls and fewer core stones compared to the findings of nonmasif tools such as shavings and shales [4].

In 1859, in *Darwin's Origin of Species*, he carefully evaded the imposition of evolutionary implications on humans [4]. Human fossil discoveries were found from the pleistocene layer in various places in the world, such as ancient human fossils discovered by Von Koenigswald in the Sangiran region which is a Bengawan Solo [6]. This opens up new fossil discoveries found one of them with the discovery of ancient fossils found in the Semedo Site since 2011 by a resident of Semedo Village and further investigated.



Fig 1. Homo Erectus skull roof found in 2011 at the Semedo Site.

(Source: Author Documentation, 2018)

In May 2011, the first ancient human skull roof fragment was discovered from the Semedo Site by Pak Dakri, an active local resident of Semedo Village in the preservation of the site [7]. The results of the analysis revealed that the skull roof fragments were in the classic Homo erectus group, which was around 0.7 million years ago [7]. Based on the discovery of these ancient human fossils found, the Semedo Site is complete as one of the Hominid sites in Java with its ancient cultural and environmental footprint that continues to be discovered.

B. Acceleration of Infrastructure Development in Semedo Village

Infrastructure systems can be defined as basic facilities or structures, equipment, installations that are built and needed for the functioning of the social system and economic system of society [8]. One of the factors to support the Semedo Site and Semedo Archaeological Museum, which is located in Semedo Village namely 'Acceleration of Infrastructure Development'.

Infrastructure is a vital need to support the economic activities of the community. A country's economic progress usually correlates with infrastructure development in the country. Countries with good infrastructure are usually more prosperous [8]. At present, to support the Semedo Site area, the Government is building the Semedo Archaeological Museum.. In 2019, after the construction process of the Semedo Archaeological Museum has been done, the museum will be opened to the public as an education, research and recreation centre.



Fig 2. The Process of Building the Semedo Archaeological Museum by the Government

(Source: Author Documentation, 2017)

Previously the fossils found were placed temporarily at the Semedo Site Information Cottage managed by Mr. Dakri as the inventor of the fossils in Semedo. He is one of the community leaders in Semedo Village who collects and treats artifacts and fossils found at the Semedo Site along with other residents. Through development projects sourced from state budget funds, the construction of the Semedo Archaeological Museum was built several years ago, which stands majestically on an area of 10,582 square meters in Semedo Village. Through the

establishment of the Semedo Archaeological Museum, it will become a center of research and information on ancient fossils, education, and tourist recreation.

However, access to the Semedo Site area that can be traversed through the main road from the City of Slawi to the Semedo Village, Tegal Regency is still lacking of attention by the Government. This led to a lack of tourists coming to the Semedo Site as well as community participation in supporting the Semedo Site which would have an impact on the social, economic, and cultural aspects of the Semedo Site, in Semedo Village.

Some roads to access to Semedo Village are still quite severe, so that when the dry season the road can easily crack and when the rainy season comes, the flood often appears. In fact, the existence of infrastructure towards the Semedo Site will affect visitors. Besides that, the road in Semedo Village is still not feasible like the road in general. It is necessary to accelerate the development of infrastructure to encourage the Government in this case the policy regulator to build equitable infrastructure in Semedo Village.

Through infrastructure, it will also facilitate accessibility to Semedo Village as the location of the Semedo Site area. In rural spaces, accessibility is closely related to basic needs that indirectly relate to aspects of social welfare and economic aspects [9]. So it needs acceleration in terms of infrastructure development to support the Semedo Site and the Semedo Archaeological Museum being built.

Through this, the role of Academics from universities is to formulate policies for the Government, especially in Tegal District Government and the Central Java Provincial Government that handles its territory to be able to accelerate infrastructure development towards the Semedo Site which will impact the social, economic and cultural aspects of the surrounding community Semedo Village. In this case, infrastructure acceleration will affect the ease of the community around the site to participate.

The role of research from universities is often associated with national development. Research should be carried out according to the needs of the community and if the results of the research produce new innovations, then that innovation can be used as a measurement of development performance [10]. Therefore, through the research role of universities from academics to formulate opinions that can make policies for the Government in accelerating the infrastructure built towards access and infrastructure such as environmental sanitation, clean water facilities, and rural irrigation in Semedo Site, Semedo Village, Tegal Regency .

C. Community Participation in Semedo Village to Support the Semedo Site and Semedo Archaeological Museum

Semedo is the name of the village and hills that blend with North Serayu Mountain in Kedungbanteng District, 30 Kilometers east of Slawi City, Tegal Regency. Most of the population work as farmers, they usually open up hilly land to grow crops [11]. The Semedo Village community is generic that does not make the desired place. Semedo in Semedo Village that started as a place of tourism,

education, and activities to become job opportunities and to increase the finances of the surrounding community.

Employment in Semedo Village is still dominated by agriculture because of the vast natural resources. However, this has become a factor in the lack of welfare due to the long-standing agricultural management system in the process. Based on the field statistics, the business that entered the Kedungbanteng Subdistrict, including Semedo Village, showed that there were still few business fields available. Though the processing industry is one of the important factors to improve the economy around the site. The following table explains the amount of business field data in Semedo Village:

TABLE I. LABOR IN KEDUNGBANTENG DISTRICT, 2016

| Desa | Pertanian | Pertambangan | Industri | Listrik, Gas, Air | Konstruksi |
|-----------------|-----------|--------------|----------|-------------------|------------|
| Penujah | 923 | 1 | 4 | - | - |
| Karang Anyar | 320 | 1 | 26 | 20 | 4 |
| Tonggara | 1.472 | 8 | 10 | - | 2 |
| Kedung Banteng | 1.287 | 3 | 30 | 13 | - |
| Dukuhjati Wetan | 1.623 | 1 | 33 | - | 1 |
| Sumingkir | 688 | - | 18 | - | 2 |
| Margamulya | 454 | 45 | 31 | 9 | 5 |
| Kebandingan | 920 | 12 | 25 | - | 8 |
| Karangmalang | 612 | - | 32 | 2 | - |
| Semedo | 41 | - | 5 | - | - |
| Jumlah | 8.340 | 71 | 214 | 44 | 22 |

(Source: BPS Tegal Regency, 2016)

Aside from being a learning center for purakala sites it can also be used as a place for cultural recreation [12]. So that the ancient sites in Semedo Village as one of the cultural recreation places and ancient historical heritage sites need the support of the participation of the Semedo Village community to optimize the existence of a Semedo Site tour and the Semedo Archaeological Museum.

Effect of acceleration development infrastructure from all sides will also accelerate community participation in supporting the tourism potential of the Semedo Site and the Semedo Archaeological Museum which will prosper the economy of the Semedo Village community. So that the effect of accelerating infrastructure development is very important from the Government's program to have a positive impact on the surrounding community. The people of Semedo Village have not been able to take advantage of the existing business opportunities, because the lack of education for the 7-24 year olds between primary and tertiary levels is still low, in 2016 there were only 961 youth attending school [13].

In the conception and implementation of development, there are often perceived problems that are conflicting two poles, namely between economic growth and large human

resources [14]. The Semedo community, in this case to optimize in improving welfare can also optimize the opportunities for new tourism from the Semedo Site. So it is necessary to have cooperation from all parties such as the Government, Academics, the public and the private sector in developing the community of Semedo Village who participated in the participation.

The participation of the community of Semedo Village has become an important role in supporting the tourism of the Semedo Site and the Semedo Archaeological Museum. Citizen participation can be described as the distribution of power among members of the community itself [15]. Through community participation will also have an impact on the economic prosperity of the surrounding communities in the Semedo Site. This is as stated that the development of tourism in a tourist area, both locally, regionally in a country is closely related to the economic development of the region or country [16].

The participation of the Semedo Village community that can be done is to see the potential of Semedo Site tourism which has ancient characteristics. This can be the theme in making crafts or souvenirs from Semedo Village as a tourist attraction for Semedo Site and Semedo Archaeological Museum. Crafting bags, souvenirs, t-shirts, and others with ancient decoration from the Semedo Site will attract the tourist to buy. In addition, this community participation needs assistance from government and academician as an effort to educate the Semedo Village community on the importance of community participation in increasing the economy through creative industries owned by communities with resilient and skilled abilities.



Fig 3. One of the Wooden Souvenirs and T-Shirts made by One of the Semedo Village Communities (Source: Author Documentation, 2017)

The concept of implementation of the participation of the community requires training on making souvenirs and souvenirs typical of the Semedo site to improve the economy of the community around the site and attract visitors to come to the Semedo Site and the Semedo Archaeological Museum. The training also aims to make the Semedo Village community have the skills in making souvenirs or souvenirs and have new income from the making of the souvenirs. Then in this implementation it is necessary to actualize the results of craft souvenirs made or souvenirs typical of Semedo Village for sale in locations that have been provided by the Government in

support of tourism from the Semedo Site and Semedo Archaeological Museum.

The Semedo Site and Semedo Archaeological Museum in Semedo Village as the tourism object and cultural heritage should be preserved and explored by the surrounding community. Some efforts that can be done to develop the site and the museum are (1) scientific research; (2) Creative Arts; (3) Education (4) Recreation and tourism; (5) Symbolic representation; (6) Legitimacy of actions; (7) Solidarity and social integrity; (8) monetary and economic benefits [17].

CONCLUSION

The Semedo site is an archaeological site that was discovered in 2005, which is located not far from Semedo Village, Kedungbanteng District, Tegal Regency. The existence of ancient fossil discoveries such as animal fossils, rocks, and even fossils of ancient human skulls is evidence of the location of a cultural heritage site that should be preserved. The construction of the Semedo Archaeological Museum that is being built and will soon be opened to the public as education and research centre, and recreational tourism. The museum is potential for the community around the site. Providing sufficient infrastructure near the museum and the site is needed.

The acceleration of infrastructure will be one of the factors that can motivate the Semedo Village community to participate in supporting the Semedo Site tourism and the Semedo Archaeological Museum. The participation of the Semedo Village Community can be done by joining a training how to make souvenirs. The training supports both tourism and the economic welfare of the community around Semeedo Site. Further, it also improve the skills of the Semedo Village community. Then, later tourists are interested in visiting the Semedo Site and Semedo Archaeological Museum in Semedo Village.

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