



Master plan design in developing village tourism potential with a Community Participatory Model

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ABSTRACT

Pait Village, located in Kasembon Sub-district of Malang Regency, is a village with high natural tourism potential. However, the allure of tourism in Pait Village, which is located in a green area and surrounded by rivers and waterfalls, still lacks development. Carrying the main mission to increase the tourism potential in Pait Village, the community service team will develop a water tourism design in the form of a multifunctional fishpond. This fishpond will solve the problem of water surplus due to agricultural land runoff. In addition, this pond can be an alternative source of animal protein for residents and an integrated water tourism location in the Kasembon Area. The implementation method carried out in this program is to analyze the needs of the Pait village integrated Master Plan design with a community participatory model. The results of the Pait Village water tourism master plan design are in the form of a 3D mockup of water tourism and a cultivation pond that can be used as an amphitheater along with the regional expenditure budget plan (RAB).

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1. INTRODUCTION

Pait Village, which is located in a green area with four waterfalls, has a myriad of tourism potentials that still need development (Fauzan & Riyatmoko, 2021; Hadi et al., 2021; Chotimah & Sutaman, 2020). The development of tourism potential in an area is proven to be able to significantly increase the regional economy (Rahma & Handayani, 2013). So that efforts to develop a tourist village in a region can be a pioneer for regional economic development in that region. This is confirmed by several literatures that have recorded village economic development with the construction of micro- and macro-scale tourism facilities (Mardianis & Syartika, 2018; Rahma & Handayani, 2013).

Based on the needs analysis conducted between Institute for Research and Community Service Malang State University and the village apparatus of Pait, particularly the Pokdarwis in 2021, the village

of Pait requires assistance in the form of arranging a master plan for the village's land as an integrated water tourism area and also as a source of animal protein for its residents. Pait village, located at an altitude of 574 meters above sea level and surrounded by the Lanang River, has a surplus of water resources, especially during the rainy season (Hadi et al., 2021). Utilization and arrangement of inefficient land can cause the water surplus in Pait village to become a source of disaster (Hadi et al., 2021). With a hilly topography, water runoff will quickly inundate agricultural fields located in valley areas and cause losses to residents.

A master plan is a document outlining the development plan for an area that is compiled gradually and sustainably according to the potential of supporting capacity, resource capacity, social, economic, and spatial aspects. The development of a master plan design can be carried out sustainably by involving local residents through a participatory mentoring process. With the availability of a clear and directed master plan, structured, planned, and targeted regional development can be realized (Vitasurya et al., 2022; Jaya, 2021; Wibowo & Purbadi, 2021). The development of a master plan using participatory methods in building the Watupurbo Yogyakarta tourism area has been successfully carried out by the community service team of Atma Jaya University (Vitasurya et al., 2022; Arifin, 2017; Sidiq & Resnawaty, 2017). As prospective managers of tourism assets, the community is actively involved in providing input on appropriate and functional designs. Community-based development is reported to be a benchmark for the success of village development, as the community is actively involved in the design, implementation, and construction processes (Wahyuhana & Sukmawati, 2019; Arifin, 2017).

The idea of water tourism in Pait village has been initiated since 2021 with the development of a tracking area in Coban Slumpring (Fauzan & Riyatmoko, 2021; Wartana et al., 2021). However, this program has not yet fully optimally run as the infrastructure design around the area has not been fully established. The design concept applied to the Pait tourism village master plan is to utilize the contoured topography of the location. Ponds are planned at the lowest elevation to minimize cut and fill work. In addition to serving as a means of addressing water overflow issues in this water tourism area, it can also increase tourism potential and fulfill the needs of Pait village residents for animal protein by building multi-functional fish ponds.

The main objective of the implementation of the work program "Participatory Model Assistance in Developing Water Tourism Master Plan as an Effort to Increase Regional Tourism Potential and Village Economy of Pait" is to provide assistance in the process of designing the master plan and creating a budget plan for water tourism in Pait village through participatory methods.

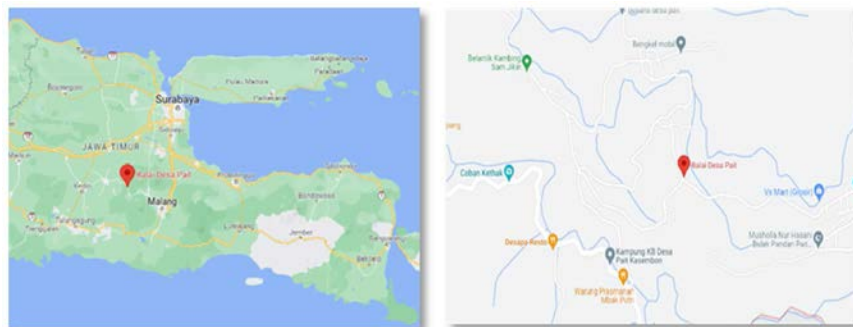


Figure 1. Pait Village, Kasembon sub-district, Malang Regency Location

2. METHODS

Activity Plan

This community service activity was carried out in Pait Village, Kasembon sub-district, Malang Regency (Figure 1). Partners involved in this community service include the Pait village apparatus, pokdarwis, and the technical team assisting Pait village. Equipment used for this community service includes a set of land measurement tools (theodolite and water pass), software for architectural design, software for calculating RAB, and equipment for presenting design results.

Table 1. *Stages of community service activities*

| Date | Activities | Explanation |
|---|--|---|
| 6 th June 2022 | Initial meeting, to communicate design planning. | This initial meeting was held for initial coordination before the team conducted a field survey with the aim of coordinating the global plan setup. |
| 9 th June 2022 | A location survey was conducted in Pait Village, specifically at the site where the reservoir tourism development is planned. | The purpose of conducting a location survey of the water tourism site in Bonjagung hamlet, around the Pait Village Hall, is to determine the condition of the land |
| 18 th June 2022 | Land measurement was conducted by the village service team of Pait with the assistance of the surveyor and land measurer team. | This land measurement was carried out on the land planned for the development of the water tourism/dam in order to obtain initial land survey data. |
| 19-25 th June 2022 | The contour data processing is carried out by the community service team. | Processing of land survey data into a contour map of the land. |
| 25 th June – 2 nd July 2022 | The process of designing the masterplan utilizes engineering software. | The planning of the water tourism used software to produce the Draft Master Plan. In this process, the planning team from UM actively communicated with the partners from Pait to obtain a design that fits the needs of the local residents. |
| 8-18 th July 2022 | The revision and assistance process | Assistance activities were carried out to the partner of Pait Village and a revision process was carried out to obtain the finalization of the master plan. |
| 19 th July 2022 | The socialization of the design to the residents of Pait Village and other community elements | This socialization was conducted to obtain feedback and input from the residents of Pait Village and to obtain their approval for the water tourism master plan design. |
| 20 th July 2022 | Finalizing design | Once the design is completed and has been socialized to obtain approval from the village officials and technical team of Desa Pait, the master plan can be considered as the final design. |
| 26 th August 2022 | Finalization of structural drawings and cost estimates | After the architectural drawings, the main stage and pool structure designs were done by the structural team. |
| 1 st October 2022 | Socialization of the final design of the water tourism village in Pait Village | In this opportunity, the 3D model, architectural and structural drawings were also handed over to the officials of Desa Pait. |

Method of Implementation for Master Plan Design and Budget Planning

The creation of the master plan design and budget plan for the water tourism in Pait village uses a participatory model involving the local community. During the design process, the community was involved in selecting the design through focus group discussions and interviews. The design process began with the identification of needs and land surveys. The contour of the land was then measured to obtain information about the elevation of the land to be built on. The contour data obtained was then used as a reference in the architectural and structural design process. In the design process, the community was involved through assistance activities conducted by the community empowerment team and the local tourism group. The initial design was then socialized to the village officials, the technical assistance team, and the tourism group. The revision and assistance process was carried out after the empowerment team received input from the village. Finally, the final master plan design, in the form of a 3D model and construction budget plan, was handed over to the village officials in the final master plan design socialization activity. The entire community empowerment process was carried out for approximately 6 months. The stages of the implementation process for this community empowerment program are presented in Table 1.

3. RESULTS AND DISCUSSION

Results

The work program for the assistance in the development of the water tourism master plan is aimed at increasing the potential of local tourism and the economy of the residents of Desa Pait through collaboration with the local community. Prior to the initial activity of land surveying, a focus group discussion (FGD) was conducted between the service team and the village officials. The results of the FGD included determining the boundaries of the village land to be developed and the needs of the residents for a natural, multifunctional water tourism facility. In addition to serving as a stage for performing arts, this natural tourism site is also expected to provide a source of protein for the residents of Desa Pait through a fish pond. The land survey was conducted by the measurement team together with the village officials to determine the environmental conditions for the planned development of the embung water tourism. The process involved the Service Team of Lecturers, Surveyor Team and Land Surveyor, which can be seen in Figures 2, 3 and 4.



Figure 2. Land survey by the Pait village service team and officials

Figure 3. Land measurement by the community service team

Figure 4. Installation of land markers

Based on the land measurement results, the contour data needs to be processed to obtain the soil contour data. From the soil contour data, the master plan design for the water tourism can be planned (Figure 5). The planning is carried out through the design making with the help of AutoCAD software for 2D design and Sketchup software for its 3D design (Figure 6). The multifunctional stage is designed in the middle of the reservoir which serves as a water reservoir and a fish pond, as one of the strategies for the food resilience of the people of Desa Pait. The pond is located at the lowest contour position so that the utilization of contoured land becomes maximum which is used as a tribune or outdoor amphitheater that follows the contour height. The stage design also reflects the local culture of Desa Pait, namely the wayang mountain as the identity of Desa Pait. This is done with the aim that visitors who come and use the facilities here can still recognize that the amphitheater location is in Desa Pait.

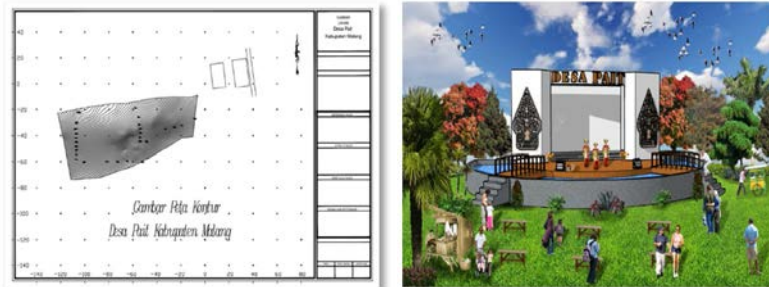


Figure 5. Integrated water tourism contour map of Pait Village, Kasembon
Figure 6. 3D Design of Water Tourism Master Plan using Sketchup software

Dissemination of the results of the community service project was carried out involving the village officials and local residents. The discussion during the dissemination session resulted in a positive response to the master plan design proposal for Pait Tourism Village (Figure 7). In this dissemination session, the enthusiasm of the village officials to realize the development of the integrated water tourism was quite high, indicated by the long technical discussion between the village officials and the community service team. As a follow-up to the design dissemination process, the village officials are still actively providing assistance related to the detailing of the work through the preparation of the project's budget plan (RAB) for the integrated water tourism in Pait village. The final planning stage of this activity is the detailed RAB submitted by the Pait village officials to the local government with technical assistance from the community service team. In general, a total of IDR 272,282,105 is needed to build an integrated water tourism in Pait Village in the form of a multipurpose art stage combined with a fish pond.



Figure 7. Socialization of the 3D Master Plan design

Discussion

The process of developing the water tourism master plan for Pait village, in the form of creating a 3D master plan for the multifunctional pond and its development budget, has been successfully carried out. This design process took approximately 5 months. Representatives of the community, namely the local tourism group and village officials, were involved in every design process, from selecting the location, selecting the functions, to the final detailing. This participatory process was also recommended by the service team that developed the master plan (Jaya, 2021; Wibowo & Purbadi, 2021). By involving the community, the level of community acceptance towards development becomes easier (Arifin, 2017; Wikantiyoso et al. 2020). In addition, involving the community as the asset manager group will facilitate the post-construction process (Srirejeki et al., 2020; Tarmidzi & Arismiyati, 2018). The immediate benefits that will be obtained by the community from the development of this water tourism master plan design are the provision of infrastructure that will become a source of animal protein needs, as well as the availability of a natural-themed stage for the community's performances. The idea of combining these two functions of the building was obtained after the community service team observed the schedule of the Pait village residents for performing arts shows. This is also supported by the topography of the land which is in the form of a valley (contoured), making it suitable for creating a natural amphitheater area.

After the socialization activity, both the local community group (pokdarwis) and the technical team were very satisfied with the design of the water tourism. This was shown by the intensive discussions that took place between the village officials, the service team, and the technical team regarding the construction method and the details of the building's function. Through this community service activity, the service team had the opportunity to apply science and technology (IPTEK) in the form of environmentally conscious architectural design, while the partner village obtained the benefit of obtaining a master plan design that meets their needs. This mutually beneficial relationship was also applied to the creation of the regional master plan by the service team (Vitasurya et al., 2022; Jaya, 2021; Wibowo & Purbadi, 2021).

4. CONCLUSION AND RECOMMENDATIONS

The development of the master plan is an activity that aims to provide assistance in the process of designing the master plan and creating a budget plan for the water tourism in Pait village. The development is carried out by the Community Service Team by utilizing the topographical conditions of the location, which has contours for water storage. By involving the community in the design process, a dual-function fish pond design was obtained, which serves as an open stage. With the implementation of this program, the people of Pait village will have a traditional art stage as well as a fish pond that can meet their alternative animal protein needs.

The limitation of this program is the amount of village funds available to carry out comprehensive development. This can be overcome by conducting gradual development according to the village funds available in each fiscal year. Proposing funding applications to sponsors is also worth trying so that the village tourism development program is more integrated with the tourism industry.

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