

Research Article

Design Visioning of Bukit Batu Eon Natural Tourism Area

Fachmy Sugih Pradifta*, Hilwati Hindersah, Gina Puspitasari Rochman, Lutfhi Ahmad Barwanto, Lely Syiddatul Akliyah, Naufal Nur Fadhlillah, Fakhri Muhammad Adisaputra, Nurcahyo Prabowo, Muhammad Shadam Syafsafa Adsyah, Halimah Nurhasanah, Kania Sephiya Sunardi, Muthia Chaerani, Rizky Rivaldi

Universitas Islam Bandung, Bandung, Indonesia

ORCID

Fachmy Sugih Pradifta: <https://orcid.org/0000-0003-3838-4751>

Hilwati Hindersah: <https://orcid.org/0000-0001-6517-902X>

Gina Puspitasari Rochman: <https://orcid.org/0000-0003-2440-4635>

Lely Syiddatul Akliyah: <https://orcid.org/0000-0002-6418-7607>

Abstract.

The Bukit Batu Eon Tourism Area is one of the most tourism potentials in Lamajang Village, Bandung Regency offering the natural beauty and history of the Dutch Colonial Government era Hydroelectric Power Plant. Bukit Batu Eon is currently managed as a camping ground area by locals. Diverse potentials such as the Batu Eon site, reservoirs and power plants, open grass fields, and natural beauty that utilize Sunrise Valley views that need to be directed into an integrated tourism area. Here the design approach was carried out in a participatory manner with various community elements to envision the Bukit Batu Eon Tourism Area design plan. The method used is focused-group discussion (FGD) to analyze the site, resulting in a mapping of potentials and problems that lead to the formulation of the initial idea for site design. The results of the FGD were embodied in a three-dimensional site design, which resulted in the preliminary design of the Bukit Batu Eon Tourism Area.

Keywords: Bukit Batu Eon, Lamajang, participatory design, design visioning, natural tourism

1. INTRODUCTION

The concept of a Tourism Village has been widely developed in tourism development and aims to tackle the urban-rural socio-economic disparity in Indonesia [1,2]. Tourism Village is a concept of rural tourism management rooted in a community-based tourism approach [3]. It seeks community empowerment through participation as a key success factor on a wide array of activity spectrum, including tourism destination development, management, and ownership to ensure direct financial benefit to the community and guarantee sustainability [4–6]. Essentially, the local community controlled substantially the overall tourism activity to keep the circular economy running in the area [7].

Corresponding Author: Fachmy Sugih Pradifta; email: fachmy.pradifta@unisba.ac.id

Published: 15 August 2024

Publishing services provided by Knowledge E

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Selection and Peer-review under the responsibility of the 6th SoRes Conference Committee.



Lamajang Village located in Bandung Regency has been stated as one of the Tourism Village by the local government since 2011 which was updated in the 2022 regulation. The government defines Tourism Village as a form of integration between attraction, accommodation, and supporting facilities which presents in the daily life embedded with local customs and traditions. Lamajang Village emphasizes special interest tourism and aims to develop the community by preserving natural and ecological values. Situated at a high altitude, the village tries to offer its cool air and scenic rural views as tourist attractions. Various destinations have been developed such as Bukit Batu Eon, Curug Ceret, Gunung Tilu, and Fajar Alam. This village also has a rich culture and history through art, performance, and traditions. The cultural attractions include the Cikondang Traditional House, heirlooms, old scripts, historical figure tombs, pencak silat (traditional martial arts), karinding (traditional bamboo musical instrument), and other performances such as Beluk and Tarawangsa. Some traditional custom is also still being practised such as Hajat Wuku Tawun, Hajat Solokan, and Hajat Lembur ceremony [8]. Despite the potentials in natural and cultural tourism, Lamajang Village hasn't as developed as expected and has still been categorized as a stub village since 2011.

One of the popular tourist attractions in Lamajang is Bukit Batu Eon. Bukit Batu Eon is a hill with a unique setting. It faces a reservoir that serves as a Dutch-colonial-era heritage hydropower plant. In the middle of it, laid a meter-wide stone like nothing like it in the surrounding area. The stone's origin is unknown, presumably tossed from the volcanic eruption of the mountain nearby. The view downhill is exquisite, especially at dawn and dusk when we can see the sun rise and set. This site is currently managed by local youth as a camping ground, although the unresolved altercation of land management between the state power company and the villagers continues to hamper its tourism development.

This paper aims to present a community service to design Bukit Batu Eon with a participatory method of visioning the site's development into a Natural Tourism Area. The first part of this paper will explain the participatory process to develop a set of principles for designing the area with responsive consideration to its natural, physical, social, and cultural values. The second part will describe the design process and result to translate the design principles into a site plan for the Bukit Batu Eon Natural Tourism Area.

2. METHOD

2.1. Design Visioning with Participatory Method

In the relation between planning and the design process, the formulation of goals and objectives is considered the end phase of planning and the starting point of the design process [9]. The ideal goals and objectives statement should be based on facts rather than subjectivity [9]. However, determining what is considered as “fact” is not easy. Facts should be reflecting the context of the issues and problems of the site. How a designer understands the context is crucial to achieve a successful design [10]. Failing this could result in the rejection of the proposed solutions or a too-generic proposal [9].

Participatory method through a design charrette or workshop program is one way to avoid rejection or generalist design proposal [10]. Robertson and Simonsen [2012] define “participation” in Participatory Design as “to investigate, reflect upon, understand, establish, develop, and support mutual learning processes as they unfold between participants in collective ‘reflection-in-action’ during the design process” [11]. The meaning of participation should not be reduced to ‘involvement’, nor to ‘user-centered design’ [11]. Community involvement is needed to build some form of consensus about the direction of the design [12]. In a participatory method, the community can be involved in one or all of these stages: data gathering, design collaboration, and technical collaboration [13].

In this project, the Lamajang community was involved in the data-gathering process as part of the site analysis. The participant analyzed the site context to determine the potential, limitations, opportunities, and threats to develop Bukit Batu Eon as a natural tourism area. The result will formulate a vision statement that later translates into spatial and physical interventions or design elements and principles.

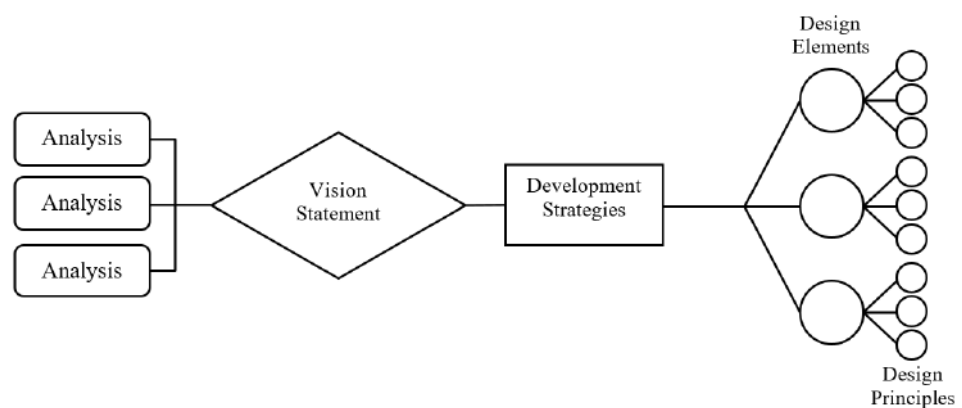


Figure 1: The Process from a Vision Statement Into Formulating Design Principles [10].

2.2. Design Charrette

Neuman et al. (2002) explained design charrette as “a short and intensive exploration into a set of place-specific issues and conflicts that uses design methods to analyze conditions and devise solutions“ [14]. The charrette was used as a collaborative process involving many stakeholders as a participative way of envisioning the Bukit Batu Eon area. The design charrette process can vary depending on the complexity of the site, the degree of participation expected from the participants, or the stages involved in the overall planning process.

The design charrette process in this project was adapted from the CLIC HUL Workshop Amsterdam [15]. The design charrette goals on this project are divided into five incremental steps: (1) identifying featured resources and potentials of the site; (2) defining socio-cultural values that need to be preserved; (3) identifying challenges, threats, and vulnerabilities of the site in facing the future development; (4) formulating design goals; (5) visioning a design proposal.

Participants were divided into three focused groups. The first group is local government and policymakers such as district government and agencies. The second group consists of the community organizations that seek to be indirectly involved in tourism development, such as women empowerment organizations and local culture activists. The third group consists of the youth organization that could be the ones who run and manage the tourist attractions. Each group assisted in identifying the tangible and intangible values of the place and marking it on a set of printed maps. The groups can also sketch a suggestion for improving the site.

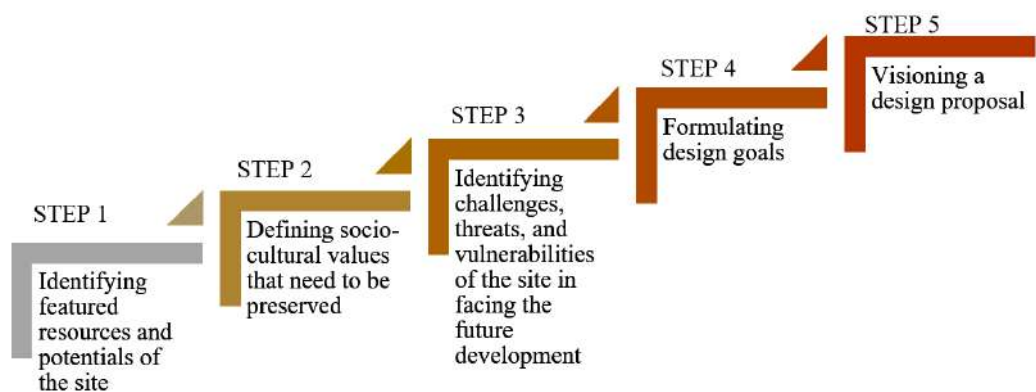


Figure 2: Five Incremental Steps of the Design Charrette.



Figure 3: The Design Charrette Process of the Three Focused Groups.



Figure 4: The Mapping Results of Five Steps from the Three Focused Group.

3. RESULTS AND DISCUSSION

3.1. Results

3.1.1. Site Inventory

The site inventory resulted from the three focused groups mapping in the design charrette. The three groups present their findings to discuss and compare with other groups' results. This process is utilized as a triangulation tool where issues are discussed

with multiple perspectives from different points of stakeholders' view. The findings then develop into a design proposal for the Bukit Batu Eon Natural Tourism Area development in Desa Lamajang. Some of the inventory items could not listed because of time limitations. The site inventories are as seen in the table below.

TABLE 1: Inventory of Site Conditions and Context from Three Focused Group in Design Charrette.

No.	Site Inventory	Group 1	Group 2	Group 3
A. Identifying featured resources and potentials of the site				
1.	Linkage with surrounding area	-	Proximity with Fajar Alam as outdoor activity area	Proximity with Fajar Alam
2.	Accessibility	Easy access from Jl. Indonesia Power and Jl. Desa	Easy of access from the road	Easy of access from the road from Fajar Alam
3.	Function and activity	Proximity with elementary to junior high school	Proximity with elementary school, farming, and rental villa Open field as multi-purpose space	Proximity with elementary school and settlement / kampung
4.	Identity	-	Batu Eon as identity	-
5.	Natural features	Open field near the reservoir	Natural landscape	-
6.	Man-made features	Coffee plantation in the site Batu Eon site	Banana, cassava, coffee, and cardamom productive plantation	Rice fields
7.	Community	Pencak silat community in kampung nearby	Cikahuripan farming community in the area	Pencak silat and Calung community in kampung nearby
8.	Events	Routine festival in open grass field	Events in Fajar Alam	Independence day routine event
9.	Visual features	Nice view from Bukit Batu Eon to the North	Good view to the North	Sunrise view from Bukit Bintang to the North-East
B. Defining socio-cultural values that need to be preserved				
10.	Local history	The local folklore of Batu Eon	The local folklore of Batu Eon	-
11.	Culture and custom	Hajat Lembur and Hajat Solokan ceremony performed in nearby kampung	Hajat Solokan to preserve the springs	Hajat Lembur ceremony performed in nearby kampung
12.	Heritage	The Dutch-colonial era hydroelectric power plant	House of power plant administrator from Dutch-colonial era	Batu Eon and all of surrounding features
13.	Settlement pattern	Rice paddy field surrounding the site and kampung settlement	-	-
14.	Architectural style	Dutch-colonial style architecture of power plant building	House of power plant administrator from Dutch-colonial era	-

TABLE 1: Continued.

No.	Site Inventory	Group 1	Group 2	Group 3
B. Defining socio-cultural values that need to be preserved				
15.	Building tradition and local materials	Bamboo chair craft		-
16.	Natural resources	Protected forest on the West of area	Clear water, paddy fields, crops, and plantation topography	-
C. Identifying challenges, threats, and vulnerabilities of the site in facing the future development				
17.	Access condition	6 meter wide of damaged road to the site Potential parking site in nearby field	Damaged road to the area Parking needed	-
18.	Site engineering	Site engineering needed to the landslide potential in the East side	Needs watertank to contain water from springs	Prone to landslide in Bukit Bintang
19.	Legal formal	PLN-owned land in most of the area	PLN-owned land in most of the area	PLN-owned land in most of the area
20.	Unsupported activity	Chicken farming	Noise disturbance from loud motorcycle	-
21.	Conservation	-	Cikahuripan farming community in the area active in natural conservation	-
22.	Disaster	Landslide potential		
23.	Social cohesion	Residents in the area supporting the development and would like to be involved in tourism management	Independence day ceremony in the open field	Enthusiasm to be involved on tourism development Youth organization actively managed the site
24.	Regulation and spatial plan	-	-	-
25.	Utility infrastructure and	3R garbage dump nearby Blindspot on internet coverage Drainage needed	Drainage needed	Existing hydroelectric power plant utility needs to be considered
D. Formulating design goals				
26.	Development goals	-	Outbond and camping ground	Agrotourism facilities
27.	Vision	-	-	-
28.	Programs	-	Camping ground Nursery and greenhouse for educational activity Secretariate, ticketing, local foodstall Art and performance events	Homestay Camping ground Cable car for sightseeing Podium for sightseeing Jogging track
29.	Design concept	-	Non-permanent tents and multiple outbond activity	Camping ground with view
30.	Design principles	-	-	-

TABLE 1: Continued.

No.	Site Inventory	Group 1	Group 2	Group 3
E. Visioning a design proposal				
31.	Zoning	-	-	-
32.	Circulation	-	Create parking in existing small field	Access to sacred tomb
33.	Open space	-	Integrate the field near the reservoir for outdoor activity	-
34.	Utility and services	-	-	-
35.	Standard	-	-	-
36.	Architectural image	-	-	-

3.1.2. Design Proposal

The site design of the Bukit Batu Eon Nature Tourism Area offers a multi-activity concept related to camping and outdoor activities by utilizing the natural atmosphere and beautiful scenery. Batu Eon, which is located in the middle of the area, functions as a landmark and focal point. Generally, the design area is divided into three zones, namely the camping zone, the picnic zone, and the heritage zone. The camping zone consists of a camping ground and supporting facilities. The picnic zone is a multifunctional field of grass that can be used for picnics as well as routine and incidental events. Meanwhile, the heritage zone is a heritage educational tour regarding hydroelectric power plants left over from the Dutch colonial era.

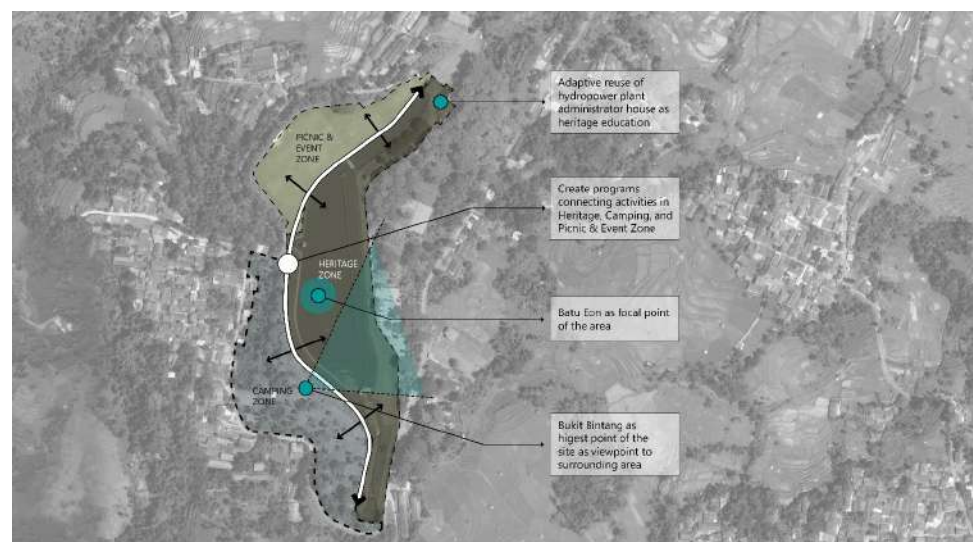


Figure 5: Development framework of Bukit Batu Eon Natural Tourism Area.

Development priority on site is camping zones where the possibility for the community to be involved in land management is more plausible. The picnic zone and the heritage zone will be connected by pedestrian access that links the Interzone activities to integrate the nature tourism theme. The camping zone consists of the camping grounds facing North and Northeast, which provide the best views from the area. A multifunctional amphitheater is provided to hold art and performances. Performers will involve local art and cultural communities such as Pencak Silat, Calung, etc.

There are two options for camping activity, one is using non-permanent tents, where wooden platforms are provided overlooking the reservoir. The other is glamping areas where permanent tents with complete lodging facilities are provided. Campers can carry out agricultural activities provided on the site through the agro-tourism. Agro-tourism activities utilize existing gardens planted with Banana, cassava, coffee, and cardamom. Various activities such as visiting greenhouses and plant nurseries, and planting and picking garden produce will be guided by the Cikahuripan farming community.

The picnic zone is connected to the camping zone via the treetop boardwalk and flying fox line. These facilities take advantage of the dense trees between the two zones. The treetop boardwalk offers the experience of walking among the tree canopy overlooking Batu Eon. Meanwhile, the flying fox track connects the food court with the grass field by gliding through the trees.

The picnic zone will be left open with a grass field for multifunctional purposes. Daily activities in this area are picnicking and flying kites. For annual events that bring in masses, this area can be used flexibly because of its vast space. Possible events to take place here are various traditional ceremonies such as Hajat Lembur and Hajat Selokan as well as the commemoration of Independence Day.

4. Conclusion

Through a participatory approach, the Bukit Batu Eon Tourism Area was designed using the design charette method. The process identified several strategic issues in designing the site. The prominent strengths of the site include ease of access and proximity to nearby tourist attractions. Additionally, the natural assets in the form of natural landscapes and the existence of Batu Eon are potential selling points. The local cultural environment also adds value to the design theme, with traditional villages and various Sundanese traditions still alive in the surrounding area. However, the land



Figure 6: The proposed Site Plan for Bukit Batu Eon Natural Tourism Area.

ownership status and the potential for landslides from steep land contours remain hampering aspects.

The community’s aspirations were obtained through the design charette, resulting in a vision to develop the Bukit Batu Eon Tourism Area into a camping ground facility. The location’s uniqueness, with the Batu Eon and the folklore behind its existence, as well as the natural potential of the site, are expected to be the selling points for visitors. The community also hopes that this tourist area can accommodate Sundanese cultural identity and provide facilities to develop the local economy.



Figure 7: The Illustrations of Some of the Facilities Proposed on Bukit Batu Eon.

5. Discussion

The Bukit Batu Eon natural tourism area has a variety of physical, nature, social, and cultural potentials that have the potential to develop. The enthusiasm and readiness of the community to be involved in developing this area is valuable social capital to realize the design proposals in this paper. Apart from the opportunity and strong aspirations to develop Bukit Batu Eon, the main problem still hampering it is land ownership controlled by PLN / Indonesia Power. The desire of landowners to maintain the status quo of land management is a challenge that remains unresolved between the community, village government, and landowners. The saturation of tourist attractions in Pangalengan and its surroundings potentially increases the competition to attract the same target market.

This study needs to be strengthened by a study of institutions between land owners, managers, and local government. This study needs to include an in-depth look at regulations, organizational statutes, and legal aspects of business management. Another study that needs to be done is a market analysis of the supply of special interest nature tourism in the surrounding area. A marketing approach of offering uniqueness by utilizing digital media needs to be a strategy in promoting this tourist attraction.

ACKNOWLEDGEMENT

This paper is part of Community Partnership Program grant from Lembaga Penelitian dan Pengembangan Masyarakat (LPPM) Universitas Islam Bandung, contract number 010/C.12/LPPM/I/2023. The authors are deeply grateful to the LPPM Universitas Islam

Bandung, Fakultas Teknik and Program Studi Perencanaan Wilayah dan Kota Universitas Islam Bandung for supporting this study by providing data and other supporting facilities for this study. Our gratitude is also given to Kepala Desa Lamajang Bapak Yusep Kurina and staff, and Ketua Lembaga Pengelola Desa Wisata Lamajang Bapak Fattah Saefulloh and staff who participated and provided data for this study.

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