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Conservation and Utilization: Community-Based Natural and Cultural Tourism Site Design in West Bali National Park

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Abstract: This study aims to assess community-based tourism site designs that support conservation goals while benefiting local communities in West Bali National Park (TNBB). The relationship between natural, social, and cultural landscapes supports sustainable use and reflects interactions between TNBB and surrounding communities. Qualitative data was collected through site observations, interviews with local stakeholders, and document analysis in the TNBB utilization zone. Findings indicate that tourism-oriented landscapes in the utilization zone contribute to TNBB's conservation goals by fostering nature and culture-based tourism. Community involvement promotes collaborative relationships between TNBB management and village communities, enhancing local welfare through conservation efforts. The natural and cultural resources of the six buffer villages surrounding the National Park serve as significant tourist attractions, contributing to the preservation and sustainable development of the area. This collaborative approach can serve as a model for sustainable tourism in other conservation areas and guide policy on community-based tourism.

Keywords: landscape; nature and cultural tourism; conservation; local communities; West Bali National Park

1. Introduction

Conservation areas have emerged as increasingly popular tourist destinations, experiencing growth particularly in nature and cultural tourism. The rising interest in visiting conservation areas requires special attention (Sobhani et al., 2023). This is related to the core functions of conservation areas, which encompass three aspects: preservation, utilization, and protection. Consequently, the management of nature tourism must maintain a balance among these three functions (Siregar et al., 2024).

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The Site Design for Nature Tourism Management in West Bali National Park (Taman Nasional Bali Barat or TNBB) represents a crucial step necessary to support policy directions, strategies, and program indications for tourism development, particularly in West Bali National Park (Utama, 2013). This is in line with realizing the management vision of "Becoming a Center for Representative Biodiversity of Bali Island through management based on harmonious relationships between nature, society, and culture for sustainable utilization interests" (Hsu, 2019; Kibria et al., 2021; Robledano et al., 2018; Sobhani et al., 2023). Through the preparation of this document, it is anticipated that all efforts to develop and organize nature tourism within West Bali National Park can be implemented in a more directed manner, within the framework of integrated utilization of regional potential as a tourism destination, responsive to market dynamics, and managed sustainably (Becker et al., 2023; Mancini et al., 2022; Samal & Dash, 2023; Sobhani et al., 2023).

The concept of site design in a specific area, particularly conservation areas, involves the division of space within a zoning system (Jazuli & Anandi, 2021; Sobhani et al., 2023). The management concept is further reinforced by government regulations, especially regarding nature tourism management in utilization zones and wilderness zones designated for public spaces and business spaces in providing nature tourism services/facilities (Adeosun & Shittu, 2022; Hapsila & Astarina, 2020; Moons et al., 2020; Muhsoni & Efendy, 2017; Zhao, 2023). The Business Space is part of the national park's utilization zone because its location, condition, and potential are used for nature tourism business interests in providing nature tourism facilities. This space is part of the wilderness/utilization zone in conservation areas due to its location, condition, and potential being utilized for visitor interests, management, and nature tourism business for providing nature tourism services and supporting (Mbanze et al., 2021).

Supporting facilities for nature tourism visitors include information centers, docks/jetties, parking areas, boat moorings/mooring buoys, gates, shelters, paved/hardened tourist roads and footpaths, bridges, electricity networks, clean water networks, telephone networks, internet networks, drainage/channel networks, toilets, waste disposal networks, helicopter landing pads (helipads), observation towers, observation and interpretation points, road and direction signs, warning signs, information boards, interpretation boards, hectometer markers along the journey, equipment and gear rental facilities, food and beverage provision areas, souvenir shops, and other visitor needs outlets (Alktrani, 2021; Bentley et al., 2010; Cobbinah et al., 2017; Heshmati et al., 2022; Lee, 2019).

The development of site design for nature tourism management in National Parks, particularly in West Bali National Park (TNBB), from 2013 to 2018 is as follows: Site design activities in 2013 were carried out at locations based on the Decree of the Director of Utilization of Environmental Services for Conservation Areas and Protection Forests (PJLKKHL) Number: SK.43/ PJLKKHL-3/2013 regarding Guidelines for Preparing Site Designs for Nature Tourism Management in Wildlife Reserves, National Parks, Grand Forest Parks, and Nature Tourism Parks (Adom, 2019; Angessa et al., 2022; Kunjuraman et al., 2022).

The management plan for wildlife reserves, national parks, grand forest parks, and nature tourism parks is a macro management plan that is indicative, strategic, qualitative, and quantitative and is prepared with consideration for participation, aspirations, community culture, environmental conditions, and regional development plans for managing wildlife reserves, national parks, grand forest parks, and nature tourism parks. The utilization zone is part of the national park area designated for nature tourism and tourist visits (Angessa et al., 2022; Chandio et al., 2021; Esmail et al., 2023; Mbanze et al., 2021; Vasco et al., 2017).

West Bali National Park is located in the western part of Bali Island in Indonesia. This national park covers an area of 19,002.89 hectares, consisting of a terrestrial area of 15,587.89 ha and a marine area of 3,415 ha and as one of the conservation areas, the management of West Bali National Park (TNBB) is aimed at: 1) Protecting the Bali Starling population and other ecosystems such as coral reef ecosystems, mangrove ecosystems, coastal forest ecosystems, and lowland to mountain forest ecosystems as life support systems, primarily intended to maintain the authenticity, integrity, and diversity of natural succession in stable ecosystem units capable of supporting life optimally, 2) Preserving the diversity of flora and fauna species and their ecosystems, aimed at protecting, restoring authenticity, and developing populations and genetic diversity within the TNBB area from human disturbances, 3) Sustainable utilization of Natural Resources and Ecosystems for various purposes such as, 4) Serving as a field laboratory for researchers to develop science and technology, 5) Providing a place for education to increase knowledge and skills for the community, 6) Tourist attractions will be in special utilization zones where tourism facilities can be built, 7) Supporting the cultivation of flora and fauna breeding to meet protein needs and medicinal plants (Amarasinghe et al., 2021).

Geographically, TNBB is located between 114º26′ - 114º35′ East Longitude and 08º 05′ 30″ – 08º 17′ 20″ South Latitude. Administratively, the location of West Bali National Park is included in Bali Province, Jembrana Regency, and Buleleng Regency. West Bali National Park consists of various forest habitats

and savannas. The position in the center of West Bali National Park is dominated by remnants of four volcanoes from the Pleistocene era, with Mount Patas as the highest point in this area. About 160 species of animals and plants are protected in this national park, including banteng, deer, langurs, flying foxes, and various birds. The soil types in the West Bali National Park area vary. This is because the parent rocks are not the same.

According to the Bali Island soil review map, the soil types in this area include alluvial, latosol, and Mediterranean. Based on the Bali Island Soil Review Map at a scale of 1:250,000 (Land Rehabilitation and Soil Conservation Pattern for the Pancoran, Teluk Terima, Balingkang Anyar Unda, and Sema Bor Watershed Areas) in 1984, the geological formation of TNBB mostly consists of Latosol.

According to Mancini et al. (2022), public demands in the forestry sector for community empowerment activities around forests are also growing stronger. Indications of increasing forest degradation are directly proportional to the increasing powerlessness of local communities in facing the global culture of "consumerism" that is increasingly influencing their lifestyle (Mancini et al., 2022). The importance of empowering indigenous communities around forests has now become increasingly prominent as a key concept that has become a fundamental need for improving the performance of business entities and agencies whose scope of work is based on forest resources.

Various models of empowerment for indigenous communities around forests have been tested with diverse argumentative bases, such as Forest Village Community Empowerment; Community-Based Forest Management; Community Forestry; Social Forestry and others. Many of those who test these empowerment models start from an awareness to fully participate in improving community welfare. However, not a few start from compulsion and fear of increasing public pressure. There is even a tendency for this empowerment to be politicized merely to secure their position while controlling forest village communities to prevent radical resistance (Adeosun et al., 2023; Chandio et al., 2021; Esmail et al., 2023).

The site design for natural and cultural tourism in conservation areas invariably coexists with villages, including in TNBB where the presence of 4 buffer villages directly bordering the Bali Barat National Park area cannot be separated, namely Blimbingsari Village, Ekasari Village, Gilimanuk Sub-district and Melaya Village in Jembrana Regency, while Sumber Klampok Village, and Pejarakan Village in Buleleng Regency (Kunjuraman et al., 2022). The existence of utilization zones and wilderness zones developed for the purpose of public space and business space planning takes into consideration community interests in the context of community empowerment in the area(Wiryawan & Djatna, 2020).

While community-based tourism is widely recognized as a sustainable approach that promotes both conservation and local community welfare, limited research has examined how this model can be specifically adapted within conservation areas like West Bali National Park (TNBB). Existing literature largely addresses either community-based tourism or site design in isolation, without exploring how these elements interact to achieve conservation goals in TNBB's unique ecological and cultural landscape (Amarasinghe et al., 2021). Addressing this gap, the present study aims to investigate how community-driven tourism site designs in TNBB can harmonize conservation efforts with socioeconomic benefits for local communities. By focusing on collaborative site design and management practices, this research seeks to provide insights that contribute to sustainable tourism models for TNBB and similar conservation areas.

This study aims to examine the intersection of site design and community-based tourism in West Bali National Park, focusing on how collaborative efforts can achieve a balance between conservation and socioeconomic benefits. By addressing this, the research seeks to fill a gap in the literature and offer practical recommendations for sustainable management practices in conservation areas.

2. Literature Review

Recent literature highlights a significant shift in the forestry sector, emphasizing community empowerment in conservation area management. This trend is driven by increased public demand for active participation in managing forest areas, especially those with growing accessibility, which fosters greater local involvement in conservation efforts (Listiani et al., 2024). Alongside these developments, regulatory frameworks have evolved to support community-based conservation, including the establishment of internal community rules, partnership structures, and formalized collaborations with conservation management authorities.

Indonesia's conservation areas hold immense potential for natural tourism, encompassing 2,612 documented Natural Tourism Objects and Attractions. These include distinctive landscapes such as waterfalls, cave systems, coastal regions, lakes, mountains, and pristine forests (Listiani et al., 2024). The integration of biodiversity with the socio-cultural uniqueness of local communities offers opportunities for nature-based and cultural tourism. Muhamad (2009) categorizes these activities into nature-based experiences, including hiking, snorkelling, and wildlife observation, and cultural activities, such as Labuan ceremonies, which reflect the area's rich cultural heritage. However, the practical implementation of these categories into site design models that harmonize conservation and tourism objectives remains underexplored.

To address this, structured site design principles have been introduced through the Regulation of the Director General of PHKA Number: 3/2011 jo. Number: 5/2015. These principles delineate conservation areas into Public Space and Business Space. Public Space accommodates visitor activities and community management within protected zones, while Business Space supports nature tourism exploitation and business ventures in utilization zones. This structured approach is critical for balancing conservation and tourism development goals.

A successful example of this framework's application is the Kalikuning area of Mount Merapi National Park, where the Utilization Zone concept effectively integrates natural and cultural tourism while preserving environmental integrity (Muhamad & Khabibi, 2021). While this case study offers valuable insights, its potential adaptation to other conservation areas, such as West Bali National Park, has not been sufficiently examined.

Okazaki (2008) underscores the importance of community-based tourism (CBT) as a sustainable tourism model, emphasizing frameworks such as the ladder of citizen participation, power redistribution, and the role of collaboration in fostering community engagement. These frameworks are crucial for understanding participation dynamics at specific tourism sites. For instance, a case study in Palawan, Philippines, highlights an indigenous community's attempt to initiate community-based ecotourism, which faced challenges such as conflicts with non-indigenous stakeholders. Such examples illustrate the complexities of implementing CBT models and the need for ongoing evaluation and refinement.

Naranjo Llupart (2022) expands on the theoretical foundations of CBT by proposing a model that integrates systemic components and adapts to evolving tourism demands. Conducted in Ecuador, the study emphasizes the deductive analysis of tourism theories, leading to the development of a comprehensive CBT framework. This model highlights the interplay between subsystems, offering insights into community involvement and adaptability as critical factors in sustainable tourism development. The findings suggest that updating and localizing these models is essential for scientific and practical advancements in tourism management.

Building on these insights, this study focuses on West Bali National Park (TNBB) as a case study to address the research gap in designing integrated site models that balance natural and cultural tourism within conservation areas. It seeks to validate theoretical CBT models and explore practical applications that empower local communities while ensuring environmental sustainability.

3. Research Method and Theory

3.1 Research Method

3.1.1 Data Collection

Primary data were collected through direct observations at the Bali Barat National Park Conservation Area, focusing on the utilization zone. Observations were conducted over a four-month period, with field visits taking place twice a week from February to May 2023. Each observation session lasted approximately four hours, occurring between 9:00 AM and 1:00 PM to capture peak tourist activity. During each visit, the research team documented key landscape features such as beaches, waterfalls, caves, and forested areas, along with tourist facilities, including signage, infrastructure, and accessibility paths. The team also observed community activities, particularly those involving local residents in cultural practices such as traditional dances and rituals, as well as community-based tourism initiatives like craft markets and eco-tourism services.

The observation protocol included a checklist to standardize data collection, focusing on the condition of natural and built elements, visitor numbers, and the nature of interactions between tourists and the local community. Criteria used for documenting landscape features included uniqueness, biodiversity, and visitor engagement levels. Additionally, the research team observed the involvement of local residents in tourism-related activities, noting their roles, frequency of participation, and the cultural significance of the activities.

Secondary data were gathered through a comprehensive literature review, including books, academic journal articles, government reports, and previous studies on community-based tourism, conservation management, and tourism development policies. Relevant documents were sourced from local government agencies, such as the Ministry of Tourism, and academic publications on tourism and environmental management. Secondary data were used to provide context for primary data and support the analysis of tourism management frameworks and their alignment with conservation and community empowerment goals. For example, policy documents, such as the "Regulation of the Director General of PHKA Number: 3/2011 jo. Number: 5/2015," were reviewed to understand the regulatory frameworks for managing conservation areas and tourism activities.

3.1.2 Site Selection Criteria

The selection of villages for this study was based on several criteria to ensure their relevance to the study's objectives. The villages chosen—Gilimanuk, Blimbingsari, Sumber Klampok, and Pejarakan—are located within the buffer zones of the TNBB utilization zone. These villages were selected for their proximity to the conservation area, making them central to the tourism dynamics in the region. Moreover, the level of community involvement in

tourism activities, such as eco-tourism ventures, guided tours, and local cultural performances, was considered a key factor in their selection. Additionally, these villages were evaluated for their cultural significance, environmental sensitivity, and accessibility, all of which play a crucial role in the study's analysis of tourism site design within conservation areas.

The criteria for site selection were as follows: Proximity to Conservation Areas: Villages were selected for their direct connection to the TNBB conservation areas, which are crucial for tourism development. Their location within the buffer zones makes them integral to the park's tourism dynamics. Community Involvement in Tourism: Villages were evaluated based on their active participation in tourism-related activities, including local crafts, cultural performances, and eco-tourism services. This involvement is essential for understanding the role of local communities in tourism management.

Cultural Significance: Villages with strong cultural ties to the region, including traditional ceremonies, rituals, and other cultural practices, were prioritized to highlight the importance of cultural tourism and local heritage preservation. Environmental Impact: The ecological sensitivity of each village was assessed, with particular attention paid to its proximity to protected areas, critical habitats, and biodiversity hotspots. Villages with a higher ecological value were selected to examine the integration of conservation and tourism objectives. Accessibility: Villages were chosen based on their ease of access for tourists, ensuring that tourism infrastructure such as roads, signage, and accommodations are either present or in development. This criterion was critical for evaluating the viability of these locations for sustainable tourism practices.

3.1.3 Observation Protocol

The observation protocol for this study involved systematic field visits to the selected villages, with observations conducted over an extended period to capture a comprehensive picture of tourism activities and community involvement. Observations were made at regular intervals, with each observation lasting several hours to ensure that both daily and seasonal variations in activities were captured. During these observations, particular attention was paid to the landscape features that contribute to the attractiveness of the tourism sites, including natural landmarks, tourist infrastructure, and interactions between tourists and the local community.

In terms of community activities, a wide range of events were observed, such as cultural festivals, local markets, and eco-tourism initiatives. These activities were documented using a set of predefined criteria, which included their relevance to sustainable tourism practices, their cultural significance to the local community, and their potential impact on the environment.

3.1.4 Focus Group Discussion

The Focus Group Discussion (FGD) in this study aimed to explore the perspectives and experiences of local communities and stakeholders regarding the management of nature and culture-based tourism around the West Bali National Park. The FGD was held at the TNBB Hall, located at Jl. Raya Cekik, Gilimanuk, Jembrana, Bali, on July 15, 2023. The session lasted for one full day and was attended by 25 participants out of 30 invited stakeholders. The invitees included representatives from local government, relevant agencies, village and traditional leaders, community groups, and tourism operators.

The discussion was conducted in two sessions throughout the day, covering topics such as the revision of zoning regulations, tourism site design, public space versus commercial space, as well as national and regional policies such as Law No. 32/2024 on Natural Resources and Ecosystem Conservation, Government Regulation No. 36/2024 on Non-Tax State Revenue under the Ministry of Environment and Forestry, and business permits in conservation areas, particularly within TNBB.

In addition, the discussion addressed the management of nature and culture-based tourism around TNBB, challenges in developing community-based tourism, socio-economic impacts on local communities, and community expectations for collaboration with TNBB management to support conservation and regional development. The discussion followed a semi-structured guide, allowing for an open exchange of views on the challenges and opportunities of community-based tourism, socio-economic impacts, and the importance of stronger collaboration between local communities and TNBB management for sustainable tourism and conservation efforts.

3.1.5 Data analyses

Data were analyzed using both qualitative and quantitative methods. Qualitative Data were derived primarily from field observations and interviews. Observational data were recorded using field notes and photographs, and thematic analysis was used to identify recurring patterns, such as common tourist behaviors, popular landscape features, and community involvement in tourism activities. Thematic coding was applied to categorize the data into themes related to tourism site design, community participation, and ecological impact. For example, one theme that emerged was the balance between preserving cultural heritage while accommodating tourists, with particular attention to local ceremonies and festivals.

For quantitative data, the matching method was applied to assess the suitability of the conservation areas for tourism development. This method involved comparing the landscape features with land-use criteria to evaluate

the viability of different areas within the park for tourism. Each feature was scored on a scale of 1-5 based on its ecological sensitivity, accessibility, cultural value, and potential to attract tourists. The scoring system was as follows: 1 = low suitability, 5 = high suitability. Each zone within the utilization area was evaluated based on this scoring system, with scores being summed to provide an overall rating for each zone's tourism potential.

Community feedback was also analyzed using thematic analysis, focusing on their perspectives regarding tourism site design, environmental sustainability, and cultural preservation. Interviews were conducted with 30 local community members (15 men and 15 women), selected through purposive sampling to represent various age groups and roles in tourism activities. The interview guide included questions on the perceived benefits of tourism, the challenges faced by local communities, and suggestions for improving tourism management. Interview responses were analyzed by identifying recurring themes related to community involvement, cultural impact, and tourism development strategies.

3.2 Theory

Community-based tourism (CBT) is understood as a segment of tourism development that seeks to strengthen community participation, particularly in areas that reject mainstream tourism (Stem et al., 2003). It aims to promote community control over tourism activities, ultimately improving local well-being (Harrison & Schipani, 2007). Community-based tourism is defined as a collective program or initiative involving a group of individuals within a community who choose to actively participate in the development of small- and medium-scale local tourism industries. It is considered an alternative form of tourism that prioritizes community engagement as a key component in achieving sustainable tourism development (Telfer & Sharpley, 2008).

Another approach developed by Goodwin and Santilli (2009) identifies two key criteria in the academic definition of community-based tourism: community ownership or management and community benefits. However, communities can still benefit from tourism even without direct control or ownership (Li, 2006). Ownership in CBT often revolves around providing low-level employment opportunities for local residents (Li, 2006). Community-led tourism, in contrast, has the potential to generate greater social and economic impacts (Cole, 2006). CBT encourages direct community involvement (collective action) in the development, management, and distribution of tourism benefits, ensuring that tourism activities are well-integrated into the local economy (Ruiz-Ballesteros & Caceres-Feria, 2016).

4. Research Results And Discussion

4.1 General Overview of the West Bali National Park

West Bali National Park varies from flat to moderately steep terrain, with elevations ranging from 0 to 1,414 meters above sea level. Based on the Decree of the Director General of PHKA No. SK. 143/IV-KK/2010, dated September 20, 2010, TNBB is divided into multiple zones: the Core Zone (8,023.22 ha), Wilderness Zone (6,174.756 ha), Marine Protection Zone (221.741 ha), Utilization Zone (4,294.43 ha), Cultural, Religious, and Historical Zone (50.570 ha), Special Zone (3,967 ha), and Traditional Zone (310.943 ha), the latter comprising water areas such as Gilimanuk Bay and Teluk Terima Bay. Figure 1 illustrates the zoning map of TNBB.

West Bali National Park is a popular eco-tourism destination, known for its biodiversity, including Menjangan Island, a prime diving and snorkeling spot. The park offers facilities such as visitor centers, eco-lodges, and guided tours. Annually, TNBB attracts 50,000 to 60,000 visitors, with growing interest in its marine and terrestrial attractions. While tourism infrastructure is developing, balancing visitor numbers with conservation remains a challenge, aiming to preserve natural resources while benefiting local communities.

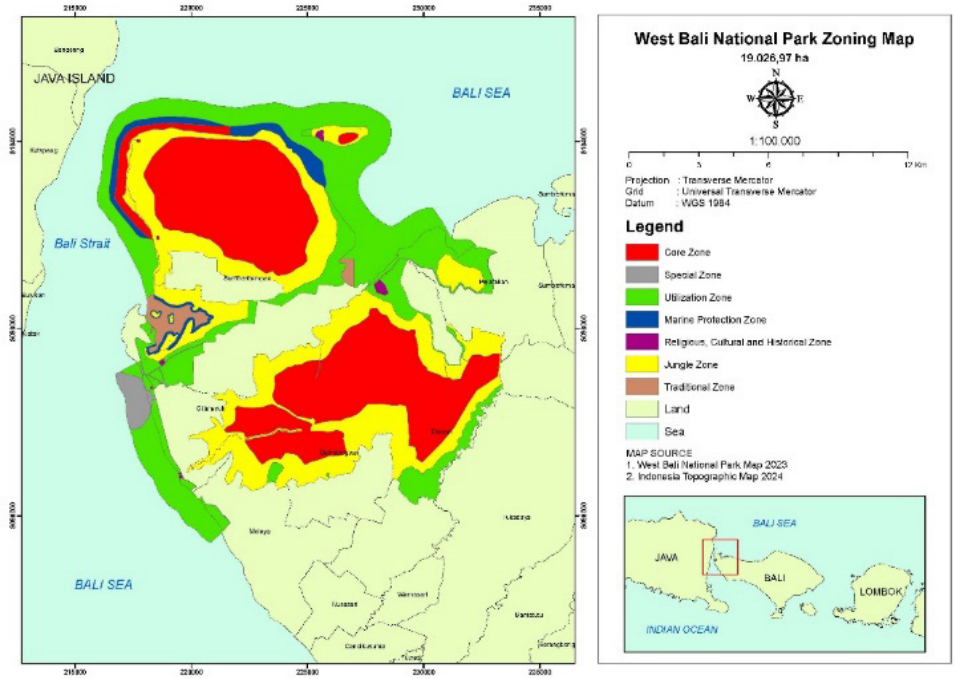

Figure 1. Zoning Review Map of the West Bali National Park (TNBB) (Source: West Bali National Park, 2023)

4.2 Community Involvement in Tourism Zones

4.2.1 Socio-Cultural Conditions of the Conservation Area

Socio-cultural conditions and community are essential elements in site planning (Pramono et al., 2021). The context of developing site designs for natural and cultural tourism management cannot be separated from the existence of 6 buffer villages directly bordering the Bali Barat National Park area, namely Blimbingsari Village, Ekasari Village, Gilimanuk Sub-district, and Melaya Village in Jembrana Regency, while Sumber Klampok Village and Pejarakan Village are in Buleleng Regency. The presence of utilization and wilderness zones developed for the purpose of public space and business space planning also considers community interests in the context of community empowerment (Krismawintari & Utama, 2019).

Furthermore, the socio-cultural potential considerations in natural tourism management include: 1) community involvement that can build harmonious relationships between National Park managers and the culture of village communities in conservation areas, while simultaneously improving the welfare of communities around forest areas in protecting and preserving through natural and cultural tourism sites; 2) natural and cultural conditions in 4 buffer villages directly bordering the National Park area as determining factors for the strength of tourist attractions, as shown in the data collection results in the following table (Heshmati et al., 2022). The following are some areas with socio-cultural potential in tourism, as shown in Table 1.

Beyond socio-cultural potential, TNBB also offers a range of natural tourism attractions and environmental services that can significantly boost national revenue. Various tourism and ecological service potentials, particularly in the utilization zones, provide opportunities for recreational, cultural, and conservation-based activities. Table 2 presents the distribution of natural tourism attractions within TNBB's utilization zones, including key sites such as Menjangan Island, Cekik, and Prapat Agung, which offer diverse tourism experiences, from diving and snorkeling to religious and wildlife tourism.

Table 1. Socio-Cultural Potential of the West Bali National Park Conservation Area

No	Village/Sub-District	Object/Zone, Utilization	Natural and Cultural Tourism Attractions	Community Cultural Activities
1	Gilimanuk	Karangsewu Beach, Gilimanuk Bay, Cekik	Mangrove, natural scenery, savanna landscape, sunrise, coral reefs, seagrass beds, mangroves, endemic Bali Starling, camping grounds, temples	Traditional fishing, service providers/ vendors, motorcycle taxis, tour guides, workers/laborers/ entrepreneurs, religious activities on Kalong Island/ Pelinggih Giri Putri, Pura Dalem, Bakungan, sea harvesting ceremony at Gilimanuk Bay
2	Blimbingsari Village	Blimbingsari Village, Grojogan	Cool and serene village scenery, preserved local wisdom, natural landscapes, waterfalls	Farming/gardening, service providers/ vendors, motorcycle taxis, tour guides, workers/laborers/ entrepreneurs, religious activities
3	Sumber Klampok Village	Tegal Bunder, Prapat Agung, Labuan Lalang, Teluk Terima, Menjangan Island	Mangroves, savanna landscape, natural scenery, seasonal forests, endemic birds, seasonal forests, savannas, beaches, temples, endemic Bali Starling, Jaya Prana's Tomb, mangroves, lowland rainforests, coral reefs	Farming, traditional fishing, service providers/vendors, motorcycle taxis, transport services, tour guides, workers/laborers/ entrepreneurs, religious activities
4	Pejarakan Village	Banyuwedang	Hot springs, mangroves	Farming, traditional fishing, service providers/vendors, motorcycle taxis, transport services, tour guides, workers/laborers/ entrepreneurs, religious activities

Source: Field observations (2023)

Table 2. Distribution of Natural Tourism Attractions in West Bali National Park Utilization Zone

No	Location	Tourism Object	Tourism Activities	Zone
1	Menjangan Island	Klentingsari Temple, Coral Reefs	Religious and Cultural Tourism	Utilization Zone, Religious, Cultural, and Historical Zone
2	Cekik	Camping Ground, Maritime Cross Monument	Camping, Trekking	Utilization Zone
3	Teluk Terima	Jaya Prana's Tomb, Mangrove Forest, Seasonal and Evergreen Coastal Forest	Cultural Tourism, Trekking, Bird Watching, Animal Watching, Jungle Trekking, Camping, Selfie Spot	Utilization Zone, Religious, Cultural, and Historical Zone
4	Prapat Agung	Seasonal Forest and Savannah, Segaraupek Temple	Bird Watching, Religious Tourism	Utilization Zone, Religious Zone

Source: Field observations (2023)

Figure 2. Distribution of Natural Tourism Attractions in West Bali National Park Utilization Zone (Land Attractions) (Source: Photographed by I Putu Gede Arya Kusdyana, 2023)

The land-based attractions in TNBB include forests, coastal landscapes, savannas, and wildlife habitats. The park's lowland forests are home to rare and endemic species, such as the Bali starling (Leucopsar rothschildi), wild deer (menjangan), long-tailed macaques, and monitor lizards. The mangrove forests along the coast provide essential ecological functions and serve as a habitat for various bird species, including kingfishers, hornbills, and sea eagles (Figure 2).

Figure 3. Distribution of Natural Tourism Attractions in West Bali National Park Utilization Zone (Marine Attractions) (Photographed by I Putu Gede Arya Kusdyana, 2023)

The marine attractions in TNBB are equally remarkable, offering crystal-clear waters, coral reefs, and diverse marine life. The park's coastal and underwater ecosystems support snorkeling, diving, and other marine activities (Figure 3). Several coral reef sites provide excellent locations for diving and snorkeling, showcasing vibrant coral formations, tropical fish, sea turtles, and other marine species. Some marine areas within TNBB feature mangrove-lined coastal zones that are ideal for kayaking and wildlife observation, as they support both marine and terrestrial ecosystems. The park's marine biodiversity makes it a crucial area for marine conservation and sustainable tourism, drawing both researchers and nature enthusiasts.

4.3 Tourism Impact on Conservation

4.3.1 Institutions and Community Empowerment

Institutions and community involvement in natural and cultural tourism management are crucial components in supporting the success of natural tourism management in conservation areas (Robledano et al., 2018). Furthermore, institutions play a role in resource management and benefit distribution in efforts to enhance tourism potential, serving as both a vessel and a driver in facilitating and developing community participation (Becker et al., 2023; Adom, 2019). One form of community involvement in natural tourism ranges from planning and implementation to monitoring (Adom, 2019). The development of institutions and community involvement requires appropriate initial planning facilitated by TNBB in determining proposed programs or special activities in tourism product development so that they can be implemented effectively and collaboratively according to the knowledge and skills of communities around the conservation area in TNBB.

The current condition of the West Bali National Park shows that the park is facing challenges related to both conservation and tourism development. While the utilization zone has significant potential for natural and cultural tourism, there are concerns about over-exploitation and the sustainability of tourism activities, particularly in the areas close to the park's boundaries. The park's wilderness and traditional zones are less developed for tourism, leading to missed opportunities for sustainable tourism in these areas. Additionally, the local community's level of involvement in tourism activities has been variable, with some communities being more active in eco-tourism ventures, while others lack the capacity or motivation to engage fully.

The challenges facing TNBB are not only a concern for park management but also for the local communities who are directly impacted by tourism development. While some communities are eager to participate in eco-tourism, their lack of resources and skills training limits their involvement. This gap highlights the need for greater collaboration between TNBB management and local stakeholders to create sustainable tourism models that benefit both the environment and the community.

As expressed by FGD participants, such as Ni Made Ayu (a dive equipment rental operator) and Mase Suparta (a guide from the Indonesian Tourist Guide Association – HPI), there is a shared desire for closer cooperation with TNBB to ensure that tourism development supports conservation while also improving local livelihoods. Ni Made Ayu is a dive equipment rental operator who actively participates in eco-tourism initiatives in the area surrounding West Bali National Park. She has expressed a desire for increased involvement in tourism activities, emphasizing the need for proper training and facilities to support both her business and conservation efforts.

> "*We want to be more involved in tourism, but we don't have enough training or proper facilities. If we could work more closely with TNBB, it would help both our income and conservation efforts*." (Ni Made Ayu – FGD Participant, 2023).

Made Perwata is a guide from the Indonesian Tourist Guide Association (HPI), specializing in the region around TNBB. With years of experience guiding tourists, he is keen on ensuring that tourism development remains environmentally sustainable while also supporting the local economy.

> "*Tourism here has great potential, but we worry that too much development could harm the environment. Some areas are thriving, while others remain untouched and underutilized. More support is needed to ensure tourism benefits both nature and the local community*." (Made Perwata – FGD Participant, 2023).

This desire for more integrated participation is in line with regional development plans for TNBB, which emphasize the importance of balancing tourism development with conservation efforts. Specifically, zoning provisions for TNBB must ensure compatibility between tourism activities and the protection of natural resources and ecosystems. Natural tourism development is permissible only within the utilization zone, while limited tourism activities can take place in the wilderness and traditional zones (Jazuli & Anandi, 2021). The current condition of TNBB highlights the need for better coordination between the park's management, local institutions, and surrounding communities to align tourism development with conservation objectives, ensuring that community involvement is effectively integrated into the process.

4.4 Challenges and Opportunities in Site Design

4.4.1 Zoning Provisions and Management Implications

Based on management zone criteria in conservation areas, activities that can be carried out within the Utilization Zone related to natural and socio-cultural tourism development include developing the cultural potential of surrounding communities, natural tourist attractions, natural tourism business operations, and limited infrastructure development to support activities. Site suitability analysis in conservation areas for determining community-based natural and cultural tourism spaces involves the provision of natural and cultural tourism services as a support for nature tourism (Bentley et al., 2010). Furthermore, according to Tandi & Burhanuddin (2023), site suitability is based on policy, ecological, technical, socio-cultural, and regional development plan considerations. The potential for natural and cultural tourism attractions with community involvement, biodiversity, potential disruptions to conservation activities, and vulnerability to nature tourism development in West Bali National Park are the most important factors in site suitability within conservation areas (Luong, 2023; Sawchuk et al., 2015)

Natural and cultural-based tourism development as shown in Figure 4 is a perspective encouraged by the government to achieve sustainable development goals (Vasco et al., 2017). Community empowerment programs are an important strategy to realize this. The main requirements for community empowerment are granting authority and increasing community capacity (Hsu, 2019). Based on TNBB community empowerment data there are target fostered villages, namely Sumber Klampok Village, Blimbingsari Village, and Gilimanuk Sub-district. Community involvement in tourism management in TNBB is accommodated in 8 groups, namely: (1) Sumber Klampok Tourism Awareness Group; (2) Gilimanuk Tourism Awareness Group; (3) Service Provider Forum; (4) Gilimanuk Community Self-Help Group Communication

Forum; (5) Manuk Jegeg Group; (6) Paksi Sarimerta Group; (7) Labuan Lalang Management Board and (8) Fishermen Group. To strengthen the community's position in ecotourism management, authority needs to be granted in the form of licensing through Natural Tourism Service Management Business Permits (IUPJWA).

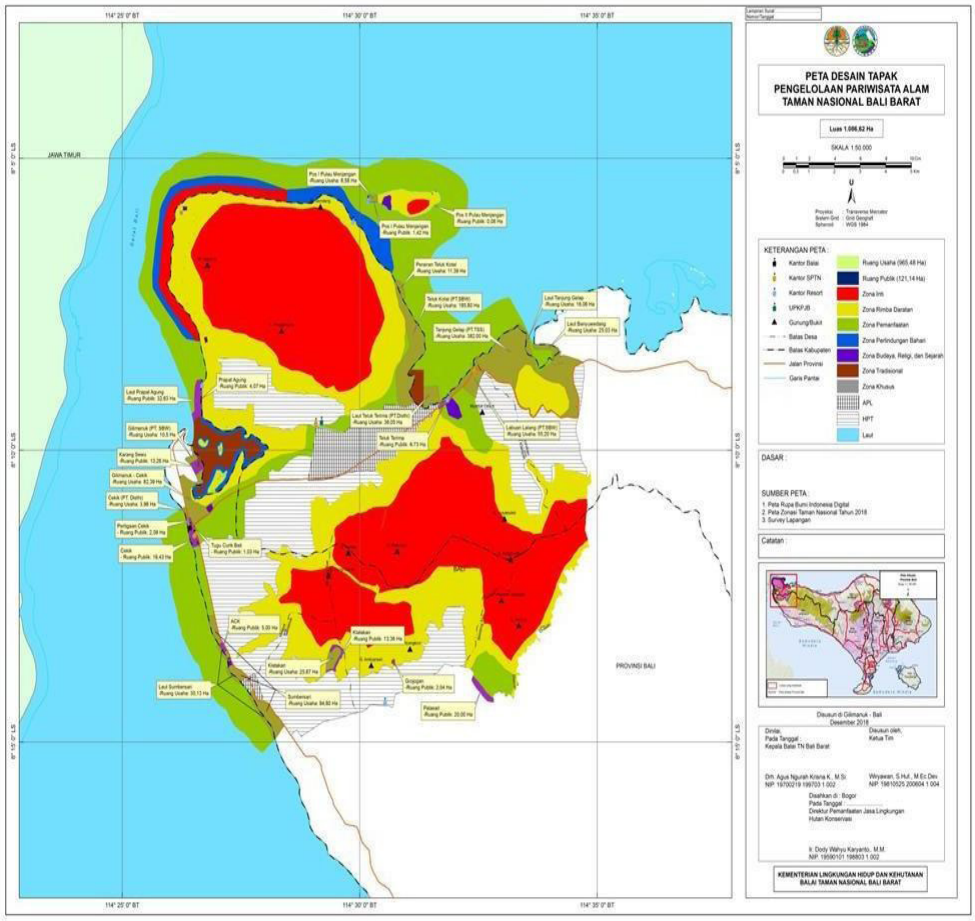

Figure 4. Map of Natural and Cultural Tourism Development Plan in TNBB (2019-2038) (Source: West Bali National Park, 2023)

Granting natural tourism management permits to community groups can be categorized into 2 forms: (a) based on existing groups and (b) based on Tourism Village area groups. This second form can become a model for community culture-based ecotourism management that integrates tourism planning and village planning (Bodosca & Diaconescu, 2015). Blimbingsari Village is one that can be encouraged to implement this model. Community interest and support from the government are the main assets in realizing community-based ecotourism management (Naury et al., 2024; Samal & Dash, 2023).

Community-based natural and cultural tourism management can be conducted by conservation area managers through (1) "granting management permits" and (2) "institutional strengthening" of natural and cultural tourism by developing group rules to regulate relationships among members, as well as rules governing inter-institutional relationships, especially with TNBB and among community tourism groups (Angessa et al., 2022; Bodosca & Diaconescu, 2015). In addition to these two aspects, a "community capacity building program" is needed for group members to provide professional services to visitors (Cobbinah et al., 2017). To promote these three programs, conservation areas can collaborate with various experienced stakeholders in providing assistance to community tourism groups (Esmail et al., 2023). This can be done through community business development via MSME development of local excellence products, service businesses, MSME empowerment, through cooperation with the Ministry of Villages, Village Community Empowerment Office in the form of Cooperatives, Non-Governmental Organizations, and other related institutions (Jazuli & Anandi, 2021)

Facilitating community involvement in managing natural tourism needs to be accompanied by good and detailed planning at the site level. Interaction and awareness from communities around TNBB are positive factors in building and developing nature and culture-based tourism (Bodosca & Diaconescu, 2015; Moons et al., 2020; Samal & Dash, 2023). In this context, the alignment of community-based tourism management that integrates traditional village management areas, government villages, site management areas, and TNBB zones, as well as local government programs, becomes a priority for developing sustainable natural tourism in TNBB. The management of tourist attractions, such as Banyu Wedang, requires coordinated efforts to prioritize and formulate a collaborative management model that accommodates the interests of relevant parties, including local communities, government agencies, and conservation authorities.

The current condition of TNBB is characterized by its rich biodiversity and ecological significance. However, the park is facing several challenges related to tourism development. While tourism holds great potential for economic growth and community empowerment, the pressure on the park's natural resources has increased in recent years due to rising visitor numbers. Issues such as environmental degradation, overuse of natural resources, and the need for better infrastructure management are critical challenges for TNBB's sustainability.

Additionally, there is a growing concern about balancing conservation efforts with community needs, as the surrounding communities are increasingly involved in tourism-related activities, including eco-tourism ventures and

cultural performances. Efforts to address these issues include ongoing collaborative initiatives between the park management, local communities, and government entities. The development of sustainable tourism models that integrate conservation with community welfare is essential for ensuring that tourism benefits both the environment and the local population without compromising the park's ecological integrity.

To ensure that the utilization of TNBB remains aligned with sustainability principles, an approach that balances conservation and tourism development is necessary. In this regard, the management of zones within the national park plays a crucial role in determining the types of activities that can be conducted without harming the ecosystem. Table 3 presents the matching method for utilizing zones for nature and culture-based tourism in TNBB, including area criteria and permissible activities to support environmental preservation and the well-being of local communities.

Table 3. Matching method for utilizing a zone for nature and culture-based tourism in West Bali National Park.

No	Zone	Criteria and Activities
1	Utilization Zone	It is an area possessing natural beauty, natural or cultural attractions of historical value and/or a region with accessibility capable of supporting utilization activities; it is an area highly suitable for the construction of tourism infrastructure to support utilization and management. It is not a concentration of primary plant/biota communities, nor an area with high species diversity; and/or it contains potential environmental services and natural and cultural tourism resources that can be utilized.
2	Permissible Activities	Protection and security; Inventory and monitoring of biological natural resources and their ecosystems; Habitat and population management to maintain wildlife population existence; Scientific research and development; Education and enhancement of nature conservation; Carbon storage and sequestration; Utilization of genetic resources and germplasm to support cultivation; Development of natural and cultural tourism potential and attractions; Nature tourism business operations and environmental condition management in the form of carbon storage and/or sequestration, water mass, hydropower, geothermal energy, and wind energy; Limited development of facilities and infrastructure to support natural and cultural tourism activities.

Source: Field observations (2023)

5. Conclusion

This study on community-based natural and cultural tourism site design in West Bali National Park (TNBB) highlights the importance of integrating

natural, social, and cultural landscapes into sustainable tourism development. The park's site design follows a zoning system that allocates space for public use, business activities, and tourism services—key elements in promoting both natural and cultural tourism. The utilization zone, designated for such purposes, facilitates the development of eco-tourism ventures, cultural events, and other tourism-related activities, ensuring the park's long-term sustainability. Government regulations play a crucial role in reinforcing tourism management, ensuring alignment with conservation principles.

Community involvement is key to the success of this model, as local participation fosters positive relationships between park management and the surrounding villages. Specifically, community-led initiatives, such as eco-tourism activities and cultural events, support conservation efforts by raising public awareness and promoting environmental stewardship. The natural environment and cultural practices of the six buffer villages—Blimbingsari, Ekasari, Gilimanuk, Melaya, Sumber Klampok, and Pejarakan—serve as major attractions for tourists, contributing significantly to both conservation and socio-economic development in the region.

The research emphasizes that successful community-based tourism management requires empowering local groups, enhancing community capacity, and establishing institutional frameworks that integrate tourism planning with village development. In TNBB, this approach has proven to balance ecological preservation with the socio-economic needs of local populations. However, the design of tourism spaces must be conducted with careful consideration of zoning regulations, ensuring that development aligns with the principles of ecological and cultural preservation.

In terms of practical application, it is recommended that collaborative management models be prioritized. These models should involve park authorities and local communities in decision-making processes, integrating traditional ecological knowledge with modern conservation practices. Strengthening community institutions and promoting sustainable livelihoods through ecotourism will further enhance the success of this model. Such practices could position TNBB as a leading example of sustainable, community-based natural and cultural tourism that benefits both the environment and local communities. Additionally, these models can be replicated in other conservation areas to achieve broader goals of sustainable development and biodiversity conservation.

However, this study has limitations, including its observational nature and limited geographic scope. Future research could address these gaps through longitudinal studies to assess tourism's long-term impact on conservation or by employing quantitative methods to measure its economic benefits for local

communities. Such studies would enhance our understanding of the relationship between community-based tourism and environmental sustainability, offering valuable insights for policy-making and conservation strategies.

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