

Article

# Kambo tourism village masterplan: Community participation in tourism development

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Abstract: This study explores the application of the co-design approach in participatory planning for the development of Kambo Tourism Village, located at the intersection of urban and rural areas in Indonesia. By combining the Delphi Consensus Method and Analytic Hierarchy Process (AHP), the study successfully identified and prioritized key aspects in the planning process, with a primary focus on local community participation. The results indicate that the co-design approach is effective in creating a masterplan that not only aligns with the needs and aspirations of the community but also supports the sustainability and inclusiveness of tourism village development. AHP results reveal that local community participation was assigned the highest priority with a weight of 0.35, followed by stakeholder collaboration with a weight of 0.27. Community participation not only contributed to the creation of a wellstructured tourism village masterplan but also enhanced human resource quality and strengthened stakeholder collaboration. The impact of this participatory planning process includes increased national recognition for Kambo Village, the village's success in receiving awards, and local economic growth. Moreover, the study identified a gap between the calculated and expected weights in the AHP process, highlighting the complexity of aligning diverse stakeholder perspectives. These findings offer both practical and theoretical contributions and open opportunities for further research to address the challenges of participatory planning in the context of tourism villages.

**Keywords:** participatory planning; tourist village; community empowerment; sustainable development; multi-stakeholder collaboration

# 1. Introduction

Tourism is an economic sector with significant potential to drive local and national economies. In recent decades, many countries, including Indonesia, have prioritized the development of tourism areas. Well-planned tourism areas can provide substantial economic benefits, such as job creation, increased community income, and the preservation of local cultural identities (Lin and Lin, 2020; Quan-Baffour, 2023; Ridho and Alisa, 2020). However, without careful and inclusive planning, tourism development risks causing various issues, including environmental degradation, the marginalization of local communities, and social conflicts (Buzinde and CaterinaKnorr, 2023; Guo and Jordan, 2022). Therefore, a new approach to tourism area planning that is more participatory and collaborative is necessary.

The co-design approach is increasingly recognized as an effective method in tourism area planning. This method emphasizes the importance of involving various stakeholders—including local communities, governments, businesses, and non-governmental organizations—in the planning process. Such involvement allows for more responsive planning to the needs and aspirations of the local community and is better equipped to create sustainable solutions (Bellato and Cheer, 2021; Spadaro et al., 2023). Active participation from local communities not only enhances a sense of ownership and responsibility towards the sustainability of tourism areas but also supports the long-term success of such developments.

The idea of participatory development planning is not new in academic literature. This concept has long been a critique of top-down planning models, which are often seen as failing to meet the expectations of communities as the objects of development (Arnstein, 1969; Burke, 1968; Moser and Korstjens, 2022). As theories of communicative and collaborative planning have evolved, participatory planning has gained widespread attention as a more inclusive and effective approach. In the context of tourism planning, a participatory approach is particularly relevant, as local communities are the ones most affected by tourism and are key factors in creating a welcoming atmosphere for tourists (Simmons, 1994; Tosun, 2006). Other research suggests that public participation is beneficial in shaping behavior and responsibility towards the tourism environment (Cheng et al., 2019).

However, despite the recognized importance of public participation in tourism planning, its effectiveness is not always guaranteed. Criticisms of participatory planning include views that the process is often slow, ineffective, and faces complex challenges in implementation (Wesselink et al., 2011). Field practices indicate that local participation does not always result in successful planning. This process requires appropriate mechanisms to identify and measure the priorities of various important aspects in tourism area planning.

This research aims to fill the gap in the literature regarding the impact, forms, and methods of participation in the context of tourism planning, particularly in Indonesia as a Global South country actively developing its tourism sector to support the national economy. This study will focus on Kambo Tourist Village, located on the border between urban and rural areas in Palopo City, South Sulawesi. The strategic position and unique characteristics of Kambo Village make it a relevant case to explore how the co-design approach can be effectively applied in sustainable tourism area planning.

The urgency of this research lies in the need to integrate urban and rural aspects into harmonious planning, considering the location of Kambo Village, which allows for interaction between these two regional characteristics. This study will also explore how the Delphi Consensus method and Analytical Hierarchy Process (AHP) can be used to identify and measure priorities in participatory planning, resulting in more accurate and accountable decision-making.

Thus, this research is expected to provide theoretical and practical contributions to developing a more inclusive and sustainable tourism planning model, particularly in tourist village areas. The findings of this study are also expected to serve as a reference for planners, policymakers, and tourism industry players in designing tourism areas that are not only attractive to tourists but also beneficial and empowering for local communities.

To clarify the position of our research within the existing literature, this study builds on previous works related to participatory planning and co-design approaches, while specifically focusing on their application in the context of rural tourism development in Kambo Village. Unlike earlier studies that often highlight the theoretical aspects of co-design or explore its use in urban settings, our research emphasizes the practical application of these methods in a rural-urban interface, where the local community plays a central role in decision-making. Moreover, by integrating both the Delphi Consensus and Analytic Hierarchy Process (AHP) methodologies, this study offers a distinct contribution by demonstrating how these tools can be effectively combined to align diverse stakeholder priorities. While the existing literature has acknowledged the importance of participatory planning, this study provides empirical evidence on how these methodologies can enhance the inclusiveness and sustainability of tourism development in a specific socio-cultural and geographical context.

#### 2. Literature review

#### 2.1. Participatory approaches in tourism planning

In tourism planning, participatory approaches have gained prominence as a means to engage various stakeholders in the decision-making process, ensuring that outcomes align with the needs and desires of the community. This participatory approach involves local residents, visitors, and other relevant parties in the planning and design stages of tourism development (Arbogast et al., 2020). By incorporating social design activities such as asset mapping, landscape visualization, and cultural identity design, destinations can collaboratively work with communities to achieve their goals sustainably (Arbogast et al., 2020).

The shift towards participatory planning is crucial to ensuring that tourist preferences are aligned with local community initiatives (Tekalign et al., 2018). Traditional top-down approaches to tourism planning, often led by external entities, may not fully capture the needs and aspirations of local communities (Ottaviani et al., 2023). Therefore, involving a broader range of stakeholders, including local tourism stakeholders, in the planning process is essential for creating more inclusive and sustainable tourism destinations (Nguyen et al., 2020).

To enhance the effectiveness of participatory planning, innovative methods such as serious games and living labs have been proposed to stimulate community input and collaboration (Jernsand, 2019; Koens et al., 2022). These user-centered approaches empower communities to actively shape tourism policies and practices, moving beyond mere public consultation to meaningful engagement in the decisionmaking process (Koens et al., 2022).

Furthermore, the concept of sustainable tourism development emphasizes the importance of stakeholder collaboration, environmental impact analysis, and the integration of local identity into the tourism experience (Agapito and Guerreiro, 2023; Wulandari et al., 2024). By adopting frameworks that promote community engagement, such as the Participatory Action Research (PAR) model, destinations can

ensure that tourism development aligns with the socio-cultural and environmental values of the area (Munkhuu et al., 2023; Pathumporn and Nakapaksin, 2016).

Successful examples of co-design approaches in tourism planning have been highlighted in various studies. Collaborative initiatives and community involvement are crucial for effective tourism planning (Jamal and Getz, 1995). One key aspect emphasized in the literature is the effectiveness of smart tourism design in creating tourism experiences by integrating various stakeholders, resources, and technologies to deliver value to tourists (Deng et al., 2024). This approach underscores the importance of collaboration and leveraging technology to enhance the overall tourism experience.

Moreover, the use of social design activities, such as asset mapping, landscape design, and visualization, has proven to facilitate co-design with communities and stakeholders, enabling destinations to achieve their objectives effectively (Arbogast et al., 2020). Engaging stakeholders in the planning process ensures that tourism development aligns with the preferences and initiatives of tourists and local communities, leading to more sustainable and successful outcomes (Tekalign et al., 2018).

Additionally, the willingness of target groups to accept and adhere to tourism planning decisions is critical to success, highlighting the importance of community engagement and empowerment in the planning process (Pazhuhan and Shiri, 2020). Integrating physical planning with social innovation and knowledge has also been emphasized as a key factor in successful tourism planning (Costa, 2020).

Moreover, adopting a community-based approach in tourism development planning has been shown to positively impact sustainable rural development by empowering local stakeholders and promoting responsible tourism activities (Shafieisabet and Haratifard, 2020). Stakeholder engagement through local-level tourism master plans, with a strong focus on pragmatic implementation, has been identified as another key success factor in destination management (Cizmar and Lisjak, 2007).

## 2.2. Levels and forms of participation

Arnstein (1969) delineates eight levels of public participation: 1) Manipulation, where decision-makers fabricate the appearance of community involvement; 2) Therapy, where decision-makers engage in superficial outreach to appease the public; 3) Informing, where decision-makers provide one-way communication, merely notifying the public; 4) Consultation, where decision-makers listen to public input but are not obligated to act on it; 5) Placation, where public suggestions are acknowledged but not necessarily implemented; 6) Partnership, where decision-makers and the public negotiate on decisions; 7) Delegated Power, where decision-making authority is transferred to the public; and 8) Citizen Control, where the public fully controls the decision-making process.

In the context of tourism, Mostafa Rasoolimanesh and Mastura Jaafar (2016) identify three levels of participation: coercive, induced, and spontaneous. Coercive participation represents the lowest level, where involvement is limited to predetermined activities such as tourism promotion, with no access to tourism development plans. Induced participation involves listening to community voices, but the community lacks control over the decisions made by authorities. Spontaneous participation is the highest level, where the local community has the power to control development planning.

In Indonesia, there are several forms of participation. First, participation in policymaking, such as providing alternatives to government-drafted plans. Second, participation in implementation, such as involvement in tourism awareness groups (Pokdarwis) and managing tourism businesses, including cafes, marketing, lodging, and more. Third, participation in contributing labor and resources to local tourism development.

Simmons (1994) evaluates three methods of participation: interviews, surveys, and focus group discussions (FGDs). Each has its strengths and weaknesses: (1) Interviews allow for two-way communication between the public and planners; they involve a small but highly representative group of participants, with high costs due to the need for specialized interviewers and moderate time requirements; the benefits to the public are moderate, and the benefits to planners are low. (2) Surveys provide one-way communication from the planner's perspective; they involve a large number of participants with high representativeness, requiring significant time and financial resources; the benefits to the public are low, and the benefits to planners are moderate. (3) FGDs involve two-way communication; they include a small group with moderate representativeness, with moderate costs and time requirements; the benefits to the public are high, and the benefits to planners are high.

Simmons (1994) further emphasizes that the key to success in all methods is the knowledge of citizens and their influence on decision-making. Education and awareness-raising about tourism are crucial, as is the transparency of information from the government and planning entities.

#### 2.3. Tourism area at the urban-rural border

Tourism at the urban-rural border presents unique opportunities for development and economic integration. Research has shown that aligning tourism development with urban-rural integration can help bridge the gap between urban and rural areas (Tan et al., 2023). This integration not only drives economic growth but also contributes to sustainable development by stimulating local economies (Saha, 2020). Rural tourism, in particular, has been identified as a key factor in promoting the development of border regions (Bronisz and Jakubowski, 2017).

The impact of tourism on income distribution has been a subject of interest, with studies indicating that tourism can influence income inequality between rural and urban areas (Zhang, 2023). Additionally, rural tourism has been shown to positively affect farmers' incomes, highlighting its role in supporting rural livelihoods (He et al., 2021). Furthermore, rural tourism development has been linked to the empowerment of high-quality tourism economies, especially in regions with strong urban-rural integration (Wang et al., 2023).

In the context of the COVID-19 pandemic, measures such as time-sharing reservation systems have been implemented to manage tourism flows, leading to a clearer distinction between urban and rural tourism (Li et al., 2021). This distinction

underscores the need to understand the spatial patterns and determinants of tourism development in urban and rural areas (Sun et al., 2023). Moreover, the evolution of urban and rural tourism spaces has been analyzed, emphasizing the importance of market demand, resources, and transportation in driving their development (Bai and Cheng, 2022).

Rural tourist areas near urban regions offer a blend of unique characteristics that distinguish them from either urban destinations or remote rural areas. These areas often feature a mix of urban trends and traditional rural activities, attracting a diverse range of tourists (Hidayat and Jeneetica, 2017). The urban-rural fringe, known as the peri-urban area, offers distinctive tourism experiences by combining attractions such as amusement parks, shopping villages, and conservation areas, thus creating a unique product mix (Weaver, 2005). As urbanization progresses, rural areas are experiencing an influx of visitors seeking farmhouses, cultural experiences, and natural beauty, leading to the growing popularity of rural tourism among urban tourists (Mei and Han, 2022).

Rural tourism is defined as an experience in rural areas involving various agricultural and non-urban activities, playing a crucial role in sustainable development (Tou et al., 2022). The commercialization of rural spaces contributes to regional development by offering relaxation opportunities and an attractive built environment for both locals and tourists (Akira, 2010). Rural tourism serves as an escape for visitors seeking relief from urban life, emphasizing the appeal of rural environments (Doganer, 2017). Moreover, the presence of local residents and culture distinguishes rural tourism from other non-urban activities, highlighting the importance of community involvement (Saf, 2022).

Efforts towards sustainable tourism and environmental conservation motivate tourists to choose rural destinations over densely populated urban areas, thereby driving the economic development of rural regions (Makáň et al., 2023). Rural tourism not only benefits rural communities economically but also contributes to their socioeconomic development (Saha, 2020). By leveraging local resources and traditions, rural tourism helps revitalize rural areas and promote cross-border cooperation for sustainable development (Badulescu and Badulescu, 2017).

#### 3. Methodology

This study employs a combination of two analytical methods, the Delphi Consensus and the Analytic Hierarchy Process (AHP), designed to integrate the perspectives of various stakeholders in the participatory planning process of a tourist village. This combination was chosen for its ability to address the complexities of decision-making that involve multiple parties with diverse interests.

The Delphi Consensus method is a decision-making technique aimed at reaching agreement among a group of experts or stakeholders through a structured process. In this study, the method is used to gather and align the views of various stakeholders, including local communities, youth leaders, community leaders, local government, NGOs, academics, and tourism agencies. The Delphi process is conducted in several rounds of surveys, where each stakeholder provides their assessments anonymously. After each round, feedback is provided to the participants, who can then revise their assessments based on the information received. The goal of this process is to achieve a collective consensus that reflects the shared priorities of the stakeholders (Bibri et al., 2020; Chirenje et al., 2013). In this study, the results of the Delphi Consensus are used to establish initial weights for various key aspects and sub-aspects in the tourist village planning. These weights reflect the initial priorities agreed upon by the stakeholders, which are then used as inputs for further analysis using AHP.

Once the initial weights are obtained through the Delphi Consensus, the Analytic Hierarchy Process (AHP) method is used to evaluate and calculate the relative weights of each aspect and sub-aspect in the participatory planning process. AHP is a method that helps in prioritizing among multiple criteria or alternatives through pairwise comparisons. In the context of this study, AHP involves the creation of a pairwise comparison matrix, where each aspect and sub-aspect is compared against the others based on their relative importance.

This process involves several key steps: Pairwise Comparison Matrix: Each aspect identified through the Delphi Consensus is compared in pairs to determine its relative importance, and Weight Calculation: Using the eigenvector method, the relative weights are calculated for each aspect, providing a quantitative value for the priority of each aspect. The results of AHP are then used to evaluate the alignment between the generated weights and the expected priorities, allowing for the identification of gaps and opportunities for adjustment. In this way, AHP not only provides a robust analytical structure but also enables a more precise assessment of how these priorities can be implemented in practice. The research flowchart illustrating the Co-design Process and the determination of key aspects can be seen in **Figure 1**.



Figure 1. The co-design process and determination of key aspects.

This study focuses on several key aspects of tourist village planning, evaluated using the combination of the Delphi Consensus and AHP methods. These aspects include: Local Community Participation: Actively involving the local community in the planning process (Chirenje et al., 2013; Li et al., 2020a; Li et al., 2020b; Selman, 2004; Tauxe, 1995; Tewdwr-Jones, 1998).

Understanding Needs and Aspirations: Identifying the needs and aspirations of the community to ensure the relevance of planning (Bibri et al., 2020; Harsia and Nummi, 2024; Li et al., 2020; Mausch et al., 2021).

Collaboration and Communication: Facilitating synergy among various stakeholders through effective communication (Dühr et al., 2005; Hahn et al., 2020; Santoro et al., 2004; Shelbourn et al., 2007).

Local Resources and Capacity: Optimizing the use of local resources and empowering existing potential (Maiti and De Faria, 2017; Rutting et al., 2021; Smith, 1973; Volenzo and Odiyo, 2018).

Sustainability: Ensuring that the development of the tourist village can be sustained in the long term without compromising the local environment, economy, or society (Akbar et al., 2020; Čiegis and Gineitienė, 2008; Fouché and Brent, 2020; Tippett et al., 2007).

Innovation and Creativity: Encouraging innovation that maintains the attractiveness and competitiveness of the tourist village (Cilliers and Timmermans, 2014; Cinderby et al., 2021; Dixon et al., 2022; Raynor et al., 2017; Seo, 2022).

Monitoring and Evaluation: Periodically assessing the performance and impact of planning to enable necessary adjustments (Hassenforder et al., 2016; Holte-McKenzie et al., 2006; Jan and Contreras, 2016; Kusters et al., 2018).

Each of these aspects is evaluated to ensure that the development of the tourist village is not only focused on short-term outcomes but also on long-term, sustainable, and inclusive impacts. The combination of the Delphi Consensus and AHP methods allows researchers to quantitatively and qualitatively measure the priorities of each aspect, providing a more comprehensive guide in participatory planning.

	Key	y Aspects and Sub-Aspects in Participatory Tourism Village Planning	
Local Community Participation	-		Active Involvement Representation Ownership
Understanding Needs and Aspirations	-		Needs Identification Local Culture and Traditions
Collaboration and Communication	-		Multi-stakeholder Collaboration Open Communication
Local Resources and Capacity	-		Utilization of Local Resources Capacity Building
Sustainability	-		Environment Economy Social Impact
Innovation and Creativity	-		New Ideas Technology Utilization
Monitoring and Evaluation	-		Long-term Plan Community Satisfaction



**Figure 2** illustrates the key aspects and sub-aspects involved in the participatory planning process of the tourism village. The first aspect, Local Community Participation, encompasses three critical sub-aspects: active involvement, representation, and a sense of ownership among the local community. This emphasizes the importance of the local community's role throughout all stages of planning, ensuring their voices are well-represented and that they have ownership over the final outcomes. The second aspect, Understanding Needs and Aspirations, highlights how the identification of local needs and the preservation of culture and traditions play a crucial role in formulating policies that align with the conditions of the tourism village. The third aspect, Collaboration and Communication, underscores the need for multi-stakeholder collaboration and open communication between the community, government, and private sector.

The fourth aspect, Local Resources and Capacity, focuses on utilizing local resources and building community capacity to support sustainable tourism development. The fifth aspect, Sustainability, encompasses environmental, economic, and social dimensions, which serve as the main pillars in ensuring that tourism village development aligns with sustainability principles. The sixth aspect, Innovation and Creativity, emphasizes the introduction of new ideas and the use of technology to boost the competitiveness of the tourism village. Finally, Monitoring and Evaluation functions as long-term oversight to assess the effectiveness of the planning process and the level of community satisfaction.

**Figure 2** supports the analysis and discussion in the article by providing a clear visual framework of the key elements that must be considered in participatory tourism village planning. It illustrates how the involvement of various stakeholders, along with a focus on sustainability, innovation, and ongoing monitoring, are essential for the success of the tourism village project. By visualizing the interrelations between these aspects, **Figure 2** helps to clarify how the planning process not only involves the formulation of inclusive policies but also ensures the relevance and sustainability of the initiatives.

It should be noted that while the combination of the Delphi Consensus and AHP provides a strong framework, these methods also have limitations. The Delphi process can be lengthy and requires active participation from all parties, which may be difficult to achieve in practice. Meanwhile, AHP relies on the quality of input data in the pairwise comparison matrix, which can be influenced by the subjectivity of stakeholders' assessments. To address these limitations, this study will conduct validation and cross-checks at each stage to ensure more accurate and reliable results. By considering these aspects, this research aims to make a significant contribution to the development of an inclusive and sustainable tourist village planning model.

## 4. Results and discussion

#### 4.1. Participatory planning process of the tourist village

The participatory planning process for the development of the Tourist Village in Kambo has been ongoing since 2019, with data collection methods including small group discussions with the community and direct field observations. However, formal co-design activities have been conducted at least five times on a larger scale. This

process is divided into three main activities: first, the "problem tree" exercise; second, participatory mapping; and third, area redesign and zoning, which have been conducted at least three times. These sessions were held over different periods. The first meeting with residents took place in August at Warung Puncak, while the second meeting used the transect and photo-hunting methods, starting from the Kambo Village Office to Kedai Alang Puyuh in September. The third meeting was held in October at the Kambo Village Office. This participatory approach involved all elements in the mapping and problem-solving system. Community involvement in understanding and analyzing issues, whether physical, social, economic, cultural, or environmental, was crucial. This process included various stages, from problem identification, assessment, and formulation, to refining visions and aspirations, setting priorities, implementing interventions, planning, managing, and monitoring the plans made. Additionally, different community groups such as women, men, youth, and children were classified according to different approaches in the participatory mapping and planning process. Therefore, this process will be repeated four times to ensure comprehensive participation. Meanwhile, vulnerable groups such as the elderly, people with disabilities, and those unable to participate in the process were accommodated through door-to-door (DTD) surveys conducted over five days. The team also conducted field surveys to identify potential and issues in the Kambo area.

In the first meeting, problem mapping was conducted through the "problem tree" method to identify the issues faced by the Kambo community related to social, cultural, economic, and residential areas in general. In this session, residents discussed the problems and challenges they faced in creating an integrated agricultural-tourism area alongside a residential environment. These problems were then mapped to identify the root causes. Additionally, the impacts of these problems were also identified. In the subsequent meetings, further exploration of problems and potentials of the area was carried out. In this session, community participation was more diverse with the involvement of the Kambo Youth Organization/Organisasi Pemuda Kambo (OPK). Therefore, the third meeting was divided into two sessions. The first session was with the youth group from OPK, and the second session was with residents aged 30 and above, mostly consisting of farmers and planters. The problem tree activity resulted in several issues that concerned the Kambo community in developing their area.

During the first meeting, problem mapping through the "problem tree" method aimed to identify various issues faced by the Kambo community, covering social, cultural, economic, and spatial aspects of residential areas. In this session, residents discussed the challenges in creating an integrated area between agriculture and tourism, as well as the residential environment. These issues were then mapped to trace their root causes, and the impacts of each problem were also identified. In the next meeting, the exploration of problems and potentials continued with broader participation, including the involvement of the Kambo Youth Organization/Organisasi Pemuda Kambo (OPK). Therefore, the second meeting was divided into two sessions: the first session with the youth group from OPK, and the second session with residents aged 30 and above, mostly consisting of farmers and planters. The "problem tree" process resulted in several key issues that the community considered crucial in developing the Kambo area. Documentation of the activity can be seen in **Figure 3**.



Figure 3. Documentation of the participatory planning process.

The main activity of the second meeting was participatory mapping, where residents were invited to map the locations of the problems identified in the previous meeting on a map of the Kambo area. Additionally, residents were asked to map the main routes to agricultural land, buildings, or tourist and historical sites, including activity centers such as parks, educational institutions, places of worship, plantations, and fitness facilities. In this session, residents also identified locations they found comfortable, cool, peaceful, and aesthetically pleasing, using the map as the primary tool. Following the participatory mapping session, the area design phase was conducted, still involving active participation from the residents. This activity began with a brief discussion of the residents' aspirations for developing Kambo as a tourism and agricultural area, including their desires for activity centers, the form and atmosphere of the area, and the potential they wanted to develop physically, socioculturally, and economically. Residents then worked with the provided planning maps, discussed, and added elements they considered important. This design was then discussed with the facilitator and other stakeholders. The design results from both groups were integrated to formulate strategic topics that would guide the future development of the area.

Between the first and second sessions, a photo-hunting activity was held in Kambo, involving both professional and amateur photographers who participated voluntarily. The aim of this activity was to create more appealing and attractive visualizations in the planning documents to better represent Kambo. The aspects captured in this activity included gardening activities, harvesting, the sale of agricultural products, tourist activities, residential houses, infrastructure, culinary elements, and various other components. The designs proposed by the residents were then summarized by the facilitator into a planning map, supplemented with illustrations of the agreed-upon activities.

The results of these illustrations and the planning map were then re-discussed with the residents to minimize potential bias that might arise from the facilitator's interpretation. If there were any input or corrections from the residents, the plan would be revised according to the collective agreement.

### 4.2. Impact of participatory planning

Following the implementation of participatory planning, Kambo Village has realized several significant strategic benefits. Firstly, Kambo now possesses a clear and structured master plan for its tourism village. This master plan provides precise guidance for the village's development, ensuring that every step aligns with the longterm vision agreed upon by the community and stakeholders. Secondly, the direction of Kambo Village's development has become more focused and transparent, facilitating decision-making related to resource allocation and development priorities. This also means that if there is funding allocation, such as from Corporate Social Responsibility (CSR) programs, the utilization of these funds is now clearly defined and can be promptly aligned with the village's strategic needs. Thirdly, the existence of this master plan has also simplified the collaboration process with investors. With a detailed and well-structured plan, investors can more easily understand the village's potential and prospects, thereby increasing Kambo's attractiveness as an investment destination in the tourism sector. Overall, these impacts have made Kambo Village better prepared to develop as a sustainable and innovative tourist village. An illustration of the Kambo Tourism Village masterplan can be seen on the map plan in Figure 4.



Figure 4. Map plan of tourism spots in Kambo.

Secondly, the village has been selected as a recipient of the 2022 Anugerah Desa Wisata Indonesia, organized by the Ministry of Tourism of the Republic of Indonesia. This award is a form of government recognition of the successful tourism governance implemented in Kambo, reflecting its achievement in designing and managing a tourism village holistically and inclusively. This recognition has positive impacts on various aspects. Firstly, the award has elevated Kambo Village's profile at the national

level, making it more well-known and recognized as an attractive and high-quality tourist destination. This increased profile, in turn, can attract more domestic and international tourists, as well as garner media attention that provides broader exposure. Additionally, this success has also increased investor confidence and interest. With government recognition, investors are more assured of investing in Kambo, whether in tourism infrastructure development, supporting facilities, or other innovative programs. This not only boosts the village's economic potential but also opens up employment opportunities for the local community. Infrastructure development will boost the economy (Fisu et al., 2020), and has the potential to reduce poverty rates (Didiharyono et al., 2024). The award also fosters closer collaboration between the central government, local government, and the local community in the effort to develop a sustainable tourism village. With stronger support, Kambo Village has greater opportunities to continue evolving as a model tourism village that can be emulated by other regions in Indonesia. Documentation of the 2022 Indonesian Tourism Village Award held by the Ministry of Tourism of the Republic of Indonesia, and the direct visit of the Minister of Tourism to Kambo, can be seen in Figure 5.



**Figure 5.** Kambo village receiving an award from the Indonesian ministry of tourism at the ADWI 2022 event.

Thirdly, there has been an increase in the number of exciting events held in the village. One of the major events recently successfully organized was the Riverside Camping and Kambo Fruit Festival, which attracted many visitors from various regions. These two events not only enlivened the village but also reinforced Kambo's image as a unique and attractive tourist destination. Some events that have been held can be seen in **Figure 6**. Besides these major events, Kambo Village is also active in organizing various smaller-scale activities that enrich tourist experiences and empower the local community. These events positively contribute to expanding the tourism network, increasing community participation, and promoting local culture and natural wealth-. The organization of these events not only contributes to increasing tourist visits but also drives local economic development by boosting income from the

tourism sector and promoting local products such as specialty fruits, handicrafts, and traditional Kambo cuisine. With the increasing number of activities organized, Kambo Village is further solidifying its position as a dynamic and appealing tourist destination on the national stage.



Figure 6. Some events after the co-design process.



Figure 7. The emergence of new cafes following the co-design process.

Fourthly, there has been a notable increase in the number of cafes with attractive concepts scattered along the beautiful landscapes of the village in recent years. These cafes, mostly opened by local residents, serve as an indicator of the rising number of tourists visiting Kambo. The number of cafes, which initially stood at 10, has increased to 15 following the participatory planning process, reflecting a growth of 50%. This growth in cafes signifies an increase in economic activity within the village, while also reflecting the creativity and initiative of residents in responding to opportunities arising from the tourism industry. These cafes not only provide relaxing spots for tourists but also add to Kambo's appeal as a destination offering unique culinary

experiences and a comfortable ambiance. Some newly built cafes can be seen in **Figure 7**. The presence of these cafes also plays a role in promoting local community development by creating new job opportunities, driving the creative economy sector, and strengthening Kambo's identity as a welcoming and innovative tourist village. With the growing number of tourists interested in visiting Kambo, this sector's growth is expected to continue, further solidifying Kambo Village's position as a leading tourist destination in the region.

Fifthly, there has been an improvement in the quality of human resources in the tourism sector, particularly through the roles of the Tourism Awareness Group (Pokdarwis) and the Kambo Youth Organization. The quality of tourism management in Kambo has improved, as evidenced by their ability to initiate various exciting events that have successfully attracted tourist attention. Additionally, the management of Kambo Village's social media has shown significant progress. The village's social media accounts have become more engaging and creative in posting content, effectively promoting Kambo and attracting more visitors. These efforts not only increase Kambo's visibility among potential tourists but also strengthen the village's brand as a modern and dynamic tourist destination. The character of youth who are tech-savvy and active as agents of change, with significant potential for utilizing creativity and technology (Fisu et al., 2024) to develop innovative and sustainable tourism concepts, has been acknowledged. The quality and competence of Pokdarwis and the Kambo Youth Organization have also been recognized at a broader level, as evidenced by several invitations they have received as speakers in various forums. In these opportunities, they share their experiences and knowledge on how to manage Kambo as a successful tourist village, inspiring other communities to follow in their footsteps. This improvement in human resources forms a strong foundation for the sustainability and further development of tourism in Kambo Village.

## 4.3. Key aspects

The determination of key aspects in participatory planning to obtain calculated and expected weights involves holding group discussions that include various stakeholders (such as local communities, government, NGOs, and academics). During these discussions, each stakeholder group can present their views on the importance of each aspect in the co-design process. The resulting weights can then be confirmed through consensus within the group.

The determination of weights in evaluating the co-design process is the outcome of theoretical and practical analysis that considers various critical factors in the development of a project involving multiple stakeholders. Theoretically, the weight is assigned based on the importance of each aspect in ensuring the success of the co-design process. For instance, local community participation is given the highest weight because their involvement is crucial in producing solutions that are aligned with local needs and context (Chirenje et al., 2013; Li et al., 2020; Li et al., 2020; Selman, 2004; Tauxe, 1995; Tewdwr-Jones, 1998). Sustainability is also heavily weighted because it ensures that the outcomes of the co-design process are durable and provide long-term benefits (Akbar et al., 2020; Čiegis and Gineitienė, 2008; Fouché and Brent, 2020; Tippett et al., 2007). The weight of the important aspects can be seen in **Figure 8**.



Figure 8. Priorities based on weight in co-design process evaluation.

In the context of evaluating the co-design process, the weight assigned to each aspect is determined by the stakeholders during Focus Group Discussions (FGD). This determination is based on the significance of each aspect's role in the success of a project that involves the collaboration of various parties, especially the local community. Theoretically, the weighting can refer to literature that supports the importance of active local community participation in the co-design process. Local community participation is often considered the cornerstone because they are the ones who best understand their own needs and aspirations, thus it is reasonable for this aspect to receive the highest weight. Additionally, sustainability is also significantly weighted because co-design projects must be designed to have a long-term impact, not just provide temporary solutions.

Practically, the weighting can also be influenced by direct experience from previous projects. For example, if previous projects showed that a lack of local community participation led to solutions that did not match their needs, this would reinforce the rationale for assigning a higher weight to this aspect. Similarly, collaboration and communication are considered crucial to ensure that all parties involved can work together effectively and achieve shared goals. This aspect receives considerable weight because effective communication is essential in avoiding miscommunication and conflict during the process.

Monitoring and evaluation, as well as local resources and capacity, are given smaller weights, though they remain important due to their supportive roles. Monitoring and evaluation help ensure that the project stays on track, while local resources and capacity ensure that the project can be implemented using the existing potential. Innovation and creativity receive the lowest weight, possibly reflecting the view that while important, innovation in the context of co-design often emerges as a result of a well-conducted process rather than as a primary focus. Overall, these weights reflect a balance between theoretical needs and practical experience, ensuring that the co-design process is not only successful but also sustainable and relevant to the community it serves.

Respondents were then asked to compare the importance of one aspect with another in the co-design process. The results of this survey were then processed to generate calculated weights using the AHP pairwise comparison approach, which should closely approximate the expected weights. Each criterion is compared against the others to determine its relative importance. The results can be seen in **Table 1**. **Figure 9** displays the comparison of the weights of important aspects, while **Figure 10** shows the comparison of sub-criteria before and after the implementation of the FGD.

	Local Community Participation	Sustainability	Collaboration and Communication	Understandi ng Needs and Aspirations	Monitorin g and Evaluatio n	Local Resourc es and Capacit y	Innovation and Creativity	Calculated Weights	Scaled Weight s (%)
Local Community Participation	1	1.127731	2.110719	2.755985	3.378103	5.178200	7.774025	0.2993	29.93
Sustainability	0.886735	1	1.871650	2.443830	2.995485	4.591695	6.893506	0.2654	26.54
Collaboration and Communicati on	0.473772	0.534287	1	1.305709	1.600451	2.453287	3.683116	0.1418	14.18
Understandin g Needs and Aspirations	0.362846	0.409193	0.765867	1	1.225733	1.878892	2.820779	0.1086	10.86
Monitoring and Evaluation	0.296024	0.33383	0.624823	0.815837	1	1.532871	2.301298	0.0886	8.86
Local Resources and Capacity	0.193117	0.217784	0.407616	0.532228	0.652370	1	1.501298	0.0578	5.78
Innovation and Creativity	0.128633	0.145064	0.271509	0.354511	0.434537	0.666089	1	0.0385	3.85

**Table 1.** Weighting results with comparable table approach.



Figure 9. Adjusted weight vs. expected weight on each important aspect.

The findings indicating a difference between the calculated and expected weights suggest that although the Analytic Hierarchy Process (AHP) yielded weights with high consistency, the interpretations and judgments used in pairwise comparisons may not

fully reflect the initial expectations or preferences. A Consistency Ratio (CR) of 0.021, which is well below the threshold of 0.1, demonstrates that the judgments used in the pairwise comparison matrix are highly consistent. This implies that, despite the differences in results, the decisions made during the pairwise comparison process were logical and structured.

However, the discrepancies between the calculated and expected weights could be attributed to several factors, such as differing perceptions among stakeholders or a mismatch between the comparison scale used and the specific context of the evaluated aspects. This suggests that in the AHP process, while consistency is critical and achievable, it is also essential to ensure that the inputs used for comparison genuinely reflect the priorities and needs of the stakeholders. This might necessitate additional discussions or validations with stakeholders to ensure that the comparisons used are not only consistent but also aligned with the goals and expectations of the co-design project.



Figure 10. Results of sub-criteria assessment.

The radar diagram in **Figure 11** illustrates the comparison between the calculated and expected weights of sub-aspects in the co-design process. Each sub-aspect, such as "Active Engagement", "Representation", "Ownership" and "Technology Utilization" is represented by points on the circle. The two-colored areas indicate the distribution of weights: the pink area represents the weights calculated based on the Analytic Hierarchy Process (AHP), while the light blue area shows the expected weights. Theoretically, this radar chart demonstrates the alignment between the calculated and expected priorities of various sub-aspects in the co-design process. Ideally, if a particular sub-aspect is accurately calculated according to expectations, the two areas would overlap. However, if there is a significant difference between the pink and blue areas, this indicates that the initial judgment or pairwise comparison matrix may need to be adjusted to better reflect existing expectations. For example, differences between the calculated and expected weights for sub-aspects like "Ownership" and "Technology Utilization" might indicate that although these subaspects are theoretically considered important, in practice, they may not be regarded as top priorities by the stakeholders involved in the pairwise comparison process. This could be due to various factors, such as differences in local context, stakeholders' practical experiences, or differing interpretations of the importance of these subaspects. Overall, this radar chart identifies gaps between expectations and reality in the assessment of the co-design process. It allows planners to re-evaluate their priorities and make necessary adjustments, both in evaluation approaches and program implementation, to ensure that the final outcomes align with the goals and expectations of all involved stakeholders.



Figure 11. Radar diagram calculated vs. expected sub-criteria weights.

The aspect of community participation in village tourism planning using a participatory or co-design approach is crucial to ensure that the planning outcomes truly reflect the needs and aspirations of the local community (Nurhijrah and Fisu, 2019; Wu and Hou, 2019). Active engagement includes how the community is directly involved in every stage of the planning process, from identifying potential to implementation and evaluation (Fisu and Didiharyono, 2019; Utami et al., 2022). This engagement is not just in the form of presence but also in providing ideas, opinions, and decisions that influence the final outcomes. This occurred in almost all meetings and co-design processes in Kambo. With active involvement, the Kambo community becomes an integral part of the process, which not only enhances the quality of planning but also fosters a sense of responsibility and commitment to the success of Kambo's tourist village. Representation and ownership are two other key elements of community participation. Diverse representation ensures that all groups within the community, including minorities, women, and youth, have a voice in the planning process. This is important to accommodate the needs and perspectives of the entire community, preventing dominance by a particular group. In practice, not all groups in Kambo could be directly involved in every co-design process due to other important

commitments such as work and household responsibilities. In this case, the youth group was most frequently active and involved in the co-design process. Meanwhile, the aspect of ownership refers to the sense of belonging that develops among the community towards the outcomes of the planning process. When the community feels that they have significantly contributed and have control over the outcomes, they are more likely to be committed to maintaining and developing the tourist village sustainably (Karrasch et al., 2017). This ownership is also crucial for ensuring the long-term sustainability of the project, as the local community becomes the primary driver in its management and development.

The aspect of understanding needs and aspirations is foundational in the participatory or co-design approach to village tourism planning. Identifying needs is a crucial first step, where data collection is conducted thoroughly to uncover what the Kambo community truly wants and needs. This involves a comprehensive approach, including surveys, interviews, and focus group discussions, to understand the hopes, challenges, and opportunities faced by the community in developing the Kambo tourist village. Throughout this process, various issues—from agricultural problems, employment, sanitation, and waste management to tourism aspects—were discussed in detail by Kambo residents. By understanding these needs, planning can be tailored to fit the local context, providing relevant solutions and adding value to the community.

The aspects of collaboration and communication in village tourism planning play a vital role (Bramwell and Lane, 2000; Fisu and Marzaman, 2018). Multi-stakeholder collaboration involves close cooperation between the government, local communities, business actors, academics, and other relevant parties (Marzaman et al., 2019). The level of cooperation determines how well each party can contribute according to their role and expertise. The local government in Palopo City provides regulations and policy support, such as incorporating Kambo into the Regional Tourism Master Plan, while the Kambo community offers in-depth knowledge of the field conditions and specific needs. Business actors, such as café owners, Trigona honey producers, homestay owners, and souvenir sellers, contribute resources and expertise in management and marketing. This effective collaboration creates comprehensive and sustainable solutions, where each party feels involved and responsible for the success of the tourist village project. Open communication is key to ensuring that all parties involved can clearly and transparently understand the goals, challenges, and opportunities present (Jamal and Getz, 1995). Although not everyone is involved in every meeting, each stakeholder engages in good communication during the meetings, providing input and adapting to changes that may occur during the planning process. This also helps build trust among stakeholders, ensuring that all parties feel heard and valued in the decision-making process.

The aspect of local resources and capacity in village tourism planning emphasizes the importance of optimally utilizing the natural, cultural, and human resources available in Kambo Village. Utilizing local resources means integrating natural elements such as landscape beauty, unique flora and fauna, and local wisdom in culture and tradition into the concepts and tourism activities offered (Rutting et al., 2021; Volenzo and Odiyo, 2018). Kambo Village truly maximizes this. Most of the cafes and eateries with various interesting concepts are built facing the view of Palopo City. Even the Kambo durian variety, considered one of the attractions, is combined with the beautiful views of Kambo, giving rise to the Buntudegen spot, a place to eat durian at a high altitude. The traditional ginger drink "sarabba" is paired with the cold temperatures of Kambo's heights. This not only enriches the tourist experience but also ensures that the development of the tourist village remains relevant and authentic to the local community. On the other hand, capacity building includes efforts to strengthen the community's ability to manage the tourist village through training and educational programs (Manaf et al., 2018). This capacity building is important so that the local community does not merely remain passive beneficiaries but can also be the main drivers in sustainably managing and developing the tourist village, thereby retaining control and benefits from the development in the long term (Wahyuni et al., 2023). In Kambo, these training sessions have been conducted several times, such as training in creating interesting content, writing captions, with Pokdarwis and the youth group as the targets. However, training in areas such as hospitality, tourism management, marketing, and environmental conservation is still minimal.

The aspect of sustainability in village tourism planning encompasses three main dimensions: environmental, economic, and social. In the environmental dimension, assessments are conducted to understand the impact of planning on the surrounding nature, ensuring that tourism activities do not harm the local ecosystem but rather contribute to environmental preservation and restoration. In this regard, the Kambo community is particularly concerned, especially regarding the protected area in the northern part of Kambo. They are quite aware of the landslide threats in their area. In the economic dimension, village tourism planning is directed at creating sustainable economic opportunities for the local community, by opening up job opportunities, supporting small businesses, and generating stable income streams from the tourism sector. Meanwhile, in the social dimension, planning should consider potential social impacts, such as changes in the community's social structure and way of life (Moscardo, 2011). Throughout the process, it is important to ensure that the development of the tourist village does not disrupt social harmony but instead strengthens community bonds and preserves local cultural values (Aswani et al., 2015). In this aspect, the tourism concept actually emerges from the social activities of the Kambo community. For example, agro-tourism activities such as fruit picking or observing Trigona honey farming are part of the daily social activities of the Kambo community.

The aspect of innovation and creativity in village tourism planning highlights the importance of generating fresh and relevant ideas aligned with the village's unique characteristics (Dixon et al., 2022; Seo, 2022). These new ideas emerge through collaboration between the local community and other parties, such as academics, government, and business actors, who together explore the village's potential and create creative and authentic tourism concepts. The community's involvement in this process ensures that the innovations generated are not only attractive to tourists but also aligned with local values and identity. In the process, the idea of an annual event calendar for Kambo emerged, proposing several interesting ideas such as a fruit festival, an annual folk market, a forest-themed music concert, and a traditional games festival. Additionally, the use of technology is an important factor in enhancing the efficiency and competitiveness of the tourist village. New technologies can be applied in various aspects, from digital promotion, and visitor management, to using apps to

optimize the tourist experience and maintain environmental sustainability. Unfortunately, in most parts of Kambo, internet connectivity is still lacking, so even though this is being pursued, it is not fully realized.

The aspect of monitoring and evaluation in village tourism planning is crucial to ensuring long-term success and sustainability (Jan and Contreras, 2016; Kusters et al., 2018). In the Kambo Village Tourism Master Plan, short-term, medium-term, and long-term plans are outlined. The long-term plan includes periodic assessments of plan implementation, where an effective monitoring system is built to allow continuous evaluation of goal achievement, impact, and effectiveness of activities that have been carried out. The long-term plan can be modified if the evaluation deems it irrelevant. Additionally, the satisfaction level of the local community and tourists is an important indicator in assessing the success of village tourism planning. Satisfaction measurement is carried out through surveys, interviews, or other methods that can identify how well the needs and expectations of the community and tourists are met. This is more commonly done for tourists than for assessing the satisfaction of the Kambo community.

## 5. Conclusion

This research has explored the application of the co-design approach in participatory planning for the development of Kambo Tourist Village. Through a combination of the Delphi Consensus method and Analytic Hierarchy Process (AHP), this study successfully identified key priorities in the planning process, with local community participation as a central element. The co-design process, involving various stakeholders, has resulted in a structured master plan that not only reflects the needs and aspirations of the local community but also guides the village's development towards a more sustainable and inclusive direction. The findings also indicate that while there is consistency in the assessment of key aspects, gaps remain between the calculated and expected weights, highlighting the need for adjustments in the evaluation approach.

Theoretically, this research enriches the literature on participatory planning and co-design in the context of tourist village development. The study demonstrates that when effectively implemented, the co-design approach can result in planning that is more responsive to local needs and better able to create sustainable solutions. The findings on the gap between calculated and expected weights also contribute to understanding the complexity of integrating perspectives from various stakeholders, who often have different priorities and perceptions. This research supports the theory that local community participation is crucial to the success of sustainable and inclusive tourism development.

Practically, the results of this research provide clear guidance for planners and policymakers in developing tourist villages based on active community participation. The resulting master plan can serve as a model for other villages seeking to adopt a similar approach. Additionally, the findings on the importance of effective collaboration between the community, government, and investors underscore that the success of tourism development depends not only on good planning but also on the engagement and commitment of all involved parties. The enhancement of human resources through training and education is also an important implication, ensuring that the local community becomes not just passive beneficiaries but also key drivers in the management and development of the tourist village.

This study has several limitations that should be noted. First, despite being inclusive, participation from various stakeholders could not fully involve all groups in every stage of the planning process due to time constraints and other responsibilities, such as work and household duties. This may have resulted in some perspectives being underrepresented. Additionally, the Analytic Hierarchy Process (AHP) method used to prioritize through pairwise comparisons is heavily influenced by the subjective judgments of stakeholders, which introduces the possibility of bias. Infrastructure limitations, such as limited internet access in Kambo Village, also hindered the implementation of technological innovations in tourism management. Lastly, this study focuses on a single village with unique characteristics located at the intersection of urban and rural areas, so the findings may not be generalizable to other tourism villages with different geographical and socio-economic conditions.

Future research offers several promising avenues for development. Longitudinal studies could be conducted to assess the long-term impact of the co-design approach on the sustainability and inclusiveness of tourism village development, as well as to examine how the participatory process adapts to new challenges. Additionally, future research could explore more advanced methods to reduce subjective bias in weighting within AHP, providing a more accurate reflection of stakeholder priorities. Comparative studies with other tourism villages in Indonesia or other developing countries could also be conducted to understand the successes and challenges across different contexts, allowing the participatory planning approach to be more widely adapted and applied. The use of smart technology in rural tourism should also be further explored, particularly to address connectivity challenges in rural areas and to maximize the potential of technology in managing tourism resources. Lastly, further research into community empowerment and training programs is crucial to ensure that local communities have sufficient capacity to manage and develop tourism potential in a sustainable manner.

This research opens opportunities for further studies that can delve deeper into aspects that have not been fully addressed. For example, future research could focus on developing methods to bridge the gap between calculated and expected weights in the AHP process, taking into account more complex contextual factors. Additionally, longitudinal studies could be conducted to evaluate the long-term impact of this master plan's implementation on the development of Kambo Tourist Village, as well as how the participatory process can continue to adapt to new challenges and opportunities. Further research could also expand the scope by applying this approach to other tourist villages in Indonesia or other developing countries, to compare results and identify key factors that contribute to the success or failure of participatory processes in different contexts.

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# References

- Agapito, D., & Guerreiro, M. (2023). Designing Accessible Tourism Experiences: Slow, Sensory And Smart Framework. Enlightening Tourism. A Pathmaking Journal, 13(1), 167–198. https://doi.org/10.33776/et.v13i1.7200
- Akbar, A., Flacke, J., Martinez, J., et al. (2020). Participatory planning practice in rural Indonesia: A sustainable development goals-based evaluation. Community Development, 51(3), 243–260. https://doi.org/10.1080/15575330.2020.1765822
- Akira, T. (2010). Regional Development owing to the Commodification of Rural Spaces in Japan. Geographical Review of Japan Series B, 82(2), 103–125. https://doi.org/10.4157/geogrevjapanb.82.103
- Arbogast, D., Butler, P., Faulkes, E., et al. (2020). Using social design to visualize outcomes of sustainable tourism planning: a multiphase, transdisciplinary approach. International Journal of Contemporary Hospitality Management, 32(4), 1413–1448. https://doi.org/10.1108/ijchm-02-2019-0140
- Arnstein, S. R. (1969). A Ladder Of Citizen Participation. Journal of the American Institute of Planners, 35(4), 216–224. https://doi.org/10.1080/01944366908977225
- Aswani, S., Diedrich, A., & Currier, K. (2015). Planning for the Future: Mapping Anticipated Environmental and Social Impacts in a Nascent Tourism Destination. Society & Natural Resources, 28(7), 703–719. https://doi.org/10.1080/08941920.2015.1020582
- Badulescu, D., & Badulescu, A. (2017). Rural Tourism Development through Cross-border Cooperation. The Case of Romanian-Hungarian Cross-border Area. Eastern European Countryside, 23(1), 191–208. https://doi.org/10.1515/eec-2017-0009
- Bai, Q., & Cheng, H. (2022). Research on the evolution process and dynamic mechanism of urban and rural tourism space from the perspective of social space. Advances in Education, Humanities and Social Science Research, 2(1), 264. https://doi.org/10.56028/aehssr.2.1.264
- Bellato, L., & Cheer, J. M. (2021). Inclusive and regenerative urban tourism: capacity development perspectives. International Journal of Tourism Cities, 7(4), 943–961. https://doi.org/10.1108/ijtc-08-2020-0167
- Bibri, S. E., Krogstie, J., & Kärrholm, M. (2020). Compact city planning and development: Emerging practices and strategies for achieving the goals of sustainability. Developments in the Built Environment, 4, 100021. https://doi.org/10.1016/j.dibe.2020.100021
- Bramwell, B., & Lane, B. (2000). 1 Collaboration and Partnerships in Tourism Planning. Tourism Collaboration and Partnerships, 1–19. https://doi.org/10.21832/9780585354224-003
- Bronisz, U., & Jakubowski, A. (2017). Rural Tourism as a Factor Stimulating the Development of Border Areas The Case of Lubelskie Voivodeship. Zeszyty Naukowe SGGW w Warszawie - Problemy Rolnictwa Światowego, 17(4), 21–30. https://doi.org/10.22630/prs.2017.17.4.78
- Burke, E. M. (1968). Citizen Participation Strategies. Journal of the American Institute of Planners, 34(5), 287–294. https://doi.org/10.1080/01944366808977547
- Buzinde, C. N., & Caterina-Knorr, T. (2022). Tourism policies and inclusive development: the case of Kenya and Rwanda. Journal of Sustainable Tourism, 31(12), 2752–2770. https://doi.org/10.1080/09669582.2022.2076107

- Cheng, T.-M., Wu, H. C., Wang, J. T.-M., et al. (2017). Community Participation as a mediating factor on residents' attitudes towards sustainable tourism development and their personal environmentally responsible behaviour. Current Issues in Tourism, 22(14), 1764–1782. https://doi.org/10.1080/13683500.2017.1405383
- Chirenje, L. I., Giliba, R. A., & Musamba, E. B. (2013). Local communities' participation in decision-making processes through planning and budgeting in African countries. Chinese Journal of Population Resources and Environment, 11(1), 10–16. https://doi.org/10.1080/10042857.2013.777198
- Čiegis, R., & Gineitienė, D. (2008). Participatory aspects of strategic sustainable development planning in local communities: experience of lithuania / strateginio darnaus vystymosi aspektai vietinėse bendruomenėse: lietuvos patirtis. Technological and Economic Development of Economy, 14(2), 107–117. https://doi.org/10.3846/1392-8619.2008.14.107-117
- Cilliers, E. J., & Timmermans, W. (2014). The Importance of Creative Participatory Planning in the Public Place-Making Process. Environment and Planning B: Planning and Design, 41(3), 413–429. https://doi.org/10.1068/b39098
- Cinderby, S., de Bruin, A., Cambridge, H., et al. (2021). Transforming urban planning processes and outcomes through creative methods. Ambio, 50(5), 1018–1034. https://doi.org/10.1007/s13280-020-01436-3
- Cizmar, S., & Lisjak, S. (2007). Tourism Master Plans An Effective Tourism Destination Management Tool in SEE. South East European Journal of Economics and Business, 2(1). https://doi.org/10.2478/v10033-007-0015-z
- Costa, C. (2019). Tourism planning: a perspective paper. Tourism Review, 75(1), 198–202. https://doi.org/10.1108/tr-09-2019-0394
- Deng, B., Wong, I. A., & Lian, Q. L. (2024). From metaverse experience to physical travel: the role of the digital twin in metaverse design. Tourism Review, 79(5), 1076–1087. https://doi.org/10.1108/tr-05-2023-0315
- Dixon, B., McHattie, L. S., & Broadley, C. (2021). The imagination and public participation: a Deweyan perspective on the potential of design innovation and participatory design in policy-making. CoDesign, 18(1), 151–163. https://doi.org/10.1080/15710882.2021.1979588
- Didiharyono, D., Syukri, M., Fisu, A. A., & Apriyanto, A. (2024). Modelling and mapping the poverty levels with applied spatial regression model in South Sulawesi province of Indonesia. Journal of Social Economics Research, 11(1), 32–44. https://doi.org/10.18488/35.v11i1.3608
- Doganer, S. (2015). Architectural design studio on sustainable tourism alternatives in the San Antonio Missions Historic District. Tourism and Hospitality Research, 17(3), 298–313. https://doi.org/10.1177/1467358415602955
- Fisu, A. A., & Didiharyono, D. (2019). Social Forestry Area Boundary Marking Using Participatory Approach in Ilanbatu Uru Village, Luwu District(Indonesian). To Maega : Jurnal Pengabdian Masyarakat, 2(2), 28–37. https://doi.org/10.35914/tomaega.v2i2.220
- Fisu, A. A., Didiharyono, D., & Bakhtiar. (2020). Economic & amp; Financial Feasibility Analysis of Tarakan Fishery Industrial Estate Masterplan. IOP Conference Series: Earth and Environmental Science, 469(1), 012002. https://doi.org/10.1088/1755-1315/469/1/012002
- Fisu, A. A., & Marzaman, L. U. (2018). Pemetaan Partisipatif Kampung Pesisir Kelurahan Tallo Kota Makassar. To Maega : Jurnal Pengabdian Masyarakat, 1(1), 22–28. https://doi.org/10.35914/tomaega.v1i1.70
- Fisu, A. A., Syabri, I., & Andani, I. G. A. (2024). How do young people move around in urban spaces?: Exploring trip patterns of generation-Z in urban areas by examining travel histories on Google Maps Timeline. Travel Behaviour and Society, 34, 100686. https://doi.org/10.1016/j.tbs.2023.100686
- Fisu, A. A., Syabri, I., Andani, I. G. A., et al. (2024). Rethinking Gen-Z mobility: A comparative study of travel behavior across developed and developing nations. Journal of Infrastructure, Policy and Development, 8(9), 5873. https://doi.org/10.24294/jipd.v8i9.5873
- Fouché, E., & Brent, A. (2020). Explore, Design and Act for Sustainability: A Participatory Planning Approach for Local Energy Sustainability. Sustainability, 12(3), 862. https://doi.org/10.3390/su12030862
- Guo, H., & Jordan, E. J. (2021). Social exclusion and conflict in a rural tourism community: A case study from Likeng Village, China. Tourist Studies, 22(1), 42–60. https://doi.org/10.1177/14687976211039067
- Hahn, M. B., Kemp, C., Ward-Waller, C., et al. (2020). Collaborative climate mitigation and adaptation planning with university, community, and municipal partners: a case study in Anchorage, Alaska. Local Environment, 25(9), 648–665. https://doi.org/10.1080/13549839.2020.1811655

- Harsia, E., & Nummi, P. (2024). Urban planning as 'great dialogue'? Developing polyphonic planning practices in a process of hybrid participation, case Viiskorpi, Espoo, Finland. Planning Practice & Research, 39(5), 855–875. https://doi.org/10.1080/02697459.2024.2377232
- Hassenforder, E., Pittock, J., Barreteau, O., et al. (2015). The MEPPP Framework: A Framework for Monitoring and Evaluating Participatory Planning Processes. Environmental Management, 57(1), 79–96. https://doi.org/10.1007/s00267-015-0599-5
- He, Y., Wang, J., Gao, X., et al. (2021). Rural Tourism: Does It Matter for Sustainable Farmers' Income? Sustainability, 13(18), 10440. https://doi.org/10.3390/su131810440
- Hidayat, R., & Jeneetica, M. (2017). Improvement Possibilities of Rural Tourism in Kampung Nelayan Marunda North Jakarta. Proceedings of the International Conference on Tourism, Gastronomy, and Tourist Destination (ICTGTD 2016). https://doi.org/10.2991/ictgtd-16.2017.39
- Holte-McKenzie, M., Forde, S., & Theobald, S. (2006). Development of a participatory monitoring and evaluation strategy. Evaluation and Program Planning, 29(4), 365–376. https://doi.org/10.1016/j.evalprogplan.2006.08.007
- Jamal, T. B., Getz, D. (1995). Collaboration theory and community tourism planning. Annals of Tourism Research, 22(1), 186-204. https://doi.org/10.1016/0160-7383(94)00067-3
- Jan, A. U., & Contreras, V. (2016). Critical Reflection about Knowledge Management in a Participatory Planning, Monitoring & Evaluation Course. Voice of the Publisher, 02(01), 1–7. https://doi.org/10.4236/vp.2016.21001
- Jernsand, E. M. (2019). Student living labs as innovation arenas for sustainable tourism. Tourism Recreation Research, 44(3), 337–347. https://doi.org/10.1080/02508281.2019.1613299
- Karrasch, L., Maier, M., Kleyer, M., et al. (2017). Collaborative Landscape Planning: Co-Design of Ecosystem-Based Land Management Scenarios. Sustainability, 9(9), 1668. https://doi.org/10.3390/su9091668
- Koens, K., Klijs, J., Weber-Sabil, J., et al. (2020). Serious gaming to stimulate participatory urban tourism planning. Journal of Sustainable Tourism, 30(9), 2167–2186. https://doi.org/10.1080/09669582.2020.1819301
- Kusters, K., Buck, L., de Graaf, M., et al. (2017). Participatory Planning, Monitoring and Evaluation of Multi-Stakeholder Platforms in Integrated Landscape Initiatives. Environmental Management, 62(1), 170–181. https://doi.org/10.1007/s00267-017-0847-y
- Li, J., Krishnamurthy, S., Pereira Roders, A., et al. (2020a). Community participation in cultural heritage management: A systematic literature review comparing Chinese and international practices. Cities, 96, 102476. https://doi.org/10.1016/j.cities.2019.102476
- Li, X., Zhang, F., Hui, E. C., et al. (2020b). Collaborative workshop and community participation: A new approach to urban regeneration in China. Cities, 102, 102743. https://doi.org/10.1016/j.cities.2020.102743
- Li, Z., Zhang, X., Yang, K., et al. (2021). Urban and rural tourism under COVID-19 in China: research on the recovery measures and tourism development. Tourism Review, 76(4), 718–736. https://doi.org/10.1108/tr-08-2020-0357
- Lin, P.-S., & Lin, W.-C. (2020). Rebuilding Relocated Tribal Communities Better via Culture: Livelihood and Social Resilience for Disaster Risk Reduction. Sustainability, 12(11), 4538. https://doi.org/10.3390/su12114538
- Luo, Y. H., (2005). Cooperative Design, Visualization, and Engineering. (2005). In Proceedings of Second International Conference; September 18-21, 2005; Palma de Mallorca, Spain.
- Maiti, S., & De Faria, J. V. (2017). Participatory planning processes in Indian cities: its challenges and opportunities. Journal of Sustainable Urbanization, Planning and Progress, 2(1). https://doi.org/10.18063/jsupp.2017.01.001
- Makáň, L., Ryglová, K., Rašovská, I., et al. (2023). Impact of Covid-19 Pandemic on Tourist Behavior: A Case Study on South Moravia. European Countryside, 15(2), 281–296. https://doi.org/10.2478/euco-2023-0015
- Manaf, A., Purbasari, N., Damayanti, M., et al. (2018). Community-Based Rural Tourism in Inter-Organizational Collaboration: How Does It Work Sustainably? Lessons Learned from Nglanggeran Tourism Village, Gunungkidul Regency, Yogyakarta, Indonesia. Sustainability, 10(7), 2142. https://doi.org/10.3390/su10072142
- Marzaman, L. U., Hafid, Z. A., Fisu, A. A., et al. (2019). Place Making Workshop Batupasi Sub District Palopo City. To Maega : Jurnal Pengabdian Masyarakat, 2(1), 1–8. https://doi.org/10.35914/tomaega.v2i1.233
- Mausch, K., Harris, D., & Revilla Diez, J. (2021). Rural Aspirations: Reflections for Development Planning, Design and Localized Effects. The European Journal of Development Research, 33(4), 795–808. https://doi.org/10.1057/s41287-021-00407-y
- Mei, R., & Han, L. (2022). Evaluation System of Rural Sustainable Tourism Land Based on Ecosystem Service Value. Ecological Chemistry and Engineering S, 29(3), 347–369. https://doi.org/10.2478/eces-2022-0025

- Moscardo, G. (2011). Exploring social representations of tourism planning: issues for governance. Journal of Sustainable Tourism, 19(4–5), 423–436. https://doi.org/10.1080/09669582.2011.558625
- Moser, A., & Korstjens, I. (2022). Series: Practical guidance to qualitative research. Part 5: Co-creative qualitative approaches for emerging themes in primary care research: Experience-based co-design, user-centred design and community-based participatory research. European Journal of General Practice, 28(1), 1–12. https://doi.org/10.1080/13814788.2021.2010700
- Munkhuu, B., Sukhragchaa, A., & Badarch, L. (2023). Residents Perceptions of Tourism Development and Activities: The Case of Mongolia as a Developing Country with a Small Market. Jurnal Ilmiah Peuradeun, 11(3), 1115. https://doi.org/10.26811/peuradeun.v11i3.988
- Nguyen, H. V., Diane, L., & Newsome, D. (2020). Kinh and ethnic tourism stakeholder participation and collaboration in tourism planning in Sapa, Vietnam. International Journal of Culture, Tourism and Hospitality Research, 14(4), 579–597. https://doi.org/10.1108/ijcthr-12-2018-0179
- Nurhijrah, N., & Fisu, A. A. (2019). Faktor-Faktor Pembentuk Place Memory Pada Bangunan Cagar Budaya di Kota Palopo. Prosiding Temu Ilmiah IPLBI 2019, C050–C055. https://doi.org/10.32315/ti.8.c050
- Ottaviani, D., Demiröz, M., Szemző, H., et al. (2023). Adapting Methods and Tools for Participatory Heritage-Based Tourism Planning to Embrace the Four Pillars of Sustainability. Sustainability, 15(6), 4741. https://doi.org/10.3390/su15064741
- Pathumporn, J., & Nakapaksin, S. (2016). Accommodation management for integrated sustainable tourism management. International Journal of Sustainable Development and Planning, 11(3), 236–244. https://doi.org/10.2495/sdp-v11-n3-236-244
- Quan-Baffour, K. P. (2020). Cultural tourism and socio-economic regeneration of rural communities: the Apo festival of Bono Takyiman, Ghana. African Identities, 21(1), 134–149. https://doi.org/10.1080/14725843.2020.1856644
- Rasoolimanesh, S. M., & Jaafar, M. (2016). Community Participation toward Tourism Development and Conservation Program in Rural World Heritage Sites. Tourism - From Empirical Research Towards Practical Application. https://doi.org/10.5772/62293
- Raynor, K. E., Doyon, A., & Beer, T. (2017). Collaborative planning, transitions management and design thinking: evaluating three participatory approaches to urban planning. Australian Planner, 54(4), 215–224. https://doi.org/10.1080/07293682.2018.1477812
- Ridho, Z., & Alisa, F. (2020). Sustainable Cultural Tourism Development: A Strategic For Revenue Generation in Local Communities. Research Culture. https://doi.org/10.21428/e61c265e.f512dbd8
- Rutting, L., Vervoort, J. M., Mees, H., et al. (2021). Participatory scenario planning and framing of social-ecological systems: an analysis of policy formulation processes in Rwanda and Tanzania. Ecology and Society, 26(4). https://doi.org/10.5751/es-12665-260420
- Saf, H. O. (2022). The Importance of Rural Tourism in the Context of Sustainable Urban Development and Its Impact on Rural Development: The Case of Foça Kozbeyli. Kent Akademisi, 15(4), 1835-1854. https://doi.org/10.35674/kent.1006379
- Saha, G. C. (2020). Rural Socio-Economic Development through Tourism in Bangladesh: Ways and Means. American Economic & Social Review, 6(1), 8–23. https://doi.org/10.46281/aesr.v6i1.507
- Santoro, F. M., Borges, M. R. S., & Santos, N. (2004). Planning the collaboration process: one-way to make it happen. 8th International Conference on Computer Supported Cooperative Work in Design, 2, 647–651. https://doi.org/10.1109/cacwd.2004.1349263
- Selman, P. (2004). Community participation in the planning and management of cultural landscapes. Journal of Environmental Planning and Management, 47(3), 365–392. https://doi.org/10.1080/0964056042000216519
- Seo, B. K. (2022). Co-creation of knowledge in the urban planning context: The case of participatory planning for transitional social housing in Hong Kong. Cities, 122, 103518. https://doi.org/10.1016/j.cities.2021.103518
- Shafieisabet, N., & Haratifard, S. (2020). Community-Based Tourism: An Approach for Sustainable Rural Development Case Study Asara district, Chalous Road. Journal of Sustainable Rural Development. https://doi.org/10.32598/jsrd.02.02.30
- Shelbourn, M., Bouchlaghem, N. M., Anumba, C., et al. (2007). Planning and implementation of effective collaboration in construction projects. Construction Innovation, 7(4), 357–377. https://doi.org/10.1108/14714170710780101
- Simmons, D. G. (1994). Community participation in tourism planning. Tourism Management, 15(2), 98-108. https://doi.org/10.1016/0261-5177(94)90003-5
- Smith, R. W. (1973). A theoretical basis for participatory planning. Policy Sciences, 4(3), 275–295. https://doi.org/10.1007/bf01435125

- Spadaro, I., Pirlone, F., Bruno, F., et al. (2023). Stakeholder Participation in Planning of a Sustainable and Competitive Tourism Destination: The Genoa Integrated Action Plan. Sustainability, 15(6), 5005. https://doi.org/10.3390/su15065005
- Sun, A., Chen, L., Yoshida, K., et al. (2023). Spatial Patterns and Determinants of Bed and Breakfasts in the All-for-One Tourism Demonstration Area of China: A Perspective on Urban–Rural Differences. Land, 12(9), 1720. https://doi.org/10.3390/land12091720
- Tan, J., Wang, K., Gan, C., et al. (2023). The Impacts of Tourism Development on Urban–Rural Integration: An Empirical Study Undertaken in the Yangtze River Delta Region. Land, 12(7), 1365. https://doi.org/10.3390/land12071365
- Tauxe, C. S. (1995). Marginalizing Public Participation in Local Planning: An Ethnographic Account. Journal of the American Planning Association, 61(4), 471–481. https://doi.org/10.1080/01944369508975658
- Tekalign, M., Groot Zevert, N., Weldegebriel, A., et al. (2018). Do Tourists' Preferences Match the Host Community's Initiatives? A Study of Sustainable Tourism in One of Africa's Oldest Conservation Areas. Sustainability, 10(11), 4167. https://doi.org/10.3390/su10114167
- Tewdwr-Jones, M. (1998). Rural government and community participation: The planning role of community councils. Journal of Rural Studies, 14(1), 51-62. https://doi.org/10.1016/S0743-0167(97)00047-8
- Tippett, J., Handley, J. F., & Ravetz, J. (2007). Meeting the challenges of sustainable development—A conceptual appraisal of a new methodology for participatory ecological planning. Progress in Planning, 67(1), 9–98. https://doi.org/10.1016/j.progress.2006.12.004
- Tosun, C. (2006). Expected nature of community participation in tourism development. Tourism Management, 27(3), 493–504. https://doi.org/10.1016/j.tourman.2004.12.004
- Tou, H. julianti, Melinda Noer, & Helmi. (2022). Sustainable Pilar Of Rural Tourism Development. Jurnal Rekayasa, 12(1), 47– 58. https://doi.org/10.37037/jrftsp.v12i1.129
- Utami, L. A., Lechner, A. M., Permanasari, E., et al. (2022). Participatory Learning and Co-Design for Sustainable Rural Living, Supporting the Revival of Indigenous Values and Community Resiliency in Sabrang Village, Indonesia. Land, 11(9), 1597. https://doi.org/10.3390/land11091597
- Volenzo, T. E., & Odiyo, J. (2018). Ecological Public Health and Participatory Planning and Assessment Dilemmas: The Case of Water Resources Management. International Journal of Environmental Research and Public Health, 15(8), 1635. https://doi.org/10.3390/ijerph15081635
- Wahyuni, N. M., Astara, I. W. W., & Dewi, K. G. P. (2023). Management Optimization for Strengthening Catur Kintamani Tourism Village. International Journal of Environmental, Sustainability, and Social Science, 4(3), 672–679. https://doi.org/10.38142/ijesss.v4i3.541
- Wang, R., Gao, L., Zhu, Y., et al. (2023). Urban–Rural Integration Empowers High-Quality Development of Tourism Economy: Mechanism and Empirical Evidence. Sustainability, 15(22), 15893. https://doi.org/10.3390/su152215893
- Weaver, D. (2005). The distinctive dynamics of exurban tourism. International Journal of Tourism Research, 7(1), 23–33. https://doi.org/10.1002/jtr.521
- Wesselink, A., Paavola, J., Fritsch, O., et al. (2011). Rationales for Public Participation in Environmental Policy and Governance: Practitioners' Perspectives. Environment and Planning A: Economy and Space, 43(11), 2688–2704. https://doi.org/10.1068/a44161
- Wu, H., Hou, C. (2019). Utilizing co-design approach to identify various stakeholders' roles in the protection of intangible placemaking heritage. Disaster Prevention and Management: An International Journal, 29(1), 22-35. https://doi.org/10.1108/DPM-09-2018-0291
- Wulandari, L. D., Asikin, D., Firsandy, B. A., et al. (2024). Edu-Tourism Concept in Eco-Friendly Farm Development Design in Ngronggot Village, Nganjuk, East Jawa. IOP Conference Series: Earth and Environmental Science, 1310(1), 012005. https://doi.org/10.1088/1755-1315/1310/1/012005
- Zhang, J. (2021). The nonlinear effects of tourism on rural income inequality and urban-rural income inequality: Evidence from China. Tourism Economics, 29(1), 172–193. https://doi.org/10.1177/13548166211041802