

Design Thinking Approach for Culture Sensitive Tourism: (Case Study of Cultural Degradation of Baduy Tribe Due to Tourism)

Triandi Pradana¹, Sofiani², Barbie Valerina Tanu³

¹³Matana University, Indonesia

²Universitas Bunda Mulia, Indonesia

Correspondent: sofiani@bundamulia.ac.id²

Received : August 12, 2025

Accepted : September 19, 2025

Published : October 31, 2025

Citation: Pradana, T., Sofiani, & Tanu, B.V., (2025). Design Thinking Approach for Culture Sensitive Tourism: (Case Study of Cultural Degradation of Baduy Tribe Due to Tourism). Ilomata International Journal of Social Sciences, 6(4), 1475-1493.

<https://doi.org/10.61194/ijss.v6i4.1893>

ABSTRACT: Tourism that is developing in the Baduy region has now caused cultural degradation due to tourism activities, especially those involving tour guides from the Baduy tribe. The urgency of this study is the need for a study of tourism models that can adapt to the provisions of customary rules. The purpose of this study is to make recommendations for a culturally friendly tourism concept model that is suitable for application in Baduy so as not to degrade the culture of the Baduy tribe. This study uses a qualitative method with a design thinking approach. Data were collected through interview techniques, observation, and documentation studies. The selection of informants was carried out using purposive sampling techniques. Data obtained will then be analyzed using the interactive model technique from Miles & Huberman. This study recommends the ethno-ecotourism model as a culturally appropriate and sustainable tourism approach for the Baduy region. Through the design thinking process, a prototype model was developed and translated into a policy recommendation tailored to the Baduy context. Future testing is needed to evaluate the model's alignment with community needs, and its implementation requires collaboration within a quadruple helix framework involving government, academia, communities, and media. However, despite its potential, the ethno-ecotourism model faces critical limitations, particularly in ensuring genuine community participation in decision-making. Studies show that top-down governance often marginalizes local voices, leading to a gap between projected and realized benefits.

Keywords: Design Thinking, Tourism, Baduy Tribe, Cultural Degradation, Baduy Culture.



This is an open access article under the CC-BY 4.0 license

INTRODUCTION

Tourism is a pivotal sector that drives economic growth in a region ([Magalhaes, 2023](#)). However, alongside its economic benefits, tourism also entails negative impacts, such as the erosion of cultural values ([Qu et al., 2019](#)). Interactions with tourists often influence the mindset of local communities, especially the younger generation. Tourism development in Indonesia has the potential to be developed because it has diversity such as natural conditions, culture, history, and artificial tourism ([Ardiansyah & Iskandar, 2022](#)). Improving the local economy can be done

through rural tourism, which is operated and managed by the community ([Dewi et al., 2019](#)). They may begin to perceive traditional culture as outdated and show more interest in the modern culture introduced by tourists ([Zhang & Zhang, 2021](#)).

The Baduy Traditional Village, located in Lebak Regency, Banten, has become an increasingly popular cultural tourism destination. The Baduy, also referred to as the Kanekes, are an indigenous community residing in the western region of Java, Indonesia. Renowned for their distinctive lifestyle, the Baduy people strongly uphold traditional customs and beliefs as a core aspect of their identity ([AR Krisnadi, 2024](#)). The Baduy community, consisting of the Inner Baduy and Outer Baduy groups, is well known for preserving their highly traditional way of life, remaining largely untouched by modernization ([Hasim et al., 2025](#)). Today, the Baduy Village attracts a growing number of tourists, particularly those seeking to experience a traditional lifestyle and pristine natural environment. While tourism offers economic benefits, it also poses significant challenges to the preservation of the Baduy people's cultural and environmental heritage ([Waluya et al., 2022](#)).

The urgency of this research lies in the need for a tourism model that aligns with local customary regulations. Such a model is expected to harmonize with the cultural values of the Baduy indigenous community, who seek to preserve their traditional way of life without disruption from tourist activities. Accordingly, the main research question of this study is: 1) What kind of culturally sensitive tourism model is appropriate for implementation in Baduy to prevent the degradation of Baduy cultural heritage? This study is an extension of the author's previous research, which focused on the topic: "The Threat of Cultural Degradation Due to Tourism Activities (A Case Study on Tour Guides from the Inner Baduy Tribe)."

Tourism not only brings positive impacts but can also generate negative consequences ([Apgar et al., 2015](#)). In the Baduy region, the growing tourism industry has led to cultural degradation, particularly through tourism activities involving local Baduy guides. The interaction between the Baduy people and tourists has begun to threaten the preservation of their traditional culture. Local guides from the Inner Baduy community who are traditionally known for their strict adherence to customary laws have started using mobile phones and Instagram to communicate with potential tourists seeking their services ([Pradana et al., 2024](#)). Similar observations are documented in the book *Urang Banten*, which notes that not only the general Baduy population but also traditional leaders have been secretly using mobile phones. ([Pribadi et al., 2025](#))

This phenomenon illustrates the Demonstration Effect of tourism. The Demonstration Effect refers to the tendency of individuals or groups to imitate the behaviors, lifestyles, or consumption patterns of others who are perceived as more advanced, successful, or possessing a higher social status. ([Monterrubio & Mendoza-Ontiveros, 2014](#)).

This study is a continuation of the author's previous research conducted in the Baduy region, titled "The Threat of Cultural Degradation Due to Tourism Activities (A Case Study on Tour Guides from the Inner Baduy Tribe)." The earlier study revealed that there were instances of cultural violations committed by local guides from the Inner Baduy community, such as the use of communication devices and Instagram to interact with tourists.

To address the cultural challenges currently facing the Baduy community, it is necessary to develop a culturally sensitive tourism model. Although the concept of *Seba Budaya*, outlined in Kanekes Village Regulation No. 1 of 2007, represents an effort to safeguard cultural values from the influence of modernization brought by tourism (Mutaqien et al., 2022) it has proven insufficient in effectively mitigating the ongoing cultural degradation occurring in the Baduy region (Pradana et al., 2024).

The researcher employs a Design Thinking approach to address the problems identified in this study. Design Thinking has been proven effective in generating solutions to complex issues (Sayed et al., 2024a). This approach consists of five human-centered stages—Empathize, Define, Ideate, Prototype, Test and is widely applied across various sectors, including tourism, business, and technology (Sándorová et al., 2020).

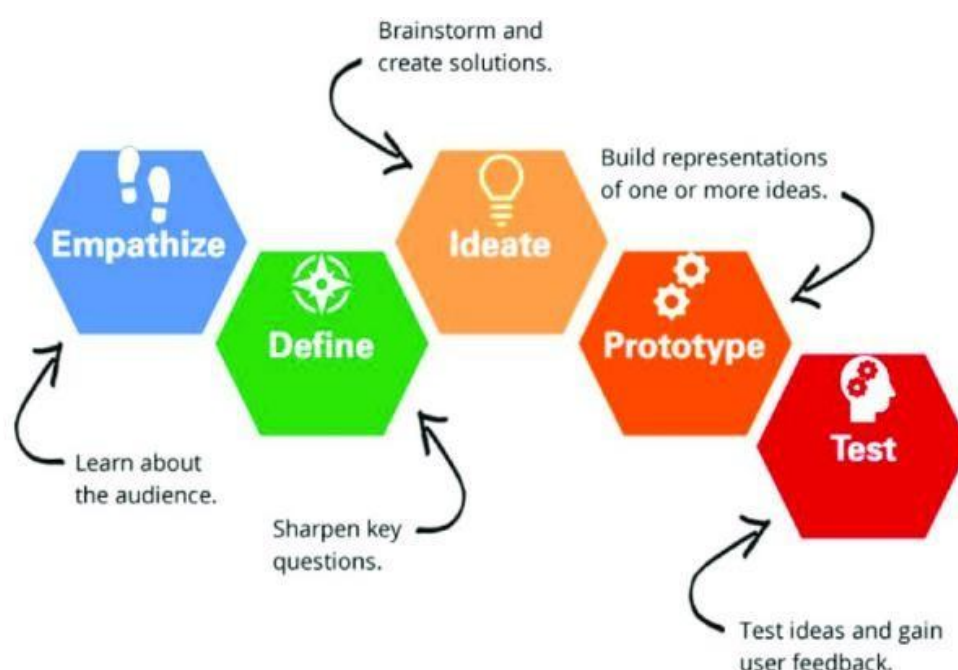


Figure 1. Proses *Design Thinking*
Source : (Sándorová et al., 2020)

Here is the State of the Art table of the research, referring to the author's previous study:

Table 1. Previous Research

Research Aspect	Previous Research	State of the Art of the Current Study
Research Method	1. A qualitative case study was conducted using surveys and interviews to identify issues related to cultural degradation in the Baduy community.	A qualitative study employing a Design Thinking approach was conducted to develop an adaptive tourism model suitable for implementation in the Baduy region, aimed at addressing the issue of cultural degradation caused by tourism
Key Finding	1. Tourism activities have contributed to the	To develop an adaptive tourism model that can be implemented in the Baduy

Design Thinking Approach for Culture Sensitive Tourism: (Case Study of Cultural Degradation of Baduy Tribe Due to Tourism)

Pradana, Sofiani and Tanu

Research Aspect	Previous Research	State of the Art of the Current Study
	degradation of cultural values among tour guides from the Inner Baduy community. 2. This study also evaluates the concept of "Seba Budaya Baduy" as a policy initiative to protect Baduy's indigenous land rights, which has not been fully implemented in practice	region to address the ongoing issue of cultural degradation.
Informants	1. Involving visitors, traditional leaders, local tour guides, and the Baduy community.	Involving the Lebak District Tourism Office and the Puun, the highest traditional authority in the Baduy community.
Result	1. The identification of key issues and the evaluation process have been completed; further research is recommended to focus on the development and strengthening of policy frameworks.	This study recommends the implementation of an adaptive tourism model tailored to the cultural context of the Baduy community, in order to support sustainable tourism development while preserving local traditions and values.

METHOD

This study employs a qualitative method with a Design Thinking approach. Design Thinking is a human-centered problem-solving framework widely applied in innovation studies (Tung, 2021). Cultural tourism research often demands a deep understanding of local values, traditions, and social dynamics—insights that can only be effectively uncovered through a qualitative approach (K. Yin, 2017). The stages of the Design Thinking process used in this study are summarized in table 2.

Table 2. Stages of Design Thinking Process

Stage	Description
Empathy	Understanding the perspectives, values, and needs of local communities.
Problem Definition	Identifying key cultural tourism challenges in the Baduy context.
Ideation	Generating potential solutions through collaborative brainstorming.
Prototyping	Developing initial models of culturally based tourism strategies.
Testing	Reviewing and refining prototypes through feedback from stakeholders.

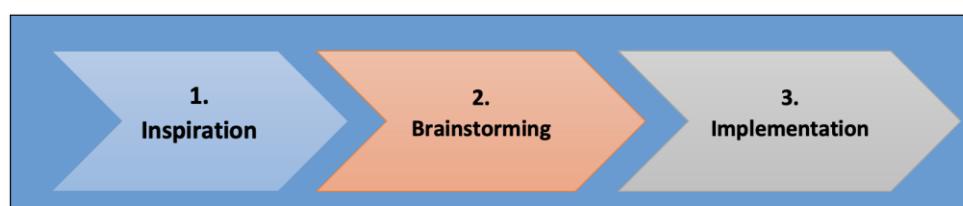


Figure 2. DEO's Procedure Model of Design Thinking (Brown, 2008)

Source: (Sayed et al., 2024b)

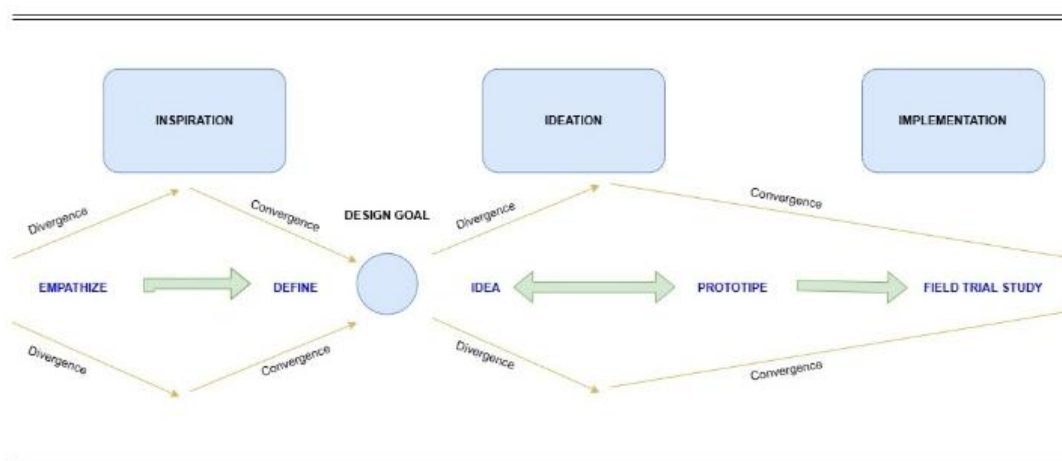


Figure 3. Stages of the applied design-thinking process.

Source: (Tung, 2021)

To address the identified problem, the author will conduct research using the Design Thinking approach to develop a tourism concept model that is more suitable for Baduy. To do this, the researcher will form a team and carry out observations and in-depth interviews with selected informants according to predefined criteria. The key informants for this study are: (1) Puun, the cultural leader of the Baduy tribe; (2) Jaro, the representative of the Baduy traditional authority who handles governmental and policy matters; (3) The Lebak Regency Tourism Office, Banten, as the tourism regulator; (4) Baduy tour guides who directly interact with tourists; (5) Tourists visiting Baduy; and (6) Baduy residents who directly engage with tourists. Collected data will then be analysed using the interactive model technique from Miles & Huberman to generate accurate conclusions and recommendations.

Data collected through interviews, observation, and document study techniques. Informant selection will use purposive sampling, with the following criteria:

- (1) Puun or the cultural leader of the Baduy tribe;
- (2) Jaro, the representative of the Baduy traditional authority responsible for governance and policy matters;
- (3) The Lebak Regency Tourism Office, Banten, as the tourism regulator;
- (4) Baduy tour guides who directly interact with tourists;

- (5) Tourists visiting Baduy; and
- (6) Baduy residents who directly engage with tourists. All gathered data will be analysed using the interactive model technique by Miles & Huberman to produce accurate conclusions and recommendations (Sugiyono, 2013).

RESULT AND DISCUSSION

The Baduy reside in Kanekes Village, Lebak Regency, Banten Province, about 160 km from Jakarta. Their customary governance is organized through the *kapuunan* institution, led by the *puun* as the highest authority, supported by other traditional roles with specific responsibilities. ([Somantri, 2020](#)).

The Baduy tribe consists of two community groups: the Baduy Dalam (tangtu) and Baduy Luar (panamping). The Baduy Dalam are known for strictly adhering to traditional customs. In terms of appearance, they wear clothing dominated by white and have black headbands. White symbolizes purity and a culture untouched by external influences. According to dispar.bantenprov.go.id, Baduy Dalam hold firmly to the concept of pikukuh, which is a customary rule whose main essence emphasizes of existence and being. Many strict taboos continue to be upheld in their daily lives. They strongly reject changes within their group. The Baduy Dalam live in three villages: Cikeusik, Cibeo, and Cikertawana. In these villages, they are forbidden to meet with outsiders, use electronic devices, utilize transportation, or wear footwear ([GEZITA INOVA RUSYDA, 2023](#)). During Christmas and New Year Holidays, 11,272 Tourists Visit Baduy Tribe Area in Lebak ([Febrian, 2025](#)).

The Baduy tribe is not an isolated tribe, but a tribe that deliberately "isolates itself" from the outside world, settles and closes itself off from the influence of outside culture that is considered negative with one goal to fulfill the mandate of its ancestors. The Baduy tribe is also a figure of society that from time to time does not recognize change like society in general who always follow the development of the times ([Muhibah & Rohimah, 2023](#)). There is a difference in identity between the Baduy Dalam and Baduy Luar communities. Baduy Dalam people wear white tops and black bottoms, which symbolizes purity and simplicity. Baduy Luar people, on the other hand, wear all black, reflecting the influence of outside cultures they have received ([Abduh et al., 2023](#)).

To develop a tourism model that aligns with the customary regulations of the Baduy community, a Design Thinking approach is employed, consisting of three key stages: Inspiration, Ideation, and Implementation. The Ideation process is informed by a deep understanding of the problems articulated by stakeholders during the interview sessions. The following are the insights gathered during the Inspiration phase:

Inspiration

In the Design Thinking approach, the Inspiration stage is the initial phase aimed at developing a deep understanding of the users' problems. It involves gathering insights and building empathy

from the field, which serve as the foundation for generating innovative solutions. This stage typically includes observation, interviews, documentation, and direct engagement with users or stakeholders ([Gonen, 2019](#))

Tourism affects the economic, socio-cultural, and spatial-environmental aspects of a destination ([Stevic et al., 2024](#)). In the Baduy region, tourism activities have begun to produce negative impacts on the host community. Interactions between tourists and the Baduy people have led to a decline in adherence to traditional customs ([Pradana et al., 2024](#)). One prominent example of cultural degradation is the increasing use of mobile phones among local tour guides. Many Baduy guides now use mobile phones to communicate with tourists. This issue was confirmed during in-depth interviews with *Jaro Oom*, a local customary leader, who acknowledged that such actions by tour guides constitute violations of traditional norms.

” Yes, it is true that many are now using mobile phones. This clearly violates customary rules—they hide it. From a customary perspective, it is not allowed. The rules in Inner Baduy and Outer Baduy are actually the same, but exceptions are still tolerated in Outer Baduy.”

”There have also been cases where tourists were caught creating content in the Inner Baduy area. Therefore, it is necessary to formulate recommendations to regulate tourist behavior. If this continues, it will further affect the purity of our customs” (Interview with *Jaro Oom*, 2025)

Jaro Oom is a designated *Jaro* (customary leader) responsible for overseeing the implementation of traditional regulations in the Baduy community. He serves as the village representative who liaises directly with external institutions, including the local tourism office and the Ministry of Tourism. His statement indicates the presence of cultural degradation as a consequence of increasing tourist visits. To validate the data provided, the researcher conducted source triangulation by interviewing *Jaro Kasim*, the *Jaro Tangtu* a customary leader appointed by the *Puun* (the highest traditional authority in the Baduy community) who is tasked with managing customary affairs.

"The use of mobile phones among community members is acknowledged; however, traditional customary law remains the primary reference. Customary inspections are still conducted, and any mobile phones found in possession of individuals are confiscated and subsequently sold in accordance with customary sanctions."

"Mobile phones are primarily used for communication with incoming visitors. While traditional customary law generally prohibits such usage, a degree of customary tolerance is granted specifically to members of the Outer Baduy community."

In addition to the positive impacts of tourism such as increased economic opportunities through guiding services, porter services, homestay accommodations, and souvenir sales the Baduy community has also begun to experience negative consequences. Based on field interviews and observations conducted in the Baduy region, the following table outlines the Inspiration stage findings in the Design Thinking process:

Table 3. Inspirations

Stage	Activities	Problem Findings
Empathize	Data collection in the Inspiration stage was conducted through field observation, documentation of tourism-related activities, and in-depth interviews	1. Local tour guides from the Baduy community have begun using mobile phones to communicate with prospective visitors. 2. Tourists have been observed taking photographs and recording videos in the Inner Baduy area. 3. The use of social media platforms to communicate with prospective visitors. 4. Disruptions to the traditional way of life of the Baduy community. 5. The role of <i>Pokdarwis</i> in implementing visitor management has not yet been effective, particularly in educating and monitoring tourists, compared to established models such as UNESCO cultural site protocols or community-based tourism standards. 6. Some tourists fail to understand local regulations due to the lack of pre-visit information.
	Key Informants: <i>Jaro Oom & Jaro Kasim</i>	
Define	Problem Identification	1. There is currently no established policy regulating a structured system for tourist education and supervision in the Baduy regio 2. The Community-Based Tourism Awareness Group (<i>Pokdarwis</i>) responsible for managing tour guiding activities is not functioning effectively.
	Statement of Needs	1. There is a need for a tourist control system that can be implemented at each entrance point to the Baduy area, such as Ciboleger and Cikeusik 2. A structured tour guide management system needs to

Design Thinking Approach for Culture Sensitive Tourism: (Case Study of Cultural Degradation of Baduy Tribe Due to Tourism)

Pradana, Sofiani and Tanu

Stage	Activities	Problem Findings
		be developed and operated by the <i>Pokdarwis</i> (Tourism Awareness Group).
	Insight Synthesis	1. Cultural education, visitor capacity control, and ethical guidance are essential components in effective tourism management. 2. The active involvement of <i>Pokdarwis</i> (Tourism Awareness Group) is crucial in regulating and coordinating tourist visits.

Source: Data processed by the researcher

During the empathize and define stages, it became evident that the current visitor management system is still weak. The ease with which tourists can enter customary areas—bringing with them modern technology and cultural influences indirectly threatens the preservation of existing traditions. (Harsanto, 2023) The Baduy people's efforts to sustain their cultural and customary identity will become increasingly difficult in the absence of an effective preventive system.



Figure 4. Information Board on *Seba Budaya Baduy* Regulations

Source: Researcher's documentation

Despite the presence of informational boards outlining visitor regulations such as those related to *Seba Budaya Baduy* these measures have proven insufficient. The ineffectiveness stems primarily from low tourist engagement with the signage, indicating a need for more proactive and interactive methods of cultural education

“Since I became a Jaro, information boards about the local rules have been installed. However, most visitors do not read them, which is why there needs to be direct guidance at every entrance point into the Baduy area.” (Interview with Jaro Oom, 2025)

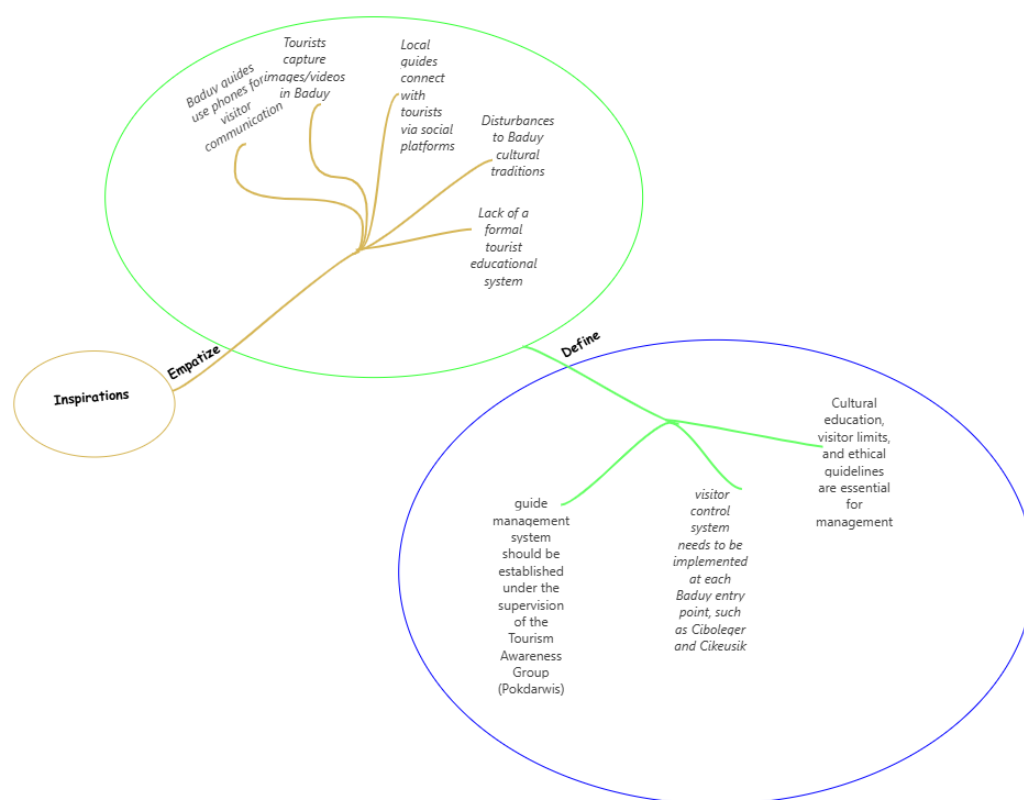


Figure 5. Mind Mapping (Inspirations of Design Thinking)

Source: Data processed by the researcher

The inspiration for applying design thinking in tourism models is rooted in its user-centered, iterative nature, facilitating innovative solutions that respond to the diverse needs of stakeholders involved in the tourism ecosystem. Design thinking emphasizes empathizing with users, defining their problems, ideating, prototyping, and testing, leading to a deep understanding of user experiences and needs, which is pivotal for enhancing tourism offering ([Wiyatiningsih et al., 2023](#))([Sutresno & Singgalen, 2023a](#))

Several studies demonstrate the effectiveness of design thinking methodologies in addressing specific challenges within tourism. For instance, Wiyatiningsih et al. discuss a community service project that integrated a user-centered approach to innovate tourism experiences in Purbayan Village. This initiative showcased how engaging users in the design process results in solutions aligned with local cultural and economic contexts ([Wiyatiningsih et al., 2023](#)) Similarly, Sutresno and Singgalen emphasized the impact of design thinking in designing digital marketing platforms for targeted tourism segments, highlighting how understanding user pain points can lead to more effective tourism websites that enhance user experiences ([Sutresno & Singgalen, 2023a](#))

Ideation

To address the issues identified during the Inspiration phase which includes the *Empathize* and *Define* stages the next step is to conduct the Ideation process. This stage is intended to develop

potential prototypes that can serve as a foundation for recommended solutions to the problems observed. Ideation is crucial in generating as many creative and innovative ideas as possible, based on the insights and core problems previously identified (Meinel et al., 2011). The central focus of this process is to design solutions that are not only innovative but also aligned with the cultural values, traditions, and needs of the Baduy community, ensuring that the outcomes are contextually appropriate and culturally respectful.

Tabel 4. Ideation dan Prototype

Ideation	Prototype
Tourist Education	1. Dedicated information posts are proposed at the main entrances to the Baduy area, such as <i>Ciboleger</i> and <i>Cikeusik</i> 2. Mandatory Pre-visit Briefings by <i>Pokdarwis</i> or Customary Institutions 3. The pre-visit briefing session is not merely recommended but is proposed as a mandatory prerequisite for all visitors
Monitoring and Regulation	1. Develop an integrated online registration system with a daily visitor quota limit. 2. Issue visitor ID cards to individuals who have completed the mandatory pre-departure briefing conducted by <i>Pokdarwis</i> 3. Disseminate information regarding a blacklist sanction policy during the pre-departure briefing 4. Enforce blacklist sanctions against visitors found violating established local regulations.
Capacity Building and Institutional Strengthening of Tourism Awareness Groups (<i>Pokdarwis</i>)	1. Training and capacity building for <i>Pokdarwis</i> conducted by academics and the local Tourism Office 2. Collaboration between <i>Pokdarwis</i>, academic institutions, and the local Tourism Office to enhance tourism management. 3. Provision of an official mandate by the Jaro (traditional leader) designating <i>Pokdarwis</i> as the authorized body responsible for managing tourism activities in Baduy.
Collaborating with mass media to disseminate information regarding customary rules and visitor guidelines in the Baduy area	1. it is necessary to establish synergy with mass media to widely disseminate the established rules and regulations

Source: Data processed by the researcher

The Ideation and Prototype Table emphasizes a holistic approach, focusing on education, regulation, local empowerment, and communication. Its implementation is expected to balance tourism development with the preservation of cultural and environmental values in Baduy.

Design Thinking Approach for Culture Sensitive Tourism: (Case Study of Cultural Degradation of Baduy Tribe Due to Tourism)

Pradana, Sofiani and Tanu

Collaboration among key stakeholders (*Pokdarwis*, local government, media, and indigenous communities) is essential for its success.

The ideation process was informed by interviews with *Jaro Oom* and *Jaro Kasim*, both of whom expressed the need for formal recommendations to the government regarding the regulation of tourist visits as a preventive measure against cultural degradation in Baduy society. In this context, *Jaro Oom* stated that they require a comprehensive study and concrete recommendations to evaluate and improve the existing tourism management system, in order to prevent the emergence of further problems.

"Given the current issues, we hope the research team can provide recommendations, and that the government will establish regulations to prevent future violations of cultural norms." (Interview with Jaro Oom, 2025)

A similar concern was expressed by Jaro Kasim, who emphasized the importance of preserving the cultural traditions that have long been safeguarded by the community. His statement served to validate the concerns previously raised by Jaro Oom regarding the potential cultural degradation caused by visiting tourists.

"My hope is the same as Jaro Oom's. It is time for the government to establish regulations that must be followed by all visitors. There needs to be clear guidelines in place before tourists enter the Baduy area." (Interview with Jaro Kasim, 2025)

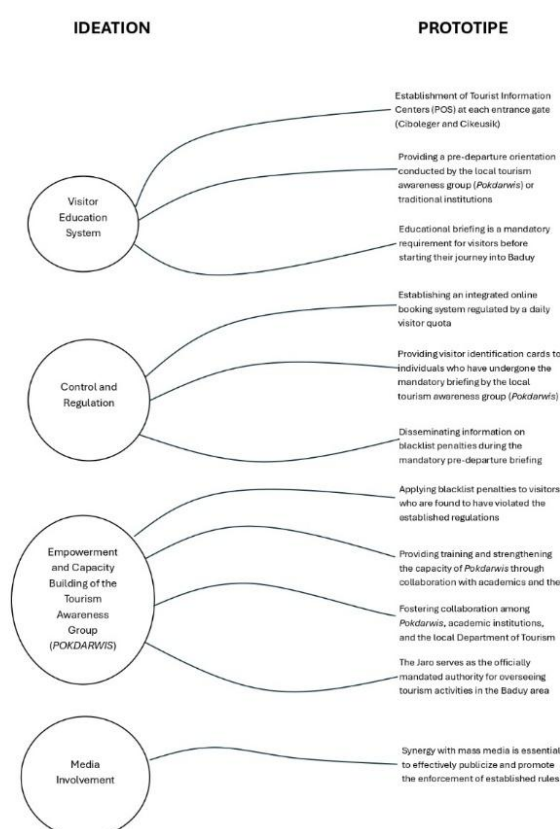


Figure 6. Mind Mapping of Ideation & Prototype

Source: Data Proceed by Researcher

In developing the ideation phase, the researcher adopted a benchmarking approach by referencing the visitor management system implemented at the basecamps of Mount Merbabu. Visitor governance is strictly regulated, including mandatory briefings at each registration post prior to hiking, in order to prevent environmental and cultural degradation (Hasan, 2024). This system is formally outlined in the Hiking Protocol issued under *(Keputusan Kepala Balai Taman Nasional Gunung Merbabu, 2024)* which identifies five official entry routes: *Selo, Thekelan, Cuntel, Wekas, and Suvanting*. Hikers are required to comply with a set of regulations prior to entry, and violations result in the imposition of a blacklist status by the park authorities.

In the ideation and prototyping stages, the integration and collaboration among the host community, academia, government, and media are critical. This synergy is expected to offer viable solutions to the challenges currently faced in Baduy. The collaboration model aligns with the Quadruple Helix concept, which emphasizes multi-stakeholder engagement comprising government, private sector, universities, and civil society in addressing societal issues collaboratively. The Quadruple Helix framework has been increasingly adopted in the context of regional development, resource management, and sustainable tourism initiatives (Schütz et al., 2019)

The implementation of the Quadruple Helix Model provides a relevant and strategic conceptual framework for addressing these challenges. This model emphasizes the importance of collaboration among government, academia, local communities, and media in the formulation and execution of tourism policies and programs in a synergistic manner. The Quadruple Helix model provides a comprehensive framework for understanding collaborative innovation, particularly in contexts such as tourism, where various stakeholders come together to foster sustainable development. This model builds upon the Triple Helix framework, integrating the roles of academia, industry, and government while also incorporating civil society as a crucial fourth pillar. The inclusion of civil society, often represented by the media and cultural entities, significantly enhances the innovation process by allowing for greater participation from the public, leading to more inclusive and effective outcomes in the tourism sector (Carayannis et al., 2012)(Prayudi et al., 2020)

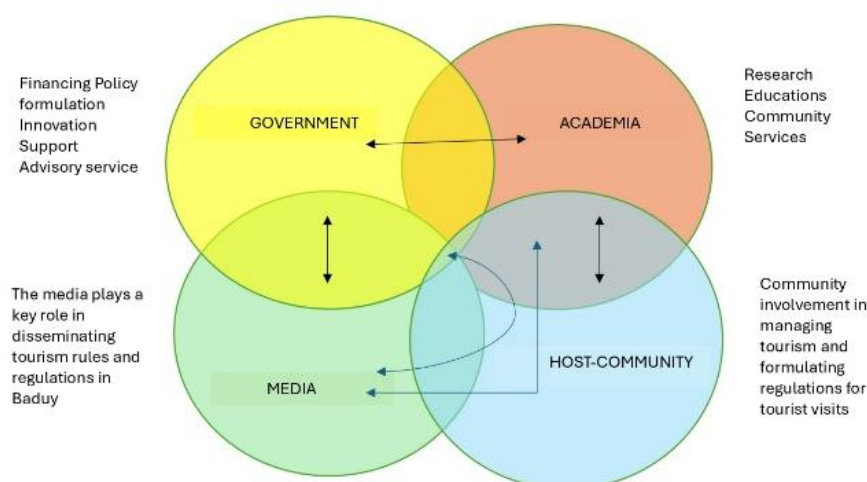


Figure 7. Quadruple Helix Innovation System

Source : (Lindberg et al., 2014)

The Quadruple Helix conceptual model is adapted to align with the specific needs and socio-cultural context of the challenges faced by the Baduy indigenous community. In this localized adaptation, the traditional role of the industry or private sector is replaced by the media, due to its strategic influence in shaping public discourse and behavior.

The government, particularly through tourism agencies and local authorities, holds a critical role in developing regulations, allocating financial support, and ensuring legal protections for the Baduy people. Academia contributes by conducting empirical research and providing scientific assessments of tourism impacts, while also developing participatory approaches to empower local communities. The local community, especially groups such as Pokdarwis (Tourism Awareness Groups) and Jaro (customary leaders), act as the primary agents managing daily tourism activities. Their role extends beyond being passive recipients of tourism's effects they are active managers who require institutional support in the form of training, empowerment, and capacity building. The media, both local and national, plays an equally vital role by disseminating the cultural values of the Baduy, educating tourists, and cultivating collective awareness about the importance of ethical and sustainable tourism.

By implementing the Quadruple Helix model, each stakeholder can contribute according to their distinct roles, thereby establishing a more holistic system of tourism governance. This collaborative framework not only promotes economic sustainability and cultural preservation, but also reinforces the agency of the Baduy indigenous community as key actors rather than mere subjects within the tourism industry.

Based on the results of the researcher's Design Thinking analysis, the most suitable model to address the challenges faced by the Baduy community is the implementation of an Ethno-Ecotourism model. Ethno-Ecotourism is an approach deemed highly appropriate for the Baduy area, which is characterized by its rich cultural heritage and unique ecological values. The ethno-ecotourism model is an emerging concept that intertwines cultural heritage with sustainable tourism practices, emphasizing the importance of indigenous cultures and environmental conservation. Such models are particularly relevant as they not only promote tourism but also enhance community involvement and ecological stewardship.

Similarly, the ethno-ecotourism initiative in Kulon Progo, Indonesia, illustrates the symbiotic relationship between cultural resources and natural landscapes. This model places indigenous communities as primary stakeholders, emphasizing the critical need to integrate local cultural practices with natural resource conservation in tourism development ([Iban et al., 2019](#)).

The ethno-ecotourism model, while promising in fostering sustainable tourism that celebrates local cultures and natural environments, is also fraught with limitations and cautions that must be critically understood. Addressing these issues is crucial for ensuring that ethno-ecotourism fulfils its potential without harming the communities and ecosystems it intends to benefit. One of the most significant limitations in the ethno-ecotourism approach lies in the actual participation of local communities in the decision-making processes. Studies indicate that despite the espoused principles of community engagement, many local populations remain inadequately involved in planning and operational stages of ecotourism projects, leading to disparities between the benefits promised and those received ([Gumede & Nzama, 2022](#)). This disconnect can stem from top-down

governance structures that prioritize external stakeholders' interests, often overshadowing the voices of local communities who have a deeper understanding of their cultural and ecological contexts ([Efani et al., 2024](#)). Therefore, fostering a genuine participatory approach is critical in mitigating these issues. Without such involvement, the essence of ethno-ecotourism could be compromised, resulting in a model that does not truly reflect the values and needs of the indigenous populations it aims to serve.

This study provides valuable insights into the early stages of the Design Thinking framework, particularly in addressing the phases of Empathize, Define, Ideate, and Prototype. However, further research is necessary to explore and evaluate the Test phase in greater depth. A preliminary evaluation framework may be introduced through indicators such as cultural integrity, tourist compliance, and community satisfaction, thereby providing methodological guidance for the testing phase and enhancing the study's practical and scholarly contribution.

Future studies should focus on implementing and assessing the proposed solutions in real-world contexts to determine their effectiveness, adaptability, and impact on the targeted community or system. This continuation is essential to validate the model and ensure its relevance, usability, and sustainability within the cultural and situational context under study.

The testing phase of design thinking is pivotal in validating concepts and ensuring they meet user expectations. During this phase, prototypes are evaluated through user feedback, which is crucial for refining ideas and improving overall service delivery. For instance, a study focused on designing a tourism destination marketing website highlighted the necessity of understanding user needs during the testing phase to develop functionalities that align with user behaviors ([Sutresno & Singgalen, 2023b](#)). Similarly, the testing stage facilitates iterative improvements based on real-world feedback, potentially leading to enhanced engagement and satisfaction among tourists ([Wiyatiningsih et al., 2023](#)).

CONCLUSION

This study recommends the *ethno-ecotourism* model as a culturally respectful tourism approach that is highly suitable for implementation in the Baduy region. This model is considered effective in preserving the cultural and ecological values that define the identity of the Baduy community, while also offering sustainable economic benefits through tourism activities.

Within the design thinking framework, this study progressed to the prototyping stage, through which a culturally grounded tourism model was developed. The prototype not only provides a conceptual foundation but has also been refined into a policy recommendation designed for practical implementation in the Baduy context.

Furthermore, successful implementation of this model requires a collaborative approach based on the *quadruple helix* framework, involving active participation from government, academia, the community, and media (as a substitute for the industry sector). Such cross-sectoral collaboration is essential to establish inclusive, adaptive, and culturally sustainable tourism governance.

However, while the ethno-ecotourism model shows promise in promoting sustainable tourism that respects and celebrates local cultures and natural environments, it is not without limitations. One of the most significant challenges lies in ensuring genuine participation of local communities in decision-making processes. To address this, the model could be structurally reinforced through the Quadruple Helix framework by embedding concrete mechanisms such as co-decision protocols where community representatives share equal authority in planning and the establishment of community advisory boards that provide formal channels for local voices. These mechanisms not only mitigate the risks of top-down governance that often marginalize indigenous perspectives but also strengthen the alignment of tourism benefits with the communities' cultural and ecological priorities."

REFERENCES

- Abduh, M., Ma'arif, A. S., Ari, D., Nurmalawati, N. N., & Unaedi, R. (2023). Implementasi Gaya Hidup Berkelanjutan Masyarakat Suku Baduy Banten. *Jurnal Citizenship Virtues*, 3(2), 607–614. <https://doi.org/10.37640/jcv.v3i2.1879>
- Apgar, M. J., Allen, W., Moore, K., & Ataria, J. (2015). Understanding adaptation and transformation through indigenous practice: the case of the Guna of Panama. *Ecology and Society*, 20(1), art45. <https://doi.org/10.5751/ES-07314-200145>
- Ardiansyah, I., & Iskandar, H. (2022). Analisis Potensi Ekowisata Di Taman Wisata Alam Gunung Pancar Dengan Menggunakan Metode Analisis ADO-ODTWA. *Jurnal Inovasi Penelitian*, 2(8), 2622–2630.
- AR Krisnadi., A Tirtadidjadja, I Ardiansyah. (2024). The meaning and function congcoṭ—a rice cone in the ritual of life Baduy outer community, Banten Province. 1366. 10.1088/1755-1315/1366/1/012049
- Carayannis, E. G., Barth, T. D., & Campbell, D. F. J. (2012). The Quintuple Helix Innovation Model: Global Warming as a Challenge and Driver for Innovation. *Journal of Innovation and Entrepreneurship*, 1(1), 2. <https://doi.org/10.1186/2192-5372-1-2>
- Dewi, L., Djunaid, I. S., Studi Usaha Perjalanan Wisata, P., & Tinggi Pariwisata Bogor, S. (2019). Meningkatkan Ekonomi Lokal Melalui Pariwisata Pedesaan: Studi Kasus Desa Ciseeng. *Jurnal Sosial Humaniora*, 10(1), 14–26.
- Efani, A., Tiarantika, R., Manzilati, A., Rahman, M. S., Soemarno, S., & Koderi. (2024). Complex Solutions Collaborative-Based Mangrove Ecosystem Management Model for Development Ecotourism in South Coastal East Java Indonesia. *International Journal of Sustainable Development and Planning*, 19(10), 3821–3835. <https://doi.org/10.18280/ijssdp.191011>
- Febrian. (2025). *Selama Libur Nataru, 11.272 Wisatawan Kunjungi Kawasan Suku Baduy di Lebak*. <https://www.poskota.co.id/2025/01/05/selama-libur-nataru-11272-wisatawan-kunjungi-kawasan-suku-baduy-di-lebak?halaman=2>

- GEZITA INOVA RUSYDA. (2023). *Perbedaan Baduy Dalam dan Baduy Luar di Banten*. <https://www.tempo.co/hiburan/perbedaan-baduy-dalam-dan-baduy-luar-di-banten-apa-saja-pantangan-di-sana--166041>
- Gonen, E. (2019). Tim Brown, Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation (2009). *Markets, Globalization & Development Review*, 04. <https://doi.org/10.23860/MGDR-2019-04-02-08>
- Gumede, T. K., & Nzama, A. T. (2022). *Approaches Toward Community Participation Enhancement in Ecotourism*. <https://doi.org/10.5772/intechopen.100295>
- Harsanto, P. W. (2023). Degradasi Kesadaran Nilai-Nilai Kearifan Lokal: Representasi Budaya Jepang pada Mural sebagai Upaya Branding Kampung. *ANDHARUPA: Jurnal Desain Komunikasi Visual & Multimedia*, 9(02), 166–180. <https://doi.org/10.33633/andharupa.v9i02.8236>
- Hasan, M. A. (2024). Social and cultural impacts of the Selo hiking trail in Mount Merbabu National Park: a case study on community interaction and sustainable tourism development. *Journal of Religion and Environmental Humanities*, 1(1), 26–34.
- Hasim, I. S., Widiastuti, I., Faisal, B., & Sudradjat, I. (2025). The birth and demise of a village within the vernacular community of Baduy in Banten, Indonesia. *Frontiers of Architectural Research*, 14(1), 127–144. <https://doi.org/10.1016/j.foar.2024.07.011>
- Iban, C., Nugraha, C. D., & Elfrida, T. (2019). Ethno-Ecotourism in Kulon Progo, Indonesia: A Downstreaming Process of Natural Resources-Based Products With a Touch of Cultural Resources. *Kne Social Sciences*. <https://doi.org/10.18502/kss.v3i23.5137>
- K. Yin, R. (2017). *Case Study Research and Applications: Design and Methods* (6th ed.). SAGE Publications.
- Keputusan Kepala Balai Taman Nasional Gunung Merbabu, Pub. L. No. SK : 39/T.35/TEK/04/2024, <https://tngunungmerbabu.org/tata-tertib/> (2024).
- Lindberg, M., Lindgren, M., & Packendorff, J. (2014). Quadruple Helix as a Way to Bridge the Gender Gap in Entrepreneurship: The Case of an Innovation System Project in the Baltic Sea Region. *Journal of the Knowledge Economy*, 5(1), 94–113. <https://doi.org/10.1007/s13132-012-0098-3>
- Magalhaes, L. (2023). Dampak Pembangunan Pariwisata terhadap Pertumbuhan Ekonomi Daerah (Studi Pembangunan Pariwisata di Kabupaten Jombang). *Journal of Regional Economics Indonesia*, 3(2), 71–86. <https://doi.org/10.26905/jrei.v3i2.8899>
- Meinel, C., Leifer, L., & Plattner, H. (2011). *Design Thinking: Understand – Improve – Apply*. <https://doi.org/10.1007/978-3-642-13757-0>
- Monterrubio, J. C., & Mendoza-Ontiveros, M. M. (2014). Tourism and the demonstration effect: Empirical evidence. *Tourism & Management* <https://www.redalyc.org/pdf/3887/388743881014.pdf>

- Muhibah, S., & Rohimah, Rt. B. (2023). Mengenal Karakteristik Suku Baduy Dalam dan Suku Baduy Luar. *Jawara*, 9(1), 73–85.
- Mutaqien, N. F., Pujaastawa, I. B. G., & Suwena, I. W. (2022). Baduy Dalam Sentuhan Pariwisata: Studi Antropologi Tentang Perkembangan Pariwisata di Desa Kanekes dan Implikasinya. *Sunari Penjor: Journal of Anthropology*, 5(2), 69. <https://doi.org/10.24843/SP.2021.v5.i02.p03>
- Pradana, T., Simamora, V. I. J., & Zai, Y. M. I. (2024). The Threat of Cultural Degradation Due to Tourism Activities (Case Study on Tourist Guides from Baduy Dalam Tribe at Banten, Indonesia). *Ilomata International Journal of Social Science*, 5(4), 1120–1136. <https://doi.org/10.61194/ijss.v5i4.1379>
- Prayudi, P., Ardhanariswari, K. A., & Probosari, N. (2020). The Quadruple Helix Communication Model in Yogyakarta's Creative City Development. *Jurnal Aspikom*, 5(2), 294. <https://doi.org/10.24329/aspikom.v5i2.704>
- Pribadi, Y., Fadillah, A. M., Fajri, A., & Suryani, A. J. (2025). *Urang Banten* (Y. Pribadi, Ed.; 1st ed., Vol. 1). A-Empat.
- Qu, C., Timothy, D. J., & Zhang, C. (2019). Does tourism erode or prosper culture? Evidence from the Tibetan ethnic area of Sichuan Province, China. *Journal of Tourism and Cultural Change*, 17(4), 526–543. <https://doi.org/10.1080/14766825.2019.1600867>
- Sándorová, Z., Repánová, T., Palenčíková, Z., & Beták, N. (2020). Design thinking - A revolutionary new approach in tourism education? *Journal of Hospitality, Leisure, Sport & Tourism Education*, 26, 100238. <https://doi.org/10.1016/j.jhlste.2019.100238>
- Sayed, Z., Proches, C. N. G., Kader, A., & Taylor, S. (2024a). The Applicability of Design Thinking in the Tourism Sector, Kwazulu-Natal, South Africa. *Qeios*. <https://doi.org/10.32388/ARJMSR>
- Sayed, Z., Proches, C. N. G., Kader, A., & Taylor, S. (2024b). The Applicability of Design Thinking in the Tourism Sector, Kwazulu-Natal, South Africa. *Qeios*, 6(5). <https://doi.org/10.32388/ARJMSR>
- Schütz, F., Heidingsfelder, M. L., & Schraudner, M. (2019). Co-shaping the Future in Quadruple Helix Innovation Systems: Uncovering Public Preferences toward Participatory Research and Innovation. *She Ji: The Journal of Design, Economics, and Innovation*, 5(2), 128–146. <https://doi.org/10.1016/j.sheji.2019.04.002>
- Somantri, R. A. (2020). *Kehidupan Masyarakat Baduy*. <https://kebudayaan.kemdikbud.go.id/bpnbjabar/kehidupan-masyarakat-baduy/>
- Stevic, I., Rodrigues, V., Breda, Z., Veríssimo, M., da Silva, A. M. F., & da Costa, C. M. M. (2024). Residents' perceptions of negative tourism impacts and mitigation strategies: the case of Porto. *International Journal of Tourism Cities*, 10(4), 1488–1506. <https://doi.org/10.1108/IJTC-11-2022-0254>
- Sugiyono. (2013). *Metode Penelitian Kuantitatif*. Alfabeta.

- Sutresno, S. A., & Singgalen, Y. A. (2023a). Digital Innovation Design of Tourism Destination Marketing Website Using Design Thinking Method. *Journal of Information Systems and Informatics*, 5(2), 428–444. <https://doi.org/10.51519/journalisi.v5i2.464>
- Sutresno, S. A., & Singgalen, Y. A. (2023b). Digital Innovation Design of Tourism Destination Marketing Website Using Design Thinking Method. *Journal of Information Systems and Informatics*, 5(2), 428–444. <https://doi.org/10.51519/journalisi.v5i2.464>
- Tung, F.-W. (2021). Rediscovering Herb Lane: Application of Design Thinking to Enhance Visitor Experience in a Traditional Market. *Sustainability*, 13(7), 4033. <https://doi.org/10.3390/su13074033>
- Waluya, B., Malihah, E., Ruhimat, M., & Wiyanarti, E. (2022). Tourism Revitalization Based on Local Wisdom in ‘Saba Budaya’ of Baduy. *Jurnal Geografi Gea*, 22(1), 1–13. <https://doi.org/10.17509/gea.v22i1.45571>
- Wiyatiningsih, W., Oentoro, K., Satwikasanti, W. T., & Mahendra, M. A. (2023). Silver and Culinary MSMEs Assistance in the Purbayan Tourism Village Through Synergized Promotional Design. *Journal of Innovation and Community Engagement*, 4(2), 117–136. <https://doi.org/10.28932/ice.v4i2.6456>
- Zhang, J., & Zhang, Y. (2021). Why does tourism have to confront the emissions trading scheme? Evidence from China. *Tourism Management Perspectives*, 40, 100876. <https://doi.org/10.1016/j.tmp.2021.100876>