

Rejuvenating Sustainable Mangrove Ecotourism Destinations Using a Tetrapreneur Model: A Case of Kulon Progo, Indonesia

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Article Info

Submitted, 12 September 2024

Revised, 28 September 2024

Accepted, 1 October 2024

Keywords:

Rejuvenation; Sustainable Mangrove Ecotourism; Tetrapreneur Model; Kulon Progo

Kata Kunci:

Rejuvenasi; Ekowisata Mangrove Berkelanjutan; Model Tetrapreneur; Kulon Progo

ABSTRACT

This article aims to investigate actual conditions and construct potential recommendations to rejuvenate mangrove ecotourism destinations to be more sustainable along the southern coast of Kulon Progo using a Tetrapreneur Model. In this study, a qualitative research approach was adopted. To obtain primary data, systematic observation and in-depth interviews were utilized, while a literature study strategy involving a comprehensive review of relevant documents in various forms, such as textual, visual, digital, and physical items, was employed to collect secondary data. The results indicate that the four approaches of the Tetrapreneur Model, namely Chainpreneur, Marketpreneur, Qualitypreneur, and Brandpreneur, as examined in this study, have their own unique set of facts, comprising Improvement Gap Facts, Sustainability Potential Facts, and Supporting Facts for the rejuvenation of mangrove ecotourism destinations. Furthermore, stakeholders in mangrove ecotourism destinations, particularly local community groups acting as tourism business operators and the local government of Jangkar Village, are suggested to consider implementing several practical recommendations based on the Tetrapreneur Model.

ABSTRAK

Tujuan dari artikel ini adalah untuk menginvestigasi kondisi aktual dan mengkonstruksi rekomendasi potensial untuk meremajakan destinasi ekowisata mangrove agar lebih berkelanjutan di sepanjang pesisir selatan Kabupaten Kulon Progo menggunakan Model Tetrapreneur. Kajian ini mengadopsi pendekatan penelitian kualitatif. Untuk mengumpulkan data primer, observasi secara sistematis dan wawancara mendalam digunakan, sedangkan studi literatur yang melibatkan tinjauan komprehensif terhadap dokumen-dokumen yang relevan dalam berbagai bentuk, mulai tekstual, visual, digital, hingga fisik digunakan untuk mengumpulkan data sekunder. Hasil menunjukkan bahwa empat pendekatan dari Model Tetrapreneur, yakni Chainpreneur, Marketpreneur, Qualitypreneur, dan Brandpreneur, seperti yang dikaji dalam tulisan ini, memiliki fakta-fakta uniknya masing-masing, terdiri dari Fakta Gap Perbaikan, Fakta Potensi Keberlanjutan, dan Fakta Pendukung dalam konteks peremajaan destinasi ekowisata mangrove. Selanjutnya, para pemangku kepentingan di destinasi ekowisata mangrove, khususnya komunitas lokal sebagai pengelola bisnis pariwisata dan pemerintah Desa Jangkar, disarankan untuk mempertimbangkan penerapan beberapa rekomendasi praktis berdasarkan Model Tetrapreneur.

D.O.I

: <https://doi.org/10.17509/jithor.v7i2.74608>

INTRODUCTION

Around 3,945 mangrove tourist attractions have been identified across 93 countries from 13.76 million hectares of mangrove ecosystem across the globe, which are concentrated in coastal lands, particularly along tropical and subtropical shorelines, and river estuaries (Bunting et al., 2018; Ochoa-Gómez et al., 2019; Spalding & Parrett, 2019; Trialfhianty et al., 2022). These tourist attractions have the potential to attract millions of tourists, estimated to generate billions of dollars in revenue (Aji et al., 2024; Spalding & Parrett, 2019). The diverse range of recreational activities available at mangrove-based tourism sites can cater to tourists with varying lengths of stay, ranging from single day trips to extended overnight boat tours, with a focus on wildlife observation, birdwatching, fishing, mangrove planting, kayaking, and eating seafood (Avau et al., 2011; Blanton et al., 2024).

Indonesia, as one of the archipelagic countries situated near the equator, boasts the world's largest mangrove ecosystem, accounting for half of Asia's mangrove ecosystem (Alongi, 2015; Donato et al., 2011; Mursyid et al., 2021). Mangrove ecosystems perform various ecological functions, including serving as a habitat for marine life, controlling sedimentation in downstream areas, resisting waves and tsunamis, and acting as a protection area against sea level rise (Barbier et al., 2011; Kauffman et al., 2020). In addition, mangroves are capable of absorbing and storing carbon three times higher than other ecosystems, which is essential for climate change mitigation and adaptation (Howard et al., 2017; Kauffman et al., 2020; Murdiyarso et al., 2015; Mursyid et al., 2021). Mangrove ecosystems also play crucial roles in the socio-economic lives of local communities (Hakim et al., 2017; Mursyid et al., 2021). Over the years, local communities have regularly utilized mangroves for various purposes, including obtaining firewood, raw materials for making charcoal, building

materials, fishing gear, and other non-timber products, such as tannins and medicines sourced from mangrove sap (Kusmana & Sukristijiono, 2016).

In Indonesia, the development of mangrove ecosystems as tourism destinations has been aimed at promoting economic benefits for various parties, including local communities, governments, and private businesses (Duffy, 2015; Friess, 2017). One such location is the southern coast of Kulon Progo Regency in the Special Region of Yogyakarta Province (Aji & Pakan, 2023). Local communities living around the estuary zone of the Bogowonto River in Kulon Progo have been utilizing mangrove ecosystems as mangrove ecotourism destinations since 2016 (Fistiningrum & Harini, 2021). Mangrove-based ecotourism in the area can be recognized as an integral practice of conservation efforts, as the environment has been adversely affected by land use changes for aquaculture, particularly shrimp pond farming (Aji & Pakan, 2023). This condition reflects Blanton et al.'s (2024) statement that ecotourism in Southeast Asia has gained prominence as a financial incentive tool to support mangrove conservation and restoration.

The utilization of mangroves for ecotourism in Kulon Progo has resulted in significant economic benefits for the local community (Fistiningrum & Harini, 2021). However, the process of tourism development in the area has been hindered by conflicts arising from local-to-local relations, intergroup competition, destination management, and tourism income distribution (Aji & Pakan, 2023). These issues have had a negative impact on the sustainability of mangrove ecotourism and have stagnated the development of the destination. Prior research has focused on the importance of community participation in governing mangrove tourism (Fistiningrum & Harini, 2021), the supporting and resisting factors of mangrove tourism development (Arrahmah & Wicaksono, 2022), and community support for tourism in the

mangrove ecosystem (Astikasari et al., 2023).

While these studies provide empirical insights into the role of the community in determining the direction of mangrove tourism development, research on the bigger picture of sustainable mangrove ecotourism destinations using a particular model or strategy is understudied. To address these issues, this article adopts the Tetrapreneur Model, which provides a comprehensive way to map and evaluate specific issues into four poles: *Chainpreneur*, *Marketpreneur*, *Qualitypreneur*, and *Brandpreneur*, resulting in practical recommendations. Thus, the primary objective of this article is to critically evaluate the current state of sustainable mangrove ecotourism in Kulon Progo and propose practical recommendations for rejuvenating it using the Tetrapreneur Model. This is necessary because the number of tourists and annual revenue at these mangrove ecotourism destinations in Kulon Progo have both experienced a significant decline (Aji & Pakan, 2023).

Furthermore, the structure of the article is organized into five sections: introduction, conceptual framework, research methods, results and discussion, as well as conclusion and practical recommendations. The introduction provided a succinct overview of the research background, objectives, and article structure. The conceptual framework section outlined the theoretical foundations employed to analyze the data in this study. Meanwhile, the research methods described the study procedure and how data collection approaches were administered. The results and discussion sections then investigated the findings using the theoretical foundations of the data collected. Eventually, the conclusion and practical recommendations elaborated on the research findings as well as prospective future agendas relevant to the scope and issues addressed in this study.

LITERATURE REVIEW

Sustainable Ecotourism

The effective management of mangrove ecosystems as conservation avenues for tourism purposes necessitates a sustainable approach, which emphasizes the harmony between development and attempts to preserve the environment (Pratama et al., 2023). Moreover, sustainability in tourism has been a priority on the global agenda since the 1980s and is commonly translated into the concept of sustainable tourism, which is subsequently implemented via diverse strategic frameworks (Bramwell et al., 2017; Dewantara & Gaud, 2022; Hall, 2010; Higham & Miller, 2018; Page, 2009; Sharpley, 2009). Sustainable tourism has been the main topic of discussion for decades following the publication of a document entitled '*Our Common Future*' released in 1987 by the Brundtland Commission (Butler, 1999; Steer & Wade-Gery, 1993). In general, it is widely perceived that the idea of "sustainable tourism" came from "sustainable development" (Sharpley, 2000, 2020). Since the 1990s, the term sustainable tourism has been defined by various experts and organizations. For instance, UNWTO (1993) defined sustainable tourism as a form of tourism that can accommodate tourist demands and the needs of tourism service providers while also preserving and enhancing opportunities for the future. On the other hand, Butler (1999) defined sustainable tourism as tourism that is developed and maintained at a specific scale in a particular area, such as a neighborhood or community, to remain viable indefinitely without degrading or altering the natural and physical environment in which it takes place.

Furthermore, McKercher (2010) argued that sustainable tourism has many 'faces', with ecotourism being one of the most prominent. Ecotourism is a type of sustainable tourism that aims to responsibly use natural, cultural, and historical resources while also contributing to local communities and natural area conservation as well (Fennell, 2007; Weaver, 2001). Ecotourism

is portrayed as advantageous to the Global South because it enables for generating profits from environmental resources without relying on smokestack industries (Duffy, 2002). Historically, the term 'ecotourism' was introduced into academic literature in the mid-1980s as a direct outcome of the world's recognition and response to sustainable and worldwide ecological practices (Diamantis, 1999; Weaver, 2001, 2002).

Despite the existence of a substantial body of literature on the subject of ecotourism (Fennell, 2007), there has been some confusion regarding the origins or etymology of the term 'ecotourism' until recently. Ceballos-Lascuráin provides a widely cited definition of ecotourism as a type of travel that involves visiting natural areas that are largely undisturbed or uncontaminated, with the goal of appreciating and learning about the area's flora and fauna, as well as its cultural heritage both past and present (Duffy, 2002; Fennell, 2007; Orams, 1995). According to The International Ecotourism Society (TIES), ecotourism is responsible travel to natural areas that supports the environment, local people, and education for both hosts and guests. To meet these criteria, ecotourism must be nature-based, learning-focused, and environmentally and socio-culturally sustainable (Weaver, 2002). Ecotourism also promotes the development of traveler's codes of conduct and certification programs for the travel industry (Honey, 2008). The goals of ecotourism include benefiting local communities, protecting natural and cultural heritage, and adhering to ethical standards for tourists and operators (Dawson, 2008; Johnston & Payne, 2004).

Tourism Area Life Cycle (TALC)

The fundamental guarantee of a tourism destination is that it undergoes transformations and progresses over time (Aji & Kusumawanto, 2020). In this sense, a conceptual framework is utilized to grasp the lifespan of a tourism destination by considering the various aspects of change, such as land use, economic development, and

destination marketing (Getz, 1992). This framework is widely known as the Tourism Area Life Cycle (TALC) model, which has persisted for more than four decades and has been regarded as "one of the most cited and contentious areas of tourism knowledge" (Butler, 2024).

TALC has become one of the most well-known theories of destination growth and change within the field of tourism studies (Butler, 2024). Butler (2024) argued that the TALC was primarily derived from the product life cycle model utilized in business and management studies and adapted to explain the developmental and transformative processes that transpire in tourism destinations across the globe. Recent significant trends and theories suggest that sustainable tourism management's continued development has impacted or is beginning to impact the TALC concept and model (Butler, 2024).

According to Butler (1980, 2006), the life cycle of a tourism destination encompasses seven stages of change, consisting of five regular development stages and two optional advanced stages of development. The five regular development stages are: a) exploration; b) involvement; c) development; d) consolidation; and e) stagnation. Additionally, there are two advanced stages of development that may occur for a tourist destination after entering the stagnation stage, namely rejuvenation or decline. The illustration of the Tourism Area Life Cycle (TALC) model can be seen in Figure 1. as follows:

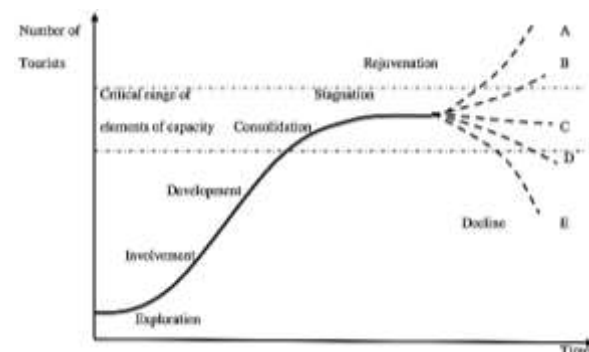


Figure 1. Tourism Area Life Cycle (TALC)

Source: Butler, 1980; 2006

Each stage of a tourism destination's life cycle has characteristics that can serve as indicators to determine where the destination is in its growth. Table 1 provides an outline of the defining characteristics of each stage.

Table 1. Characteristics of Stages of Tourism Area Life Cycle (TALC)

Stage	Characteristics
Exploration	<ul style="list-style-type: none"> a) Small numbers of visitors are attracted by natural or cultural attractions. b) Visitor numbers are limited and few tourist facilities exist. c) Visitors may come from nearby destinations.
Involvement	<ul style="list-style-type: none"> a) There is limited involvement by local residents who provide some facilities for visitors. b) Recognizable tourist seasons and market areas begin to emerge. c) Visitors may travel from within the state or region.
Development	<ul style="list-style-type: none"> a) Large numbers of tourists arrive and external organizations such as hotel chains and tour operators take more of a key role. b) Tourists may travel from all parts of the nation or internationally.
Consolidation	<ul style="list-style-type: none"> a) Tourism becomes a major part of the local economy and of increasing political importance. b) Rates of visitor growth may have levelled off.
Stagnation	<ul style="list-style-type: none"> a) The number of visitors has peaked. b) The destination may no longer be considered fashionable. c) There may be a high turnover of business properties.
Rejuvenation/Decline	<ul style="list-style-type: none"> a) Various scenarios are then possible, including decline, stabilization, or rejuvenation. It is at the stage of consolidation and stagnation that managers or business operators need to intervene and take action to avoid decline.

Source: UNWTO, 2007

As presented in the table above, it is suggested that destination managers should undertake rejuvenation after the destination

experiences stagnation or even decline. The rejuvenation initiatives, in many cases, were considered an effort to make destinations sustainable (UNWTO, 2007). According to Butler (2006), destinations might be rejuvenated through various strategies, such as changing to a new focus, finding an additional focus, or and repositioning the destination with respect to markets.

Tetrapreneur Model

As hinted before, the Tetrapreneur Model comprises four major holistic approaches, namely: 1) *Chainpreneur*; 2) *Marketpreneur*; 3) *Qualitypreneur*; and 4) *Brandpreneur*. Figure 2. illustrates the Tetrapreneur Model, including the definition of each approach.

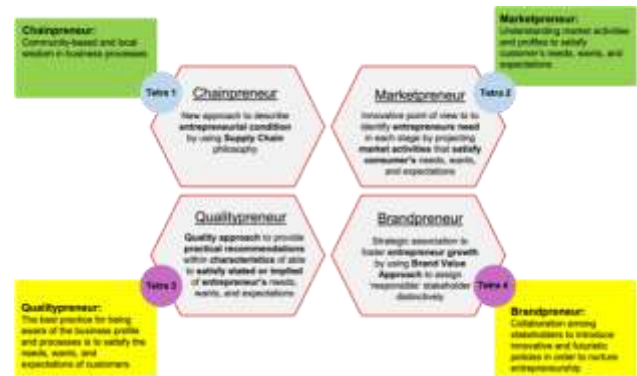


Figure 2. Tetrapreneur Model

Source: Rika Fatimah, 2018

According to Rika Fatimah (2018), *Chainpreneur* represents a novel approach to depicting entrepreneurial conditions based on the principles of supply chain philosophy which representing supply chain business from upstream to downstream (Rahmatika et al., 2019; Rika Fatimah, 2018). In general, supply chain management involves the relationships and links between partners with the aim of collectively achieving goals and the most efficient processes (Helmold, 2022), thereby maximizing the overall value generated (Rika Fatimah, 2018). This value is also referred to as the Supply Chain surplus (Rika Fatimah, 2018). In contrast, *Marketpreneur* is an innovative perspective that identifies the needs of entrepreneurs at every stage by projecting market activities

that satisfy consumers' needs, wants, and expectations (Rika Fatimah, 2018). In this context, consumers are not limited to those who interact directly with or purchase products or services (Rika Fatimah, 2018). To achieve and maintain profitability, businesses have discovered that they must provide high-quality products, operate efficiently, and be socially and ethically responsible in their interactions with customers, employees, investors, government regulators, and the public (Rika Fatimah, 2018). These key stakeholders play an important role in the business's development and outcomes (Rika Fatimah, 2018).

In addition, *Qualitypreneur* is a quality approach in providing practical recommendations within characteristics of able to satisfy stated or implied entrepreneurs' needs, wants and expectations. Subsequently, *Brandpreneur* related to strategic association to foster entrepreneur growth by using brand value approach to assign responsible stakeholder distinctively. The goal is to strengthen the strategic position in the market, sustain the life cycle, and have compatible capabilities to compete and collaborate, by using global best practices. Benchmarking is one of the most widely used strategies for identifying best practices in successful global entrepreneurship models (Rika Fatimah, 2018).

Based on Rika Fatimah's (2018) study, which utilized the Tetrapreneur Model, three main priorities emerged: 1) *Improvement Gap Facts*, 2) *Sustainability Potential Facts*, and 3) *Supporting Facts*. *The Improvement Gap Facts* indicate areas of deficiency, challenge, or obstacle, and as such, they are a priority for immediate action. *The Sustainability Potential Facts* highlight strengths or advantages that should be maintained and preserved. Lastly, *the Supporting Facts* refer to circumstances or situations that bolster existing potential, making them a priority for development.

RESEARCH METHODS

This research employed a qualitative strategy. The data used in this research was classified into two categories: primary and secondary. The primary data were gathered through systematic observation (Creswell, 2014; Merriam & Tisdell, 2016). An observation protocol was created to ensure that the observed objects related to the research's focus. Additionally, primary data were also collected through in-depth interviews with 12 key informants who were regularly involved in mangrove ecotourism activities along the southern coast of Kulon Progo Regency, Special Region of Yogyakarta. The key informants were selected using sampling techniques based on the assumption that they are important actors, both individuals and institutions, who had a deep understanding of the issues and could provide reliable information that was relevant to the study's focus and objectives (Persada & Aji, 2021). Adopting Hewage & Chandralal (2023), an interview guide was developed and pre-tested with three participants to ensure interviews ran smoothly before being used for the actual data collection. With the participant's permission, every onsite face-to-face interview in research locations was recorded, and the transcript was generated. The entire series of primary data collection through systematic observation and in-depth interviews in this research was conducted from April to October 2023.

Meanwhile, secondary data for this research were collected through a literature study strategy that involved conducting a thorough review of relevant documents in the form of textual, visual, digital, and physical items (Merriam & Tisdell, 2016). At last, the qualitative descriptive analysis was employed to generate interpretations of the data's meaning, and the final manuscript was composed using flexible structures (Creswell, 2014).

RESULTS AND DISCUSSION

An Overview of Mangrove Ecotourism Destinations in Kulon Progo

The mangrove ecosystem in Kulon Progo is concentrated in Jangkaran Village, Temon Subdistrict, 14 kilometers west of Yogyakarta International Airport (YIA). This area covers 40.1 hectares and is located along the coastlines of two hamlets, Pasir Mendit and Pasir Kadilangu, along the Bogowonto River estuary zone. There are three mangrove ecotourism hotspots (see Figure 3.) in these two hamlets, including: 1) Pantai Pasir Kadilangu Mangrove Area; 2) Jembatan Api-Api Mangrove Area; and 3) Wana Tirta Pasir Mendit Mangrove Area.



Figure 3. Portrait of Mangrove Ecotourism Destinations on the South Coast of Kulon Progo (Jangkaran Village)

Source: Authors, 2023

In the beginning, land use in the mangrove area was originally intended to facilitate the mobility of surrounding residents, who are pond farmers. This is notably demonstrated by the existence of dozens of shrimp ponds placed over the coastline area for mangrove tourism site access (see Figure 4.). Over the years, numerous inhabitants of the surrounding community frequently visit mangrove sites at various spots in Jangkaran Village for tourism-related reasons. Due to the increasing number of visitors, local communities took the initiative to build bridges to walk along all sides of the estuary zone of the Bogowonto River. This resulted shortly after the installation of a bridge to enable access to the shrimp pond area in 2016, when the bridge became well-known as an infrastructure for strolling around mangrove forests and turned into a tourist attraction that is routinely visited by tourists.

The mangrove destinations in Jangkaran Village were initially maintained by tourism business operators, which consist of four local community groups: *Wana Tirta*, *Maju Lestari*, *Jembatan Api-Api Mangrove*, and *Pantai Pasir Kadilangu* (Aji & Pakan, 2023). However, the *Maju Lestari* no longer actively manages mangrove tourism in Pasir Mendit Hamlet. The *Wana Tirta* also experienced the same situation. Following the COVID-19 pandemic, the group no longer properly handled the Wana Tirta Pasir Mendit Mangrove Tourism Area, even though tourists continue to visit the place on a regular basis. As a result, the Wana Tirta Mangrove Tourism Area seems abandoned (Aji & Pakan, 2023).



Figure 4. Local Community Shrimp Ponds Around Mangrove Ecotourism Destinations

Source: Authors, 2023

Analyzing Chainpreneur

In the mapping of *Chainpreneur* conditions, two *Improvement Gap Facts* were found: a) *Chain Fact 1*, a few tourism products have been created to provide economic value for tourists to spend their money at the destination; and b) *Chain Fact 2*, lack of knowledge about tourism product innovations. These two facts indicate that the tourism products in mangrove ecotourism destinations have not been fully developed. As explicitly described by one of the key informants, Ms., mangrove destinations in Jangkaran Village received the highest number of tourist arrivals between 2017 and 2018, with the following quote:

‘From 2017 to 2018, we were effortlessly capable of earning 13 million rupiahs (IDR) every single day on weekends. Between the Christmas and New Year holidays during that period, we could earn 60 million rupiahs (IDR) per day.

The tourists who visited here (read: mangrove destinations in Jangkaran Village) were full and could reach a thousand per day. Our existing parking lots were inadequate for parking visitors' transportation vehicles.' (Interview with Ms., Staff of Tourism Business Operator).

However, the huge number of tourists and high revenue at mangrove destinations have failed to sustain. In the middle of 2019, the number of tourist arrivals began to fall, as did destination revenue. Most of a mangrove destination's revenue comes from the entrance fee. It implies that there is not enough effort to develop products to enhance the unique selling point of mangrove ecotourism destinations. The lack of knowledge about tourism product innovations exacerbates the situation. Without these innovations in tourism products, the spending rate of tourists visiting mangrove destinations remains low. In addition, only a few tourism products have been developed to offer economic value for tourists to spend their money at the destination.

Beside *Improvement Gap Facts*, there is one (1) *Sustainability Potential Facts* consist of *Chain Fact 3*, which is: the abilities of the tourism business operators (local community) in providing tourism amenities. Prior *Gap Fact* has been stated that only a few tourism products have been developed to offer economic value for tourists to spend their money at the destination. This strategy fits to be a supplementary 'product' for tourists. With limited options to buy tourism products, tourists can use tourism amenity for their trip to the mangrove ecotourism destinations. It means tourists can still enjoy mangrove ecotourism with the availability of tourism amenities such as bridges for strolling around mangrove forests, observation towers, and boats to explore estuary zones.

Analyzing Marketpreneur

In the *Marketpreneurs*, there are two (2) identified *Improvement Gap Facts*.

Market Fact 1 refers to the inability of tourism business operators to identify their tourist market segments. This is evidenced by interview data, which reveals that tourist visit records only focus on origin and gender. There is no data available on factors such as the motivations of tourists visiting mangrove ecotourism destinations. Furthermore, key informants only mention that tourists visit the mangrove destination for photo opportunities that are Instagram-worthy. According to [Rika Fatimah \(2018\)](#), this indicates that informants lack the necessary understanding of how to extract and utilize customer information or market segmentation. *Market Fact 2* suggests that tourism business operators are insufficient in the context of promotional activities. Based on the information provided by the key informant, it can be concluded that there is a lack of marketing and promotional channels within the tourism industry. This is exemplified by the minimal utilization of social media for advertising and promotion purposes.

On the one hand, one (1) *Supporting Facts* have been identified, which consist of *Market Fact 3*: during peak seasons, such as New Year holidays and long weekends, there was a significant increase in tourist arrivals, which contributed to the increase in the number of tourists visiting mangrove destinations in Jangkaran Village. In addition, one (1) *Sustainability Potential Facts*, which is *Market Fact 4* refers to the regular visitations from various government and academic institutions in the Special Region of Yogyakarta and surrounding areas to these mangrove destinations. These visitations are primarily for educational purposes and are conducted as part of mangrove habitat conservation programs.

Analyzing Qualitypreneur

The context of *Qualitypreneur* presents two (2) *Improvement Gap Facts*, namely *Quality Fact 1* and *Quality Fact 2*. *Quality Fact 1* highlights the insufficient expansion of tourism businesses in Jangkaran Village's mangrove ecotourism destinations, despite reaching their peak revenue several years

ago. The tourism business operators were too content with ticket revenue and lacked a development master plan, leading to a neglect of the economic sustainability of the mangrove destinations. This lack of expansion is directly related to *Quality Fact 2*, which indicates that business actors in the area have insufficient knowledge about their market segments. Consequently, they assume that tourists only visit the destination to take photos and make little effort to innovate or develop additional products for tourists visiting the mangrove ecotourism destinations in Jangkaran Village.

Furthermore, in *Qualitypreneur*, *Sustainability Potential Facts* consist of *Quality Fact 3*. It refers to the human resources of tourism business operators who possess knowledge about the mangrove ecosystem. Many members of the group are familiar with the various types of mangrove vegetation in the ecotourism destination, and they are accustomed to participating in the conservation agenda. In this vein, the mangrove ecosystem is an important aspect of the ecotourism destination, serving as the primary attraction for tourists. The presence of mangroves distinguishes Jangkaran Village's ecotourism destination from others, particularly in the Special Region of Yogyakarta.

Analyzing Brandpreneur

In the *Brandpreneur*, one (1) significant *Improvement Gap Facts* has been identified, which is referred to as *Brand Fact 1*: a sentiment of disagreement exists between tourism business operators and the local government in mangrove ecotourism destinations, as evidenced by the testimony of a key informant, Sr., in the following statement:

'We (read: local community groups as tourism business operators) do not fully agree with local government policy regarding the governance of mangrove ecotourism destinations. The local

government aims to incorporate these attractions into village business units. However, we do not want to comply with this policy since the ecotourism venture was originally established by the local community groups to support mangrove conservation efforts. Initially, the government did not provide any financial or infrastructure support to initiate business in the mangrove ecosystem to generate economic benefits.' (Interview with Sr., Head of Local Community Group).

The relationship between tourism business operators and the local government became increasingly strained due to the competition between local community groups for attracting tourists. As reported by [Aji and Pakan \(2023\)](#), this competition often led to prolonged conflicts that were exacerbated by the fact that tourism business operators who manage mangrove ecotourism destinations in Jangkaran Village are not involved with the legal community governed by the village-level government, such as *Kelompok Sadar Wisata (Pokdarwis)*¹.

On the contrary, the *Sustainability Potential Facts* in the context of *Brandpreneur* are embodied by *Brand Fact 2*, which refers to the initiative of creating an initial tourism village development master plan as part of conflict resolution and promoting future directions for managing and developing mangrove ecotourism destinations. The local government is currently in the process of drafting the Tourism Village Development Master Plan, which serves as a foundation for the local government to establish a legal framework that enables the promotion of the integration of tourism management within the local communities ([Aji & Pakan, 2023](#)).

CONCLUSION

Based on the information from the analysis provided in the results and

by the government as employing a community-based tourism approach and being comprised of local residents.

¹ *Kelompok Sadar Wisata (Pokdarwis)* is an organization that operates at the local level and manages all tourism-related activities. This organization is typically recognized

discussion section, the Tetrapreneur Model—which encompasses the approaches of *Chainpreneur*, *Marketpreneur*, *Qualitypreneur*, and *Brandpreneur*—has been used to investigate the *Improvement Gap Facts*, *Sustainability Potential Facts* and *Supporting Facts* for the rejuvenation of mangrove ecotourism destinations in Jangkaran Village. All these facts are interconnected, as are the practical recommendations for each approach within the model. Therefore, the following practical recommendations are proposed:

***Chainpreneur* Recommendations**

The analysis of *Chainpreneur* reveals that the absence of tourism product development and the insufficient comprehension of tourism businesses' operators in innovating tourism products represent pressing challenges that must be addressed. In this regard, the creation of novel tourism products is essential. One potential solution to this problem is the development of an ecotourism mangrove tour package. This particular tour package is distinct in that it features engaging activities and more in-depth content for visiting tourists. Consequently, visitors to the mangrove ecotourism destinations in Jangkaran Village will have a variety of options beyond simply exploring the mangrove forest and taking photographs. Obviously, the creation of such tour packages necessitates encouraging tourism business operators to be more innovative. In this sense, immediate support from external parties in the development of this mangrove ecotourism tour package is imperative. Another recommendation in the context of *Chainpreneur* is to optimize the amenities provided by tourism business operators. This optimization can be accomplished by including tourist amenities such as bridges for strolling around mangrove forests, observation towers, and boats for exploring estuaries in tour packages. Incorporating these amenities as part of the tour package will certainly increase the value of the package and generate additional revenue.

***Marketpreneur* Recommendations**

The analysis has yielded several recommendations in the context of *Marketpreneurs*. The primary recommendation is to conduct market segmentation, which involves establishing more comprehensive records of tourist profiles, taking into account not only demographic information such as origin and gender but also tourist motivations for visiting mangrove destinations. This will enable business operators to tailor their marketing strategies to specific target groups. Additionally, creating promotional channels and making extensive use of social media can help to reach a wider audience and promote mangrove ecotourism destinations. Collaborating with other parties, such as tour and travel agencies or the Kulon Progo tourism office, can also be an effective way to increase visibility and promote the destinations. Another important recommendation is to capitalize on specific moments and create themed products, such as those tied to holidays or long weekends. These products can be packaged thematically to align with these moments, and they are expected to be more appealing to tourists. Furthermore, establishing more intensive communication with institutions that regularly visit the mangrove ecotourism destinations, along with special pricing policies that can be applied to these loyal customer institutions, can help to build strong relationships and encourage revisit intention (repeater guests).

***Qualitypreneur* Recommendations**

Based on the analysis, potential recommendations for *Qualitypreneur* include improving tourism business operators' capacity to devise inventive products and delineating market segmentation. These initiatives can be formulated through the development of skills by multiple organizations, including the Kulon Progo tourism office and academic institutions. It is essential to bolster the capabilities of the locals to provide comprehension and reinforce the aptitude of tourism business

operators to innovate, thereby overcoming the multifarious challenges to the rejuvenation of mangrove ecotourism destinations. Moreover, the indigenous community's familiarity with the Jangkarang mangrove ecosystem must be documented in both written form (through the creation of a monograph) and visual form (by employing audio-visual media). This record will not only serve as a static archive but also provide the raw material needed for the creation of a mangrove ecotourism guidebook for tour packages as well as a content source for marketing and advertising agendas.

Brandpreneur Recommendations

The recommendation in the context of *Brandpreneur*, based on the analysis, is that the local government at the village level should promptly accelerate the issuance of a comprehensive tourism village development master plan. This master plan should serve as a technical guide for development and possess legal and formal authority. From the master plan document, village regulations should be created that are binding for all actors and stakeholders while also supporting efforts to rejuvenate mangrove ecotourism destinations in Jangkarang Village. It is expected that the publication of village regulations with legal legitimacy will facilitate a swift process of consolidation as a form of conflict resolution between local community groups as tourism business operators and the village government in managing mangrove ecotourism destinations.

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