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AGRO-TOURISM AS A CATALYST FOR LOCAL DEVELOPMENT: A CAPABILITY APPROACH ANALYSIS OF LOCAL COMMUNITIES IN PENANG, MALAYSIA

Farah Husna Mohd Radzi¹, Siti Nurainy Batrisyia Mohd Albaryiah², Nor Ardyanti Ahmad^{3*}

¹Faculty of Administrative Science & Policy Studies, Universiti Teknologi MARA, Kedah Branch, Malaysia

 farahhusna1404@gmail.com

 <https://orcid.org/0009-0000-9094-4918>

²Faculty of Administrative Science & Policy Studies, Universiti Teknologi MARA, Kedah Branch, Malaysia

 nurainybatrisyiaa@gmail.com

 <https://orcid.org/0009-0002-7327-5534>

³Faculty of Administrative Science & Policy Studies, Universiti Teknologi MARA, Kedah Branch, Malaysia

 ardiyanti@uitm.edu.my

 <https://orcid.org/0000-0002-5153-4905>

*Corresponding Author

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Abstract:

Agro tourism is an environmentally responsible form of tourism that integrates recreational and cultural experiences with agricultural activities, offering visitors authentic engagement with rural life. It has emerged as an important strategy for sustainable development by generating economic opportunities, strengthening social cohesion, and promoting environmental sustainability, particularly in rural contexts. While many existing studies emphasise the financial benefits of agro tourism for local populations, limited research has examined its non-financial impacts, particularly how it enables or constrains community well-being. This dimension can be better understood through the Capability Approach, which focuses on individuals' freedoms and real opportunities to live the kinds of lives they value. Addressing this gap, the present study explores local community perspectives on the impacts of agro-tourism in Kampung Agong Penaga, Penang, a village that has recently gained prominence as a popular agro-tourism destination. This qualitative study employed semi-structured, in-depth interviews with 20 local residents, and the data were analysed using thematic analysis to capture participants' experiences and lived realities. The findings indicate that agro tourism has enhanced community well-being by generating employment and business opportunities, supporting cultural exchange and preservation, expanding educational exposure, and encouraging infrastructure development. These outcomes demonstrate that agro tourism can improve quality of life when communities are able to convert available opportunities into valued functioning. From a capability approach perspective, local well-being was strengthened as

residents exercised their agency to transform tourism-related resources into meaningful benefits. The study proposes several recommendations to enhance agro-tourism's effectiveness, including strengthening national agricultural policies through greater community inclusion in planning processes. Overall, the study highlights agro-tourism's potential as a sustainable rural development strategy and contributes to the broader literature on inclusive and participatory tourism governance.

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Agro-Tourism, Capability Approach, Kampung Agong Penaga, Penang, Well-Being



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Introduction

Tourism has emerged as a significant driver of economic growth both in Malaysia and globally (Athanasopoulou, 2013; Chou, 2013; Risso & Brida, 2009). The World Tourism & Travel Council (2012) reported that Malaysia's tourism industry generated USD 41.8 billion in 2011, accounting for 14.8% of the country's Gross Domestic Product (GDP). This figure was projected to grow by 4.3% in 2012 and reach USD 66.5 billion by 2022 (Bhuiyan, Siwar, Mohamad Ismail, & Islam, 2011; Kunasekaran et al., 2012). Agro-tourism is a key contributor to the tourism sector, supporting national GDP growth (Uzir, 2024). In Malaysia, agro-tourism is driven by the country's natural landscapes, agricultural activities, local culture, and cuisine, making it an effective tool for strengthening rural economies and promoting sustainable development (Liu, 2006). Destinations such as Cameron Highlands in Pahang, Kundasang in Sabah, Kuala Selangor Nature Park in Selangor, and Sekayu Agriculture Park in Terengganu are among the country's well-known agro-tourism attractions (Kunasekaran, Ramachandran, & Shuib, 2011). Activities organised at these sites have generated substantial socioeconomic benefits for surrounding communities (Bhuiyan et al., 2011; Kunasekaran et al., 2012).

Agro-tourism, also referred to as agritourism, is a form of environmentally responsible tourism that integrates recreational and cultural experiences with agricultural activities (Uzir, 2024). It offers visitors opportunities to experience rural farming life, sample local cuisine, and participate in various outdoor and agricultural activities. Generally, agro-tourism refers to recreational or educational activities conducted on farms or ranches that allow the public to engage in farming, ranching, or cultural and heritage practices (Rambodagedara et al., 2015). Unlike mass tourism, agro-tourism emphasises small-scale interactions, sustainability, and support for rural farming communities. It aims to provide holistic experiences that connect visitors with rural lifestyles, environmental practices, and agricultural knowledge, while also enabling farmers to promote their products and expertise (Wong Chee Hoo et al., 2023). Agro-

tourism has long served as an income source, particularly for rural populations, and its popularity increased following the COVID-19 pandemic (Jaunis et al., 2022). Studies indicate that agro-tourism holds strong potential to expand economic opportunities, generate employment, strengthen rural communities, enhance agricultural productivity, and preserve cultural heritage (Mulya Handayani et al., 2020).

Similarly, the demand for agro-tourism in Malaysia has grown significantly as it allows visitors to experience rural life and participate in agricultural activities. According to the Department of Statistics Malaysia's Domestic Tourism Survey (2021), the proportion of tourists choosing homestays and vacation houses increased from 2.4% in 2018 to 4.3% in 2019. Research also shows that agro-tourism improves the economic well-being of farm operators while benefiting visitors (Nguyen et al., 2018). It enables farmers to diversify agricultural activities and increase income. Lobo (n.d.) found that agro-tourism stimulates local enterprise development by raising demand for local products, supporting regional marketing initiatives, adding product value, and reducing intermediary costs, thereby diversifying economic activities and increasing community income. Similarly, Su (2011) highlighted its potential to generate stable income through consistent market demand. Agro-tourism can also strengthen social cohesion by encouraging collaborative activities among residents to preserve and promote rural heritage and cultural landscapes (Aikaterini, Ioannis, & Thanasis, 2001). Overall, most studies report multiple benefits of agro-tourism for local producers and communities (Johnson, 2023). Despite these advantages, relatively few studies have examined local residents' perspectives on the impacts of agro-tourism within their communities. This gap is important because existing research has identified several challenges associated with agro-tourism development, including waste pollution, transportation noise, and disruptions to traditional settlements caused by modern development (Ramaswamy & Sathis Kumar, 2010). Some visitors generate environmental problems by bringing organic and non-organic waste into tourism areas. Even when waste bins are provided, improper disposal practices may persist (Djuwendah, Karyani, Wulandari, & Pradono, 2023). In addition, residents may feel that increased tourist presence disrupts their peaceful lifestyles, while rising living costs and service prices can create further dissatisfaction. Thus, although agro-tourism has considerable potential, it may also produce environmental and social pressures within host communities (Thowayeb, Amany, & Mostafa, 2022). To minimise such negative effects and ensure long-term sustainability, careful planning and management are essential. Accordingly, this study examines local residents' perceptions of agro-tourism in areas where it operates, providing a comprehensive understanding of its impacts on local communities. This article is structured as follows: the second section reviews the literature on agro-tourism and its relationship to well-being, including the capability approach as the guiding theoretical framework; the third section outlines the methodology; and the final section presents the findings, discussion, and conclusions.

Literature Review

This section explains the main concept of the research, agro-tourism. It then followed by the capability approach perspective acting as an underlying theory for this study. Both agro-tourism definition and the theory are important to understand how agro-tourism can enable or disable local people's well-being. The discussion on the importance of agro-tourism and people's well-being is explained right after that. The main aim is to explore the connection between agro-tourism, economic impact and social impact on the local community. The details are in the next section.

Agro-Tourism

A growing global trend that integrates tourism with agriculture is known as agro-tourism, often referred to as farm tourism. It involves visits to working farms, ranches, or other agricultural settings for educational, recreational, or economic purposes (Mahapatro et al., 2023). Agro-tourism enables farmers to diversify their income sources while offering tourists unique opportunities to experience agriculture and rural life. Numerous studies across different countries have examined agro-tourism in terms of its concepts, development, challenges, and benefits. In Malaysia, agro-tourism activities encompass four main agricultural sectors—crop farming, fisheries, livestock, and forestry - reflecting the diversity of agricultural practices integrated into tourism initiatives (Jaunis et al., 2022). Such integration can support sustainable rural tourism by promoting environmental conservation, preserving cultural heritage, and enhancing economic opportunities.

Demirezen (2020) describes agro-tourism as an arrangement in which agricultural environments provide activities such as fruit harvesting, beekeeping, and dairy farming, alongside opportunities to purchase fresh farm products and handicrafts, and to experience nature, animals, and local culture. Incorporating these elements enhances the attractiveness of agro-tourism destinations by offering diverse and distinctive experiences. Nevertheless, several challenges hinder the expansion of agro-tourism. Studies have identified constraints such as inadequate planning, limited infrastructure, weak marketing strategies, and insufficient stakeholder involvement. Concerns have also been raised regarding its social impacts on nearby communities and the risk of environmental degradation when agro-tourism is poorly managed (Mansor et al., 2015).

Despite these limitations, agro-tourism has gained increasing importance as a strategy for sustainable agricultural development, linking urban and rural communities while generating distinctive tourism experiences. Addressing existing challenges requires timely and strategic sectoral growth to ensure that agro-tourism evolves in line with sustainability principles and community participation. In Malaysia, agro-tourism is defined as activities that utilise agricultural resources and surrounding environments, combined with hospitality services, to support tourism-related initiatives (Jaunis et al., 2022). It provides tourists with experiential engagement across agricultural sectors such as forestry, livestock, crop farming, and fisheries (Mansor et al., 2015), while also enabling farmers to diversify income and improve livelihoods. Consequently, agro-tourism has the potential to promote rural development while simultaneously supporting environmental protection, cultural preservation, and employment creation (Nava & Mathurin, 2024).

However, significant barriers continue to affect agro-tourism development in Malaysia, including concerns about its social impacts on host communities and the possibility of environmental harm resulting from inadequate management. Despite these challenges, agro-tourism has emerged as a promising approach for sustaining agriculture, strengthening rural–urban linkages, and offering distinctive tourism experiences. Ensuring that its growth aligns with sustainability principles and community engagement remains essential (Jaunis et al., 2022). Beyond promoting the sector, it is equally important to evaluate its societal implications to ensure that agro-tourism development does not compromise the well-being of local populations. In this regard, the capability approach provides a useful analytical framework for assessing how agro-tourism influences the well-being of local communities. The following section therefore examines the concept of the capability approach.

The Capability Approach Perspective

The capability approach functions as a comprehensive normative framework used to evaluate individual well-being, social arrangements, and policy development aimed at societal improvement (Nussbaum & Sen, 1993; Robeyns, 2005). Sen's (1999) capability approach places strong emphasis on the concept of freedom, broadly understood as the real opportunities individuals have to lead lives they have reason to value. Unlike approaches that focus primarily on income, expenditure, or consumption as indicators of well-being, the capability perspective offers an alternative evaluative lens (Robeyns, 2005). In his influential work *Development as Freedom*, Sen (1999) argues that the expansion of freedom is both the primary end and the principal means of development. Consequently, the capability framework has been widely applied across disciplines, including development studies, social policy, welfare economics, and political philosophy.

The capability approach is defined as the set of real opportunities and abilities individuals possess (Robeyns, 2005), or as the freedom people require to engage in meaningful activities and experiences (Alkire, 2005). The term functionings refers to the states of being and activities that individuals achieve, which together constitute a person's overall condition of life (Pellissery & Bergh, 2007). Examples of functionings include physical health, literacy, mobility, and leisure. Robeyns (2005) distinguishes between capabilities and achieved functionings, describing this distinction as the difference between the range of valuable options available to a person and the actual outcomes they realise.

Sen (1999) conceptualises capabilities as encompassing both positive and negative freedoms. Positive freedom refers to an individual's ability to pursue goals and achieve valued outcomes, whereas negative freedom relates to the absence of external constraints that would otherwise restrict choice. In some situations, individuals may face no direct prohibition yet still lack the resources or conditions necessary to exercise their options. For instance, a woman may have formal access to education but be unable to attend due to transportation barriers. In such cases, her capability is limited by structural conditions rather than explicit restrictions, illustrating how freedom can exist in principle but remain unattainable in practice (Farah, 2020). Sen's framework therefore highlights the importance of agency, empowerment, and enabling conditions in expanding human capabilities (Jasek-Rysdahl, 2001).

Within academic discourse, the capability approach has generated extensive debate spanning both abstract philosophical discussions and applied empirical research. It has also provided the conceptual foundation for the human development paradigm (Fukuda-Parr, 2003). However, the capability approach should not be interpreted as a complete explanatory theory capable of independently accounting for complex phenomena such as poverty, inequality, or well-being. Rather, it serves as a powerful analytical framework for conceptualising and evaluating these issues. Accordingly, while the capability approach is highly valuable for analysing policy and social change, it often requires integration with complementary theoretical perspectives to fully explain empirical realities.

The Importance of Agro-Tourism and People's Well-Being

The development of agro-tourism has generated numerous benefits that enhance human well-being globally. It provides income diversification for farmers and agricultural workers by creating additional revenue streams that stabilise livelihoods and reduce dependence on

fluctuating commodity prices or adverse weather conditions (Kharaiashvili, Lazariashvili, & Natsvlisvili, 2019). In many regions, agro-tourism is regarded as a key driver of local development, particularly in remote rural areas. It contributes to economic growth by generating farm income, strengthening local economies through increased spending, creating employment opportunities for residents, and stimulating small businesses (Mansor et al., 2015). For instance, Hoon Leh et al. (2017) found that agro-tourism in Cameron Highlands, Malaysia, created supplementary employment and expanded economic opportunities for local communities. Such economic gains may also empower communities by fostering a sense of pride, ownership, and collective participation (Muhammad et al., 2012). These findings indicate that agro-tourism can have a substantial and multidimensional impact on local communities worldwide (Mansor et al., 2015).

Agro-tourism enterprises generate revenue by offering visitors opportunities to experience agricultural life, enjoy regional cuisine, and participate in interactive farm-based activities. This diversification benefits not only farmers but also the wider local economy, as visitors spend on accommodation, food, transportation, and related services. Beyond economic gains, agro-tourism promotes cultural preservation by encouraging appreciation of traditional lifestyles among tourists, which can motivate communities to sustain and revitalise their cultural heritage. Such preservation benefits host communities while simultaneously enriching tourist experiences by fostering understanding of diverse cultures and ways of life (Rezaei, Rokni, & Kim, 2021). The educational dimension of agro-tourism further enhances its value, as visitors gain insights into traditional agricultural practices, local food systems, and artisanal crafts. These experiences promote cross-cultural interaction, strengthen mutual understanding between hosts and visitors, and contribute to social cohesion and intercultural dialogue (Pandey & Pandey, 2011).

In addition to its economic and sociocultural contributions, agro-tourism supports environmental sustainability (Saugat & Shrestha, 2019). By exposing tourists to sustainable agricultural practices - such as organic farming, permaculture, and biodiversity conservation - agro-tourism fosters environmental awareness and encourages environmentally responsible behaviour. In this way, it may help mitigate some negative effects of urbanisation and industrialisation, including habitat degradation, soil erosion, and water pollution.

Nevertheless, agro-tourism is sometimes viewed as socially disruptive and capable of generating adverse consequences. Khanal and Shrestha (2019) identified several potential social impacts, including increased migration, demographic shifts, safety concerns, and changes in language use, religious practices, and educational patterns within host communities (Petroman et al., 2006). The influx of tourists can place pressure on local infrastructure and resources, raising concerns about security and community well-being (Pandey & Pandey, 2011). Moreover, cultural changes associated with tourism activities may be perceived as threats to local identity (Hoon Leh et al., 2017). Achieving a balanced approach between economic development and social welfare is therefore essential to maximise the benefits of agro-tourism while minimising its negative effects (Kurniawan & Khademi-Vidra, 2024). Despite these challenges, agro-tourism remains widely recognised as an important mechanism for promoting sustainable tourism development and economic diversification in rural areas (Azimi Hamzah et al., 2012).

Methodology

This study employed a qualitative research design conducted in Kampung Agong Penaga, Penang. The village was selected as the research site due to its recent emergence as a prominent agro-tourism destination. As the tourism phenomenon is relatively new to the area, local residents are still adapting to its growing popularity, making the site particularly suitable for examining community experiences and perceptions.

Semi-structured, in-depth interviews were conducted with 20 respondents from the village. This sample size was considered adequate based on Warren's (2002) recommendation of 20 to 30 interviews for qualitative inquiry. Data collection continued until thematic saturation was reached, meaning that responses became repetitive and no new insights emerged (Mason, 2010; Mocănașu, 2020). Each interview lasted between 15 and 30 minutes and was conducted in Bahasa Malaysia during daytime hours, depending on participants' availability, as all respondents were local residents engaged in business or livelihood activities. With participants' informed consent, all interviews were audio-recorded, and respondents were notified of the recording prior to the interview sessions.

The collected data were analysed using thematic analysis. The capability approach served as the analytical framework for interpreting participants' experiences, meanings, and lived realities. During analysis, the researcher systematically examined the entire dataset to identify recurring patterns and significant themes. Initial codes were generated and subsequently organised into clusters of related code segments, each supported by relevant data extracts and structured around overarching thematic categories.

Results

The objective of this study is to examine the impact of agro-tourism on rural residents in Kampung Agong Penaga, Penang. A total of 20 respondents were interviewed, comprising eight men and 12 women. In terms of age distribution, six respondents were in their 20s, five in their 30s, three in their 40s, four in their 50s, and two in their 60s. The distribution of male and female participants across age groups was relatively balanced.

Regarding occupational background, four respondents were small business owners, three were government employees, four were students, and two were farmers. Three respondents were full-time caregivers, one was a manager at Kampung Agong, and another three were employed as a nurse, firefighter, and medical assistant, respectively. Each interview was conducted face-to-face at locations within Kampung Agong Penaga, Pulau Pinang, and lasted between 15 and 30 minutes. A summary of the respondents' demographic profiles is presented in Table 1.

Table 1: Demographic Profile of the Respondents

Respondent	Age	Gender	Occupation
Respondent 1	37	Male	Manager
Respondent 2	22	Female	Small business
Respondent 3	60	Female	Small business
Respondent 4	55	Male	Firefighter
Respondent 5	40	Female	Housewife
Respondent 6	27	Female	Government staff

Respondent 7	37	Female	Small business
Respondent 8	33	Male	Government staff
Respondent 9	45	Male	Farmer
Respondent10	31	Female	Small business
Respondent11	34	Female	Housewife
Respondent 12	21	Female	Student
Respondent 13	20	Female	Student
Respondent 14	24	Male	Student
Respondent 15	58	Male	Farmer
Respondent 16	50	Female	Housewife
Respondent 17	61	Male	Government staff
Respondent 18	24	Female	Student
Respondent 19	48	Female	Nurse
Respondent 20	50	Male	Medical assistant

Source: (Researchers' Fieldwork, 2025)

The Economic and Social Impact of Agro-Tourism on Local Rural Residents in Kampung Agong Penaga, Penang

Rural development has been largely dependent on agro-tourism, especially in Kampung Agong Penaga, Penang, where agro-tourism presents an odd opportunity to fuse tourism with agriculture. From the interviews, three themes emerged to understand the economic and social impact of agro-tourism on local rural residents in Kampung Agong Penaga, Penang. For example, community cohesion, economic empowerment and cultural heritage preservation. The details are in the following sections.

Theme 1: Community Cohesion

The first theme found was community cohesion. The clarification which can be made about community cohesion is the process of fostering unity, collaboration, and mutual support among individuals within a community, particularly in rural areas engaged in agro-tourism. Research indicates that community cohesiveness is the link that fortifies social ties and promotes collaboration among inhabitants, allowing them to collaborate toward shared objectives. For instance, one of the respondents stated that agro-tourism fosters unity because “it brings people together and meet visitors from other parts of Malaysia and the world” (Respondent 16). Furthermore, the existence of agro-tourism projects frequently acts as a stimulant to improve interpersonal relationships and a feeling of communal pride. This was supported by one of the respondents that stated that “agro-tourism can improve the well-being of the villagers. When residents work in the same place, it will make them communicate more frequently. This indirectly fosters a sense of community” (Respondent 12). Based on the results from the interviews, most respondents stated that agro-tourism activities significantly contribute to fostering community cohesion by encouraging collaboration and strengthening social bonds among the villagers. For example, “agro-tourism projects provide residents the chance to collaborate in marketing their village, planning activities, and exhibiting cultural assets, which fosters a sense of solidarity and pride amongst them” (Respondent 19). Participating in economic and cultural activities as a group fosters trust, shared responsibility, and a supportive atmosphere in rural communities, which improves community cohesiveness.

Theme 2: Economic empowerment

Economic empowerment was the second theme found from the study. Agro-tourism has been a major force behind economic expansion in rural regions, giving locals new chances to make money and enhance their standard of living. Agro-tourism projects in Kampung Agong Penaga allow the locals to take part in business ventures including selling vegetables grown nearby, hosting homestays, and giving tours. For example, two respondents stated that “when many tourists come, they will buy our local products in large quantities” (Respondent 12) and “we can sell fresh produce, traditional handicrafts, and even offer homestays to visitors, creating an extra source of income” (Respondent 16). In addition, some respondents stated that he can sale fishery products and other villagers can make paid parking for tourists who come to visit the Kampung Agong (Respondent 20). From the fieldwork, it is apparent that agro-tourism, in particular Kampung Agong Penaga, a noteworthy sector in the change of rural communities’ monetary measures. The locals who get involved in agrotourism activities like selling fresh foodstuffs, guiding the whole tour and providing places for homestay accommodations have been the reason for many income-generating chances that have appeared. Agro-tourism thus empower local communities economically and able to raise their general living standards.

Theme 3: Cultural Heritage Preservation

Agro-tourism has played an important role in the preservation and promotion of cultural heritage at Kampung Agong Penaga. It ensures the preservation of rural traditions while providing a true-to-life experience through the interplay of local customs, traditional agricultural practices, and tourism-related activities. Respondent 1 stated that their village “provides exposure to outsiders about village life, traditions, and agricultural activities” thus it helps maintaining their local tradition. Furthermore, some respondents remarked that agro-tourism acts as a great facilitator in the preservation of culture and in augmenting the visibility and facilities of the village. Besides, agro-tourism has helped to strengthen community ties and pride in its cultural heritage, which are essential for its preservation. For example, Respondent 18 stated that the existence of the agro-tourism in their village helps preserve their cultural heritage, generates income, and improves their village's infrastructure. Local residents who were interviewed considered the agro-tourism attractions of the Kampung Agong Penaga area as a means of sustaining local cultural and heritage. As Respondent 1 stated, the village “bring new ways of life to people who are not from the place such as urban areas” because they can experience the rural cultural and heritage. Not only that agro-tourism became one of the factors to promote cultural preservation and promote the feeling of pride, employment and enhancing interpersonal connections in the village (Respondent 19).

The Agro-Tourism and Its Impact on Well-Being of Local Communities in Kampung Agong Penaga, Penang

This section examines the connection between agro-tourism and the well-being of local communities in Kampung Agong Penaga, Penang. From the finding, two main themes emerged: educational opportunities and infrastructure development.

Theme 1: Educational Opportunities

In Kampung Agong Penaga, agro-tourism serves as an important educational tool for both the townsfolk and the tourists. Agro-tourism offers a wide range of activities through which the

residents are able to teach their techniques in agriculture and traditional crafts together with their cultural history. For instance, both Respondents 6 and 7 claimed that the existence of the agro-tourism in their village enable young people to learn about “old traditions and agricultural activities” and “knowledge and experience about what their village offers”. In addition, agro-tourism, as perceived by the respondents, ensures that agriculture and related activities are recognised and passed on by informing the new generation of the importance of conserving its traditional customs. Educational possibilities afforded by agro-tourism further uplift the environmental consciousness and sustainable practice of the community at large. Not only that, through agro-tourism, one of the respondents stated that she can “learn more about traditional farming methods and livestock” and enable her to manage her own livestock effectively. With knowledge gained from tourists, villagers improve on farming practise and production based on modern resource management and agricultural techniques. Thus, agro-tourism provides educational experiences for both locals and visitors, enhancing knowledge about agriculture and local culture.

Theme 2: Infrastructure Development

The second theme showed that Kampung Agong Penaga agro-tourism has become a major driver of infrastructural development for the widespread benefit of local inhabitants. There is a growing demand for better amenities and services to cater to tourists and improve locals' standards of living. For instance, Respondent 1 stated that “after Kampung Agong was developed, we started receiving visitors from various states. As a result, infrastructure development has been accelerating. For example, a Caltex gas station, a pharmacy, and a 24-hour clinic have been established here”. This creates an even more populous and connected community, therefore enhancing economic opportunities and social cohesiveness amongst the villagers, with agro-tourism bearing social hallmarks for its beneficial effects on infrastructure development. Infrastructure development is a major plus point for agro-tourism, as several respondents have pointed out that agro-tourism “helps develop infrastructure in this area because the presence of tourists has led to improvements in local facilities” (Respondent 2). In addition, the development of infrastructure not only benefits tourism but also uplifts the entire community by attracting investments for better roads and facilities such as the state government: “when many tourists come, the state government will make every effort to beautify tourist spots so that tourists have the best experience when visiting a place” (Respondent 12). The construction of basic amenities like pharmacies, clinics, and petrol stations has been expedited by the inflow of tourists, improving the standard of living for locals. This advancement in agro-tourism has assumed a leading role in sustainable rural development tapping the hands not only at improving the quality of life in villages but also at attracting investments, creating social relationships, and strengthening the local economy.

Discussion and Conclusion

The main aim of this study is to understand the impact of agro-tourism on the well-being of local communities in Kampung Agong Penaga, Penang. Guided by the Capability Approach, the findings indicate that agro-tourism activities in Kampung Agong have enhanced community well-being. This is evidenced through the creation of employment and business opportunities, the exchange and preservation of cultural traditions, educational opportunities, and infrastructure development within the village. These outcomes can be explained through several main points.

First, the majority of respondents perceived no active barriers restricting their capability to benefit from agro-tourism. The Capability Approach introduced by Sen provides a useful framework for explaining well-being in relation to individuals' freedoms and capabilities to lead lives they value (Sen, 1999). This framework allows for an assessment of how agro-tourism contributes positively to local well-being. For example, the emergence of Kampung Agong Penaga as an agro-tourism destination has increased the village's visibility and attracted domestic tourists. This influx has created opportunities for villagers to benefit economically. Many respondents stated that agro-tourism provided avenues for income generation. In this context, agro-tourism functions as a resource that villagers can utilise for their own advantage (Farah, 2020). This aligns with Sen's argument that freedom and choice are realised when individuals possess the capacity to make decisions about what they wish to be and do (Robeyns, 2005). Here, local residents transformed tourism opportunities into financial gain. When individuals successfully convert resources into valued outcomes, they achieve functionings, which contributes to enhanced well-being (Alkire, 2005; Robeyns, 2005). All respondents agreed that agro-tourism had strengthened the local economy by opening business avenues such as selling agricultural produce, operating homestays, and offering guided tours. Agro-tourism also enables farmers to diversify agricultural activities and increase income (Promise & Chigora, 2023). Similarly, Lobo (n.d.) demonstrated that agro-tourism stimulates local business development through demand for local products, regional marketing initiatives, and higher product value due to reduced intermediary costs. Consequently, it broadens economic activities and increases local income.

Second, agro-tourism represents an important governmental agenda under the National Agro-Food Policy (Ministry of Agriculture and Food Security, 2024). The village's rising popularity has attracted governmental support, particularly in infrastructure development. This demonstrates that, alongside community participation, government support plays a crucial role in enhancing well-being through agro-tourism (Marketa & Jeffrey, 2018; Khanh et al., 2025). Evidence from the findings shows improvements such as new buildings, pharmacies, clinics, and road infrastructure, which benefit both tourists and residents (Bhatti, 2023; Wong Chee Hoo et al., 2024). Infrastructure development therefore emerges as a key benefit of agro-tourism, positioning it as a vehicle for sustainable rural development. Such development strengthens livelihoods, attracts investment, promotes social interaction, and stimulates local economic growth (Yanan et al., 2024). These findings align with global evidence suggesting that agro-tourism holds strong potential as a strategy for sustainable development (Kurniawan & Khademi-Vidra, 2024). From a social perspective, agro-tourism also supports cultural preservation and strengthens community cohesion. Cultural exchange between visitors and residents fosters pride, identity, and a sense of ownership among locals. In Capability Approach terms, this reflects the freedom to maintain valued cultural practices while benefiting from them (Farah, 2020).

Third, agro-tourism can generate economic and social benefits while supporting environmental sustainability (Saugat & Shrestha, 2019). It offers tourists opportunities to learn about sustainable agricultural practices such as organic farming, permaculture, and biodiversity conservation. Such exposure may encourage environmentally responsible behaviour in daily life. Agro-tourism can therefore mitigate some negative effects of urbanisation and industrialisation, including ecosystem degradation, soil erosion, and water pollution (Baloch et al., 2022). When carefully designed and implemented, agro-tourism can benefit communities by safeguarding cultural heritage, strengthening rural economies, and promoting environmental sustainability (Thi et al., 2010).

This study also offers several recommendations to enhance the effectiveness of agro-tourism in improving local well-being in Kampung Agong Penaga. First, government regulations related to the agricultural sector should be strengthened to support agro-tourism development. Financial incentives and subsidies could assist farmers in adopting sustainable practices and investing in tourism infrastructure (Penang Agricultural Policy Report, 2020). Policy measures should also include training programmes on modern agricultural techniques and tourism management. Such improvements would strengthen agro-tourism's economic and environmental sustainability (Wei & Abdullah, 2022).

Second, the sustainability of agro-tourism in Kampung Agong depends heavily on community participation. Local residents should be consulted regarding their needs and perspectives on tourism initiatives. Capacity-building workshops and training programmes could enhance local skills in managing agro-tourism ventures and interacting effectively with visitors. This approach promotes ownership, strengthens motivation, and encourages sustained participation. When individuals feel recognised and empowered, they become more willing and capable of maintaining agro-tourism initiatives (Penang Tourism Plan, 2021).

Third, effective marketing and promotion strategies are essential. The community should utilise digital platforms and collaborate with tourism agencies to broaden outreach. Distinctive attractions - such as coconut tree swings, scenic paddy fields, and authentic local cuisine - should be highlighted to attract visitors. Establishing a strong brand identity as a leading agro-tourism destination could increase visibility and generate further economic opportunities. Visual storytelling, testimonials, and narratives showcasing the village's natural and cultural assets could strengthen its tourism appeal (Jaunis et al., 2022).

Finally, improving amenities and infrastructure is vital for managing visitor inflows and enhancing residents' quality of life. Investments in waste management systems, eco-friendly accommodations, and road connectivity could significantly improve tourism experiences (Penang Agricultural Policy Study, 2020). The development of visitor centres, local craft outlets, and interactive educational spaces could create additional income streams. Strong infrastructure not only supports tourism growth but also improves access to essential services for local communities. However, all development initiatives must preserve the village's authenticity and aesthetic value by integrating harmoniously with its natural and cultural environment (Jaunis et al., 2022).

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