

## **Exploration of Fisheries Tourism as an Alternative to Diversify the Livelihoods of the Fishing Communities in Kampung Kuala Muda**

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### **Abstract**

Fishing represents a longstanding cultural practice within the community of Kampung Kuala Muda in Seberang Perai Utara, Pulau Pinang. Despite providing multiple forms of government assistance, including allowances, training programs, and oil subsidies, the fishing community continues to experience persistent poverty. Hence, the objective of this study is to investigate the potential of fisheries tourism to diversify the livelihoods of fishing communities. This is a quantitative study and the data was obtained via questionnaire. The study revealed that the site has a great promise to be a tourism hub and consequently contributing towards the income of the community. Subsequent investigations may incorporate additional variables into the extant study pertaining to the phenomenon, thereby augmenting the intrinsic worth concerning its appeal as a tourist destination.

**Keywords:** Fisheries Tourism, Fisherman Livelihoods, Fishing Village

### **Introduction**

Kuala Muda is a fishing village in Mukim 1, District of North Seberang Perai, Penang. Kuala Muda Village covers an area of 222,000 m<sup>2</sup> and is one of the early settlements along the Sungai Muda River that borders Penang and Kedah. Fishing is a tradition of the Kuala Muda community, which has existed since 1900. To this day, the activity continues to be passed down from generation to generation. Fishing activities in Kuala Muda are unique, as fishermen directly sell their catch in the market using a whisper bidding system. The fishermen present the seafood they have caught, and buyers whisper their prices to the fishermen. What makes it even more unique is that anyone can try their luck and whisper the price, not just fishmongers but also ordinary people. However, with the rapid development of Penang and its expansion into Seberang Perai due to high land requirements on the island,

there is concern that this tradition may be lost if development proceeds without considering the area's traditional values. Meanwhile, despite Penang's rapid economic and overall development, categorized as one of Malaysia's rapidly developing states alongside Selangor and Johor, the fishing community in Kuala Muda still lags in economic progress and continues to face poverty. Taking advantage of Penang's reputation as a tourism state, there is an opportunity to promote these traditional values through tourism, aligning with the objectives stated in the RSNPP2030 plan, which aims to enhance the tourism sector in Penang. Furthermore, according to the data from RSNPP2030, there has been an increase in the number of tourists visiting Penang. This initiative can benefit the state and the fishing community by showcasing and preserving their traditional values.

The fishing community in Kampung Kuala Muda, Seberang Perai, Pulau Pinang is still plagued by poverty even though the development of Pulau Pinang is developing rapidly in terms of economy and development. The fishermen rely only on their catches and government subsidies for their economy, which makes them still in poverty. There is a need to find a way to enhance their economic development with what they have as an opportunity to attract tourists, such as fisheries tourism. This research will contribute a design guideline on fisheries tourism that can emerge with the surrounding neighborhood context and improve the economic development of the fisherman community. This research also helps design fisherman's need to enhance their economic development through fisheries tourism. Therefore, this research gives a new reference or model for the fishing village with other functions and activities to be a new node as a tourist attraction. This research will contribute towards finding an alternative way to diversify the livelihood of the fisherman community. This research provides a model for designing fisherman community facilities as a tourist attraction to improve fisherman economic development.

## **Literature Review**

### *Diversifying Livelihood of the Fishing Village*

Livelihood diversification, also known as occupational mobility, occupational multiplicity, or occupational pluralism, sustains many fishers and communities around the globe, helping them cope with poverty and vulnerability (Diego Salgueiro Otero, 2022). Diversification is a process by which households engage in multiple income-generating activities. It is a strategy for spreading risk, reducing vulnerability, and promoting diversification to alleviate poverty. The purpose of diversification is thus to develop portfolios of income-generating activities with low covariate risk among their components (Ellis, 2000). Roscher (2022) stated that livelihood diversification is "... the process by which families construct diverse portfolios of activities and social support capabilities in their struggle for survival and in order to improve their standard of living". In low- to middle-income areas, rural people often employ a diverse portfolio of livelihood activities across multiple sectors in a complex and dynamic way (Roscher, 2022). Rural livelihoods scholarship commonly finds that people with diverse livelihood activities are less vulnerable or more resilient than those with a greater reliance on fewer sources of food and income. The purpose of diversification is thus to develop income-generating activities with low covariate risk. Roscher (2022) stated that livelihood diversification has been advanced as a prominent strategy to reduce vulnerability and income poverty in rural development and fisheries management for decades. Brugère (2008) stated that the outcome of a diversification process is a larger number of income-generating activities. Households engaged in multiple non-agricultural or non-fisheries activities may be

viewed as less impoverished or less susceptible. This could be attributed to their ability to consistently adjust and diversify their range of activities, which contributes to their reduced vulnerability and poverty. Thus, diversification is widespread and has been occasionally shown when households can seize opportunities to offer them a pathway out of poverty (Brugère, 2008). The benefits of diversification as a means to achieve increased income and livelihood security among the community (Roscher, 2022). Furthermore, the diversity of pursuits of fisheries is explained by the richness of the environment in which they live, the diversity of the natural resources at their disposal, and their social and cultural background. The physical and biological diversity of the land-water interface may bring opportunities to those living there (FAO, 2008).

Economic transitions from fishing to coastal tourism are common globally in many contemporary coastal communities. A case study from a village in Liaoning province in Northeastern China uses an economic framework to more systematically understand the drivers and outcomes associated with the transition from fishing to tourism by the state policies and market forces that have encouraged them to shift away from fishing and into tourism. Sa (2022) stated that the economic transitions from fishing to coastal tourism are interrelated and mediated by the shifting relationships between state, society, and markets. Based on the site observation, the current fishing community in Kuala Muda relies only on fishing as their primary source of income. Some of the community tried to find other income related to their nature and place. This study will focus on diversifying the fishing village's livelihood by exploring alternative ways to generate their income.

#### *Potential Activity in the Fishing Village*

Fishing villages and oceans offer various resources and include excellent natural environments and unique cultures that can make such villages attractive spaces to meet individuals' health, culture, and environmental needs (Park, 2021). Therefore, traditional fishing villages are popular places for tourists and visitors looking for authentic portraits involving fishermen, fresh fish, and seascapes. The tourism sector sees this as an opportunity to promote marine and coastal destinations, offering a range of experiences linked to the fishing traditions of marine heritage. As per Macias (2019), tourism holds the potential to "reinforce local identities and revitalize indigenous heritage." This is achieved by providing a platform for the preservation and exhibition of local products, festivals, culinary traditions, and job-related skills, thereby promoting sustainable development. Alternative opportunities are possible to gain additional income through innovation and diversification, e.g., by creating synergies between traditional sectors and tourism.

Besides that, Fishery Local Action Groups (FLAGS) promote fisheries-related tourism activities for economic local development in coastal areas. The activities of "pesca-tourism" and "itti-tourism" can play a "multi-functional" role in the development of fishing villages and the enhancement of their human, environmental, natural, scenic, historical, and cultural resources. Nicolosi (2016) said local products, festivals, and traditions/popular events related to fisheries, recipes of the local tradition gastronomy, flora and fauna marine, mammals and birds' diversity of landscapes, coasts, beaches, waters, cliffs, and unspoiled natural environment can also be the potential activity in the community. Celeste Jiménez de Madariaga (2018) stated that the activity of fishermen and the fishing village community can be integrated into fisheries tourism. It can turn fishing cultural heritage into a resource for tourism. Some remarkable tourism business ventures are taking advantage of the

abovementioned options, offering visits to wholesale fish markets, fish canneries, salt marshes, and fishing port facilities and sharing a day's fishing on the vessel.

Kyvelou (2020) said that a fishing village with huge potential in both the fisheries and the tourism sector was used as a focus area where a co-development process was designed, aiming to identify the advantages/potentials and challenges/disadvantages of the co-existence of artisanal fisheries and tourism. Fishing tourism may substantially contribute to the reconnection of nature and culture towards quality marine and coastal landscapes. Therefore, Angulo-Valdes (2022) mentioned that recreational fishing could contribute to economic development that can preserve jobs and food security. Moreover, Butler (2020) said recreational fisheries have been identified as significant global contributors to national economies. The recreational fishery's potential value should be to build environmental stewardship and conservation-mindedness within the community to create linkages with the recreational fishery. Susilo (2021) mentioned that the fisherman's activity can be included in tourism, and the social activity of the fisherman's wife can also be added. Thus, Whittingham et al. (2003) said that coastal zones and communities have a huge range of ecosystems supporting coastal livelihoods, providing coastal dwellers with many opportunities for extraction (e.g., reefs, mudflats, mangroves, etc.)

However, the current activity in the fishing village is not promoted or developed as a tourism attraction as an alternative to the fishing community's livelihoods. This study will analyze the potential activities in Kuala Muda fishing village and the need for activities that can be promoted as tourism products.

Model of fisheries tourism as tourist attraction and improve fishing community livelihood.

Ounanian (2021) stated that coastal zones are historically rich with unique land/seascapes, tangible artifacts, and intangible cultural heritage, which is the greater incorporation of Coastal and Maritime Cultural Heritage (CMCH) for regional development and blue growth. Besides that, CMCH activities, such as fishing-related activities, seafood, and historical buildings along the seafront, are important for connecting and understanding the identity of communities and places linked to the sea. At the same time, CMCH is a key resource for developing tourism in coastal destinations. CMCH is often used and transformed in tourism development to benefit the visitor experience (Macias, 2023). Thus, concepts of communities of meaning and communities of participation address how CMCH is created and contested and identify key considerations for its management. Building on theories of space, place, and identity, the paper constructs communities of meaning to elaborate on the various opportunities and tensions in preserving cultural heritage and cultivating reliant enterprises as a part of wider regional development strategies (Ounanian, 2021).

Community-Based Tourism (CBT) in rural areas can improve the quality of life of residents in those areas. It also increases respect for local cultures and maintains biodiversity. In the same vein as the Sustainable Development Goals (SDGs), the United Nations' global goal is to preserve and promote local culture by revitalizing fishing villages (Lee, 2021). As society has developed, fishing villages relying solely on traditional fishing have found themselves on the verge of extinction. Therefore, efforts are being made to transform fishing villages into areas with various functions, including recreation, tourism, and education (Kim, 2021). The United Nations presented the SDGs as a set of common goals for the international community to achieve together. These goals include sound economic growth, social engagement, and sustainable development, and they emphasize central values such as harmony between humans and the environment, dignity, and equality. Among them, 'Decent Work and Economic Growth' (Goal 8), 'Responsible Consumption and Production' (Goal 12), and

'Preservation and sustainable use of ocean, sea and marine resources' (Goal 14) are directly related to tourism. Accordingly, the World Tourism Organization (UNWTO) has applied the United Nations' SDGs to tourism to encourage sustainable tourism, fair tourism, and green tourism. According to the UNWTO, sustainable tourism is tourism that fully considers its own current, social, and environmental impacts, such as meeting the needs of visitors and communities, preserving natural cultural resources, and minimizing environmental damage. Lee (2021) stated that it is necessary to expand infrastructure and discover unique assets such as natural landscapes, cultural heritage sites, and local specialties to maximize the effectiveness of the development of fishing village tourism. In addition, for fishing village tourism to serve as a sustainable means of revitalizing the region, it is essential to have systematic diagnosis and strategies to verify the environmental analysis and development direction. Therefore, the established comprehensive scope encompasses aspects of various fields involving the economy, society, and environment for the sustainable development of fishing villages. It will determine the ideal application of the development direction (Lee, 2021). Thus, fisheries tourism is a model of tourism that succeeds in creating potential from coastal areas, embracing the fishing industry in the strict sense and, more generally, the landscape, culture, and local cuisine. A successful tourism service should provide three main dimensions: fishing culture, food tradition, and sea-land territory involvement. It could attract tourists, generating income opportunities through more sustainable exploitation of sea and inland local resources (Lai, 2016).

Su (2017) states that the tourism model has identified six key features: seafood meals, participatory fishing activities, hassle-free experience, personalized services, exposure to fishing culture and local hospitality, and business and service reliability. CBT has been developed, incorporating fishing culture and island lifestyles with tourism experiences. Archived positive outcomes in boosting regional economic development, enhancing island livelihood sustainability, and promoting and reinforcing island identity. Therefore, Bob (2018) mentioned that Coastal and Marine Tourism (CMT), as part of the ocean economy, offers significant development opportunities that can contribute to job creation and sustainability. The opportunity has been created to create a model supply for CMT business owners, accommodation establishments, tour operators, restaurants, and retail outlets. Therefore, Lee (2021) said fishing villages and the ocean offer various resources, including excellent natural environments and unique cultures that make such villages attractive spaces to meet individuals' health, culture, and environmental needs. The opportunities and strength areas are relatively important when it comes to the priority of sustainable development. The application of tourism in the current context is the potential approach of fishing village tourism. Thus, So-Min Cheong (2013) said the location of fishing communities affects the type of tourist services they carry. For instance, accommodations and restaurants flourish in fishing communities located along the beachfront or on one side of the village. In instances where fishing communities do not have beaches nearby, recreational fishing is popular. Recreational fishing spots are usually located by a dike or use big rocks linked to the land. If a scenic view is the major draw, restaurants, and accommodations would be developed along the coastal highway or road. The major tourist services include accommodations, seafood restaurants, and charter boats. Other tourism activities include local fish markets and opening seabed or aquaculture sites to allow educational experience.

However, the current elements in fishing villages are not well strategized as tourist attractions; it limits fishing as the main income. This study will focus on how architecture can

create a model of fisheries tourism as a tourist attraction & improve the livelihoods of the fishing community.

### **Conceptual Framework**

Fisheries tourism started long ago in other countries and is one of the strategies to improve fisherman community livelihood. At the same time, it creates a sustainable income for the whole fishing village. The fisheries tourism model is designed to take advantage of the potential activity in the fishing village to encourage visitors or tourists to explore the village and gain a new experience. Various activities in the fishing village can be developed as an opportunity to attract the interest of visitors and tourists to the area. Fishermen's daily activities, such as mending nets and repairing boats, can be used as an attraction for tourists to get closer to the life of fishermen. Apart from the activities of fishermen, the activities of fishermen's wives and local people can also be highlighted. Among the activities they carried out is the processing of local products such as the manufacture of fish crackers, salted fish, pickled fish or '*pekasam*', traditional food, and other activities that can be introduced and become an attraction. In addition, the village community has a variety of interesting celebration events throughout the year that symbolize the culture and social life of the local community. These celebration events can provide a valuable experience if promoted, and they can attract visitors and tourists to experience the celebration and culture of the local community. The topography of a fishing village is one of the main attractions that can attract tourists to the fishing village—the condition of a fishing village surrounded by beautiful beaches, forests, rivers, and so on. These assets around the fishing village can be developed with various leisure activities such as picnics, camping, kayaking along the river, etc. Apart from that, the life of flora and fauna is also an attraction that can attract visitors and tourists to the fishing village. A fishing village is rich in biodiversity; a variety of living things that support each other is an attraction for tourists who love nature.

A design model fishing village as a fisheries tourism can be built considering all aspects of the potential found in fishing villages. That aspect does not only include the fishing community but the context of the whole area. With the existence of this model, it can benefit the community through tourism-related activities. From that, it will create a job opportunity and then improve the livelihood of the fishing community.

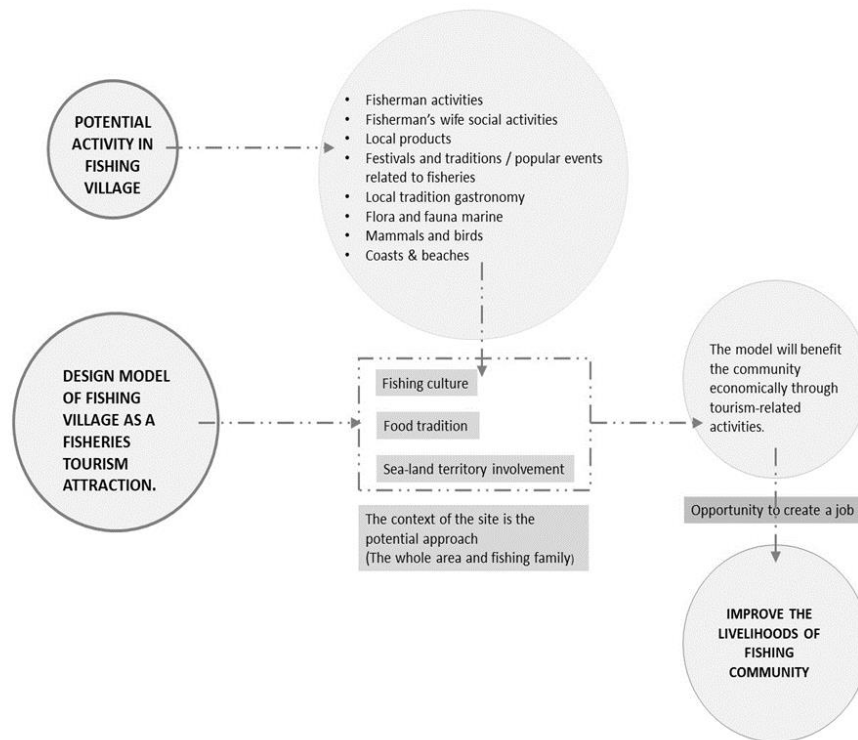


Figure 1 Conceptual Framework

Source: Author

**Method**

The research method for this study is divided into four main stages. The first stage is the research formulation stage, analyzing the data from the literature review and formulating the research aim, question, and objective. The second stage is data collection using the result of the research objective and generating survey questions (quantitative) and the questionnaire distributed through an online platform and on-site physical survey questions. The third stage of data analysis is using the data collected from the questionnaire, examining the highest frequency of respondent feedback, and formulating the new typology or spaces. The final stage is the research outcome stage, which discusses the findings, generates a conclusion and recommendation, and proposes a new architectural design strategy for the future. Figure 2 illustrates the research methodology framework for this study.

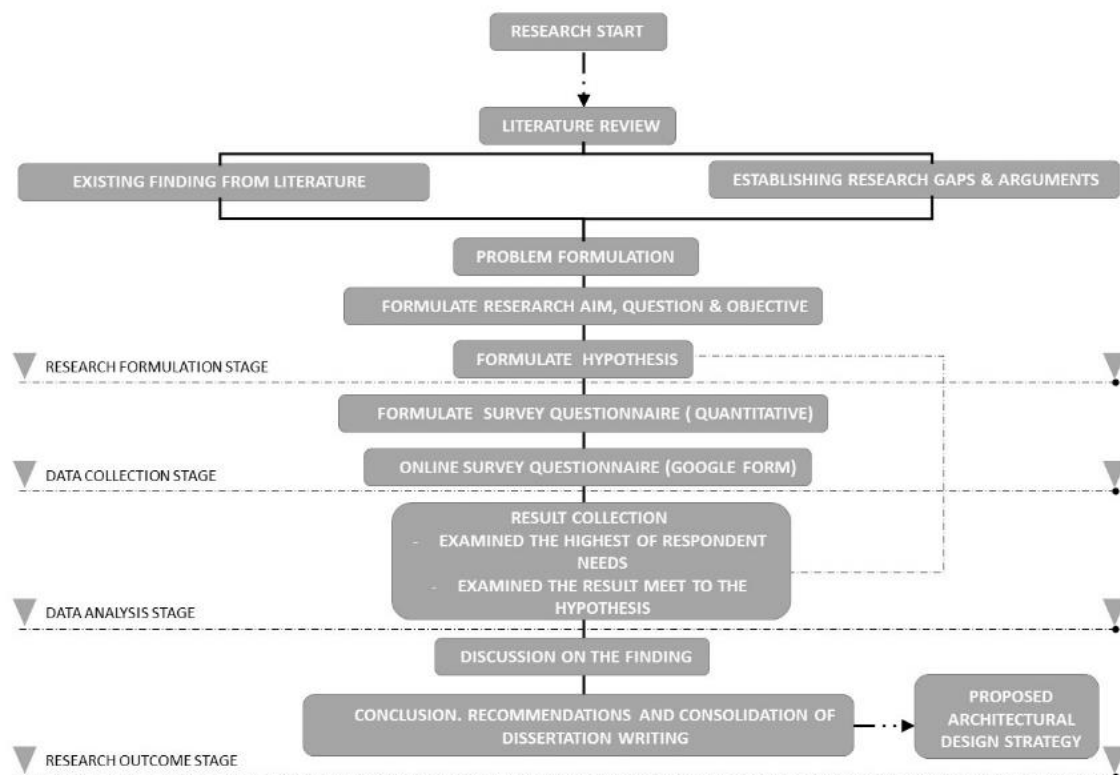


Figure 2 Research Methodology Framework

Source: Author

The study used a quantitative approach to understand the potential activity and attraction in Kuala Muda fishing village and their preferred design element that can attract visitors to their place and create a fisheries tourism model as an alternative to diversify the livelihoods. The research results described in this paper are based on survey data acquired from 104 randomly selected respondents. The respondents are those living in Kuala Muda fishing village and those familiar with Kuala Muda fishing village, and their ages range from 21 to 60 years old. The survey questionnaire titled “Exploration of Fisheries Tourism as an Alternative to Diversify the Livelihoods of the Fishing in Kampung Kuala Muda, Penaga” was administered using an online platform, specifically Google Form, and a physical Google Form distributed on-site. The present study employs a questionnaire survey to investigate the prospective value of the Kuala Muda fishing village and gather opinions regarding the various elements and designs that could be implemented to develop the village as a fisheries tourism destination in the future. The results obtained from this survey will provide valuable insights into the potential activities available in the fishing village of Kuala Muda and enhance our understanding of the lifestyles of the fishermen and the local community. The results obtained from this survey will provide valuable insights into the factors that should be considered when developing the Kuala Muda fishing village as a new model for fisheries tourism. This information will aid in attracting individuals to the fishing village and simultaneously create new prospects and opportunities for the local fishing community, serving as an alternative means to diversify their sources of income.

Survey questionnaires consist of a series of inquiries encompassing various aspects, such as the degree of agreement, preferred values, events, activities, and lifestyles associated with developing Kuala Muda fishing village as a potential tourist attraction. During the data



analysis phase, the focus will be on examining the most frequently occurring values, potentials, events, and activities in the Kuala Muda fishing village that respondents desire to develop as a tourist attraction. This development aims to attract more visitors and create new opportunities to diversify the local livelihood by implementing a fisheries tourism model. The results are being examined to verify the hypothesis put forth during the initial stages. The collected data will be analyzed using Microsoft Excel to identify the predominant frequency of respondent preferences regarding value, potential, activities, lifestyle, facilities, and amenities at the Kuala Muda fishing village. This analysis explores potential opportunities for diversifying the community's livelihoods beyond solely relying on fishing.

## **Results**

A comprehensive set of 73 questions, including sub-questions, has been organized into three sections. These questions aim to assess the potential, value, and activity in Kuala Muda that can be harnessed for developing fisheries tourism. This development aims to attract visitors while creating new opportunities for the fishing community to diversify their livelihood. The survey was conducted among 104 participants—approximately 51.9% identified as male, while 48.1% identified as female. The total number of respondents is 104. Approximately 61.5% of the respondents fall within the age range of 41 to 60 years old, while 35.6% of the respondents are 21 years old. This particular age group, consisting of individuals aged 41 to 60, is the primary focus of the research as they are considered the main contributors to the family's economy. A total of 2.9% of the respondents fell within the age range of 13 to 20 years old. There were no respondents below the age of 12. The majority of the respondents in the study are married, comprising approximately 80.8% of the total sample. Conversely, the remaining 19.2% of respondents reported being single. The majority of the respondents possess a higher level of education, with 51.9% having obtained a university degree. The percentages of individuals who pursued further education after completing secondary, college, and primary education were 24%, 23.1%, and 1%, respectively. More than half of the respondents, specifically 56.7%, reported being employed, while 31.7% identified themselves as self-employed. A total of 8.7% of the respondents in the study were found to be unemployed, while 1.9% identified themselves as students and 1% reported being retired. Regarding the inquiry about prior engagement in fisheries tourism, most respondents indicated a lack of participation in this domain. Specifically, approximately 57.7% of the respondents responded negatively, while the remaining 42.3% affirmed their previous involvement in fisheries tourism. The inquiry in Section B of the questionnaire pertains to identifying prospective activities in Kuala Muda that have the potential to be developed as tourist attractions.

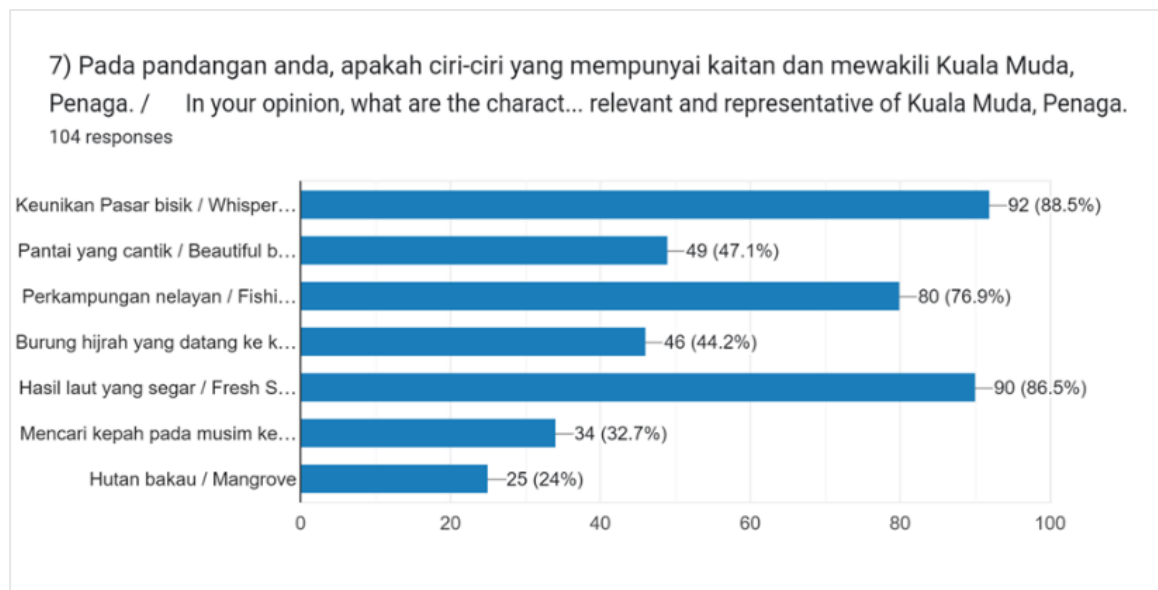


Figure 3 The Relevant Characteristics and Representative of Kuala Muda, Penaga  
(Image Source: Author)

According to the survey data, a significant majority of respondents, specifically 88.5%, expressed that the primary characteristic associated with Kuala Muda, Penaga, is the presence of the “Pasar Bisik” or whispering market. 86.5% of the respondents expressed a preference for fresh seafood, while 76.9% indicated a preference for fishing villages. Additionally, 47.1% of the respondents chose beautiful beaches as their preferred attraction, while 44.2% mentioned migration birds. A smaller proportion, 32.7%, expressed interest in the clam season, while mangroves were the least represented option at 24%.

Table 1

*Levels of Important Factors of Kuala Muda, Penaga as a Tourist Destination*

Criteria	Frequency					Average Index	Level of Agreement
	1	2	3	4	5		
Unique culture (Pasar Bisik)	-	-	5	29	70	4.62	Strongly agree
Clean village	-	2	18	30	54	4.30	Agree
Beautiful beach scenery	-	-	12	41	50	4.35	Agree
Friendly people	-	-	16	35	53	4.35	Agree
Fishing & boating	-	-	22	44	38	4.15	Agree
Ecosystem & biodiversity (Migration Birds)	-	1	6	40	57	4.43	Agree
Fresh Seafood	-	-	1	18	85	4.80	Strongly agree

Source: Author

The survey findings indicate that a significant number of participants strongly agree on the pivotal role of fresh seafood and the distinctive cultural experience Pasar Bisik offers in Kuala Muda, Penaga, as key factors contributing to its appeal as a tourist destination. Additionally, there is widespread recognition of the diverse ecosystem and rich biodiversity in the area. This includes a variety of migratory bird species that visit annually, a friendly local community, beautiful beach landscapes, and an unspoiled village environment. These factors are essential in contributing to the appeal of Kuala Muda, Penaga, and its capacity to draw individuals. In addition, it is also acknowledged that fishing and boating are significant factors due to the geographical proximity of Kuala Muda to both the sea and river.

Table 2

*Levels of Main Nature Attraction in Kuala Muda, Penaga*

Criteria	Frequency					Average Index	Level of Agreement
	1	2	3	4	5		
Migration birds	1	-	11	36	56	4.40	Agree
Mangrove	1	3	22	31	47	4.15	Agree
Fisheries	-	-	4	14	86	4.78	Strongly Agree
River	-	-	14	34	56	4.40	Agree
Beach	-	-	13	33	58	4.43	Agree

Source: Author

A substantial majority of the respondents strongly agree regarding the primary natural attraction in Kuala Muda, Penaga, which is fisheries. This assertion is primarily based on the geographical location of the area and the predominant activity that revolves around fisheries. The respondents concur that the primary attractions in this region are migratory birds, mangroves, rivers, and beaches.

Table 3

*Levels of Main Culture & Traditional Attraction in Kuala Muda, Penaga*

Criteria	Frequency					Average Index	Level of Agreement
	1	2	3	4	5		
Fishing tradition	-	-	4	27	73	4.66	Strongly Agree
Historical place	1	2	29	27	45	4.08	Agree
Whispering market	-	-	5	23	76	4.68	Strongly Agree
Cultural festival	-	1	30	36	37	4.04	Agree
Local cuisine	-	-	6	36	62	4.53	Agree

Source: Author

The majority of respondents strongly agree regarding the primary cultural and traditional attractions in Kuala Muda, Penaga, namely the 'Pasar Bisik', or whispering market, and the fishing tradition passed down through generations. In addition to the point above, the respondent also concurs that local cuisine is a cultural attraction, particularly renowned for its seafood-based dishes. In addition to the cultural festival, various cultural attractions include a boat parade celebration, a communal gathering known as "gotong royong" for the "kenduri" event, performances of the traditional martial art form known as silat, and other festival celebrations. The respondent concurs that Kuala Muda is a significant historical site where one can find an ancient jetty that was utilized during the Old Kedah Kingdom. Additionally, the respondents note the presence of the Fort of Kota Kuala Muda in this vicinity.

Table 4

*Levels of Potential Activities in Kuala Muda, Penaga, that can be Developed as a Tourist Attraction*

Criteria	Frequency					Average Index	Level of Agreement
	1	2	3	4	5		
Participating in fish whispering auctions or markets	-	2	9	22	71	4.55	Strongly Agree
Fishing tours and excursions (Day out with fisherman)	-	-	8	34	62	4.51	Strongly Agree
Boat rides and coastal cruises	-	-	10	42	52	4.40	Agree
Exploring fishing village (Village walk)	-	-	14	44	46	4.30	Agree
Birds watching tours	-	2	12	34	56	4.36	Agree
Seafood culinary	-	-	2	22	80	4.75	Strongly Agree
Coastal or river fishing	-	-	10	44	50	4.38	Agree
Cultural events or festivals	-	1	28	31	44	4.13	Agree
Culinary experiences - making local product	-	2	24	29	51	4.20	Agree

Source: Author

The respondents strongly agree regarding the potential activities in Kuala Muda, Penaga, that can be developed as tourist attractions. The highest average index level of agreement is strongly in favor of seafood culinary experiences. This is followed by participating in fish whispering auctions or markets and fishing tours and excursions, such as a day out with a fisherman. In addition, the respondents also agree with engaging in boat rides and coastal cruises, partaking in a village walk to explore fishing villages, participating in bird-watching tours, engaging in coastal or river fishing activities, and experiencing culinary endeavors such as the production of local products like *dodol*, *kuih karas*, coconut oil, *keropok lekor*, and various others. Lastly, it is important to note that respondents also concur that cultural events or festivals have the potential to be developed as tourist attractions.

In Section C of the questionnaire, participants are asked to provide their opinions on the design elements suitable for tourist attractions in Kuala Muda, Penaga.

Table 5

*Design Elements that are Important in Making Kuala Muda, Penaga Attractive to Tourists*

Criteria	Frequency					Average Index	Level of Agreement
	1	2	3	4	5		
Transportation network (Accessibility, ease of reaching Kuala Muda, Penaga.)	-	-	5	24	75	4.67	Strongly Agree
Pasar Bisik unique tradition (Preservation of cultural heritage)	-	-	2	21	81	4.75	Strongly Agree
Integration of fishing activities (e.g., fishing tours)	-	-	7	44	53	4.44	Agree
Recreation and entertainment facilities (e.g., boat rides, water sports, cycling)	1	1	10	42	50	4.33	Agree
Scenic views (natural landscapes, coastline)	-	-	6	33	65	4.56	Strongly Agree
Local cuisine and dining options	-	-	4	26	74	4.67	Strongly Agree
Shopping (seafood, local product)	1	-	8	23	72	4.58	Strongly Agree
Accommodation options (chalet, homestay)	-	-	16	33	55	4.37	Agree
Environmental conservation efforts (mangrove, migration birds)	-	-	4	23	77	4.70	Strongly Agree

*Source: Author*

The majority of respondents strongly agree that Pasar Bisik is the main design element in Kuala Muda, and the design should include the preservation of the cultural heritage, which is the unique tradition of Pasar Bisik itself. Furthermore, they also express strong agreement regarding the importance of environmental conservation efforts for the mangroves and migratory birds. Considering the natural landscapes and coastline, there is potential to develop a place for scenic views, such as a viewing tower or viewing deck, allowing visitors to enjoy the stunning vistas. Respondents strongly support enhancing local cuisine and dining options, proposing establishments like a seafood restaurant by the river or even a floating restaurant. Moreover, the respondents also recognize the significance of shopping in making Kuala Muda attractive to tourists. Therefore, it is suggested to set up a shopping bazaar that sells local products and features a cultural fish market. To accommodate visitors, respondents agree that Kuala Muda should have various lodging options, such as chalets and homestays, providing them an opportunity to spend a night in the village. Lastly, respondents also agree that integrating fishing activities, such as fishing tours, recreational pursuits, and entertainment facilities, is crucial in the design elements to make Kuala Muda, Penaga, appealing to tourists.

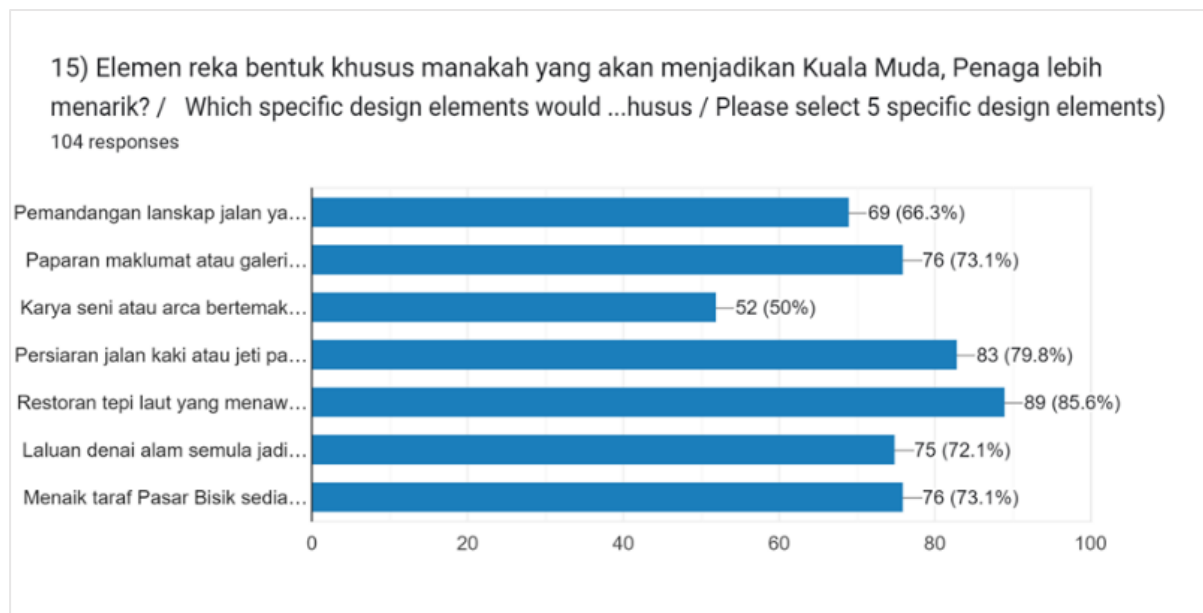


Figure 4: Preferred specific design elements would make Kuala Muda, Penaga more attractive (Image Source: Author)

According to the survey results, a significant 85.6% of respondents preferred waterfront restaurants that offer fresh seafood as a specific design element to enhance the attractiveness of Kuala Muda, Penaga. Additionally, 79.8% of respondents favored having unique waterfront promenades or piers. The survey also revealed that 73.1% of respondents would like to see interpretive displays or galleries showcasing the fishing and local heritage, as they believe this would facilitate learning and understanding about the area. Similarly, 73.1% of respondents supported upgrading the Pasar Bisik to create a more welcoming ambiance. Nature trails or scenic viewpoints were also highly favored, with 72.1% of respondents expressing a preference for these features. Additionally, 66.3% of respondents desired a colorful and vibrant streetscape to add charm and character to the surroundings. Lastly, 50% of the respondents indicated their preference for fishing-themed artwork or sculptures, as this could create a unique sense of place and serve as a popular area for Instagram-worthy photographs. In summary, the survey results provide valuable insights into respondents' preferences, highlighting various design elements that could significantly enhance the attractiveness of Kuala Muda, Penaga.

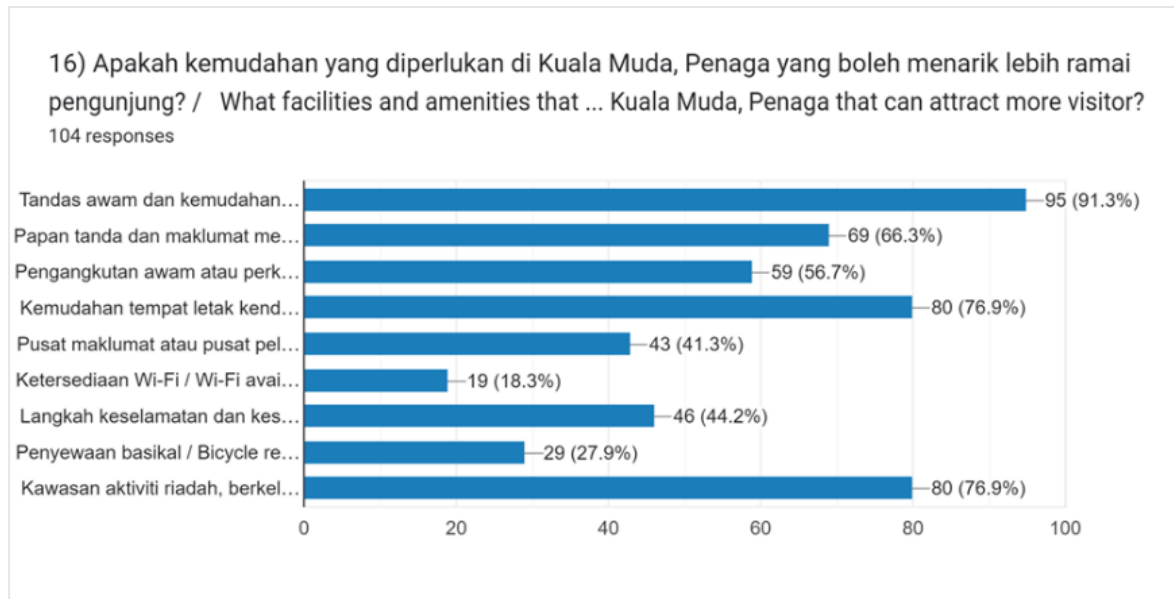


Figure 5: Preferred facilities and amenities that are needed in Kuala Muda, Penaga, that can attract more visitors (*Image Source: Author*)

The survey results indicate that 91.3% of respondents prioritize the presence of public restrooms and clean facilities, recognizing their importance in attracting more visitors. Additionally, 76.9% of respondents expressed a desire for picnic areas or seating spots, and an equal percentage of respondents also emphasized the need for sufficient parking facilities to accommodate more visitors in Kuala Muda. Furthermore, 66.3% of respondents indicated their preference for signage and wayfinding information, enabling visitors to explore the area independently. In addition, 56.7% of respondents considered good public transportation or shuttle services essential. Concerning safety and security measures, 44.2% of respondents highlighted their importance. However, a slightly higher percentage, 41.3% of respondents, also preferred an information center or visitor's center. The option for bicycle rentals was less preferred among the respondents, at 27.9%, while Wi-Fi availability was the least prioritized, with only 18.3% of respondents indicating an interest in this feature. In conclusion, the survey findings reveal the key facilities and services that respondents highly value to enhance the attractiveness of Kuala Muda to visitors.

Table 6

*Waterfront developments that are suitable for Kuala Muda, Penaga*

Criteria	Frequency					Average Index	Level of Agreement
	1	2	3	4	5		
Beachfront promenade with walking paths and seating areas.	-	-	3	29	72	4.66	Strongly Agree
Fishing piers or docks for recreational fishing activities	-	-	4	47	53	4.47	Agree
Waterfront restaurants or cafes offering fresh seafood.	-	1	7	17	79	4.67	Strongly Agree
Public parks or green spaces with picnic areas.	-	1	8	37	58	4.46	Agree
Marina for docking boats and yachts	2	1	16	40	45	4.20	Agree
Interpretive displays or galleries showcasing the fishing heritage.	1	1	17	41	44	4.21	Agree
Water sports facilities (e.g., kayaking, paddle boarding).	1	3	23	37	43	4.07	Agree
Public art installations related to fishing or marine life.	3	3	17	44	37	4.04	Agree
Outdoor performance spaces for cultural events or entertainment.	2	2	24	38	38	4.03	Agree
Shopping and craft markets along the waterfront	3	-	17	37	47	4.20	Agree

*Source: Author*

The majority of respondents strongly agree that waterfront restaurants or cafes offering fresh seafood are the most suitable waterfront development for Kuala Muda. Similarly, the respondents strongly support the beachfront promenade with walking paths and seating areas. Moreover, respondents agree that fishing piers or docks for recreational fishing activities would be ideal for attracting visitors to the waterfront in Kuala Muda. The respondents mostly agree with public parks or green spaces with picnic areas. They also agree with including interpretive displays or galleries showcasing the fishing heritage as part of the waterfront development. Furthermore, the respondents support having shopping and craft markets along the waterfront, providing opportunities for local commerce. They also agree on incorporating water sports facilities such as kayaking and paddle boarding to enhance the waterfront experience. Another aspect that the respondents find suitable for waterfront development in Kuala Muda is the inclusion of public art installations related to fishing or marine life, which could add aesthetic and cultural value to the area.



Table 5.7

*Design Elements Would be Well-Suited for Exploring Kuala Muda as a Tourist Spot*

Criteria	Frequency					Average Index	Level of Agreement
	1	2	3	4	5		
Architectural aesthetics that reflect the village's fishing heritage	-	1	4	19	80	4.71	Strongly Agree
Well-planned and easily accessible walking paths or trails.	-	-	6	37	61	4.52	Strongly Agree
Interpretive signage or displays that provide information about the village's history and culture.	-	2	9	39	54	4.39	Agree
Public spaces or plazas for social gathering and interaction.	1	1	15	41	46	4.25	Agree
Scenic viewpoints that offer panoramic views of the village and its surroundings.	-	-	9	25	70	4.58	Strongly Agree
Seating areas or benches for resting and enjoying the village's atmosphere.	1	-	13	27	63	4.45	Agree
Waterfront enhancements, such as boardwalks or piers, for closer proximity to fishing activities.	-	1	4	30	69	4.60	Strongly Agree
Lighting features that enhance the village's ambiance during evening or nighttime visits.	-	-	9	39	56	4.45	Agree

*Source: Author*

The majority of respondents strongly agree that architectural aesthetics reflecting the village's fishing heritage are the most suitable design elements for exploring Kuala Muda as a tourism destination. They also strongly support waterfront enhancements, such as boardwalks or piers, for closer proximity to fishing activities. Additionally, respondents strongly agree that scenic viewpoints offering panoramic views of the village and its surroundings are essential for enhancing the experience. Furthermore, they strongly agree that well-planned and easily accessible walking paths or trails would be well-suited for exploring Kuala Muda as a tourist place. Respondents also agree that providing seating areas or benches for resting and enjoying the village's atmosphere is crucial. Moving on, respondents mostly agree on the incorporation of lighting features that enhance the village's ambiance during evening or nighttime visits. They also agree on the importance of interpretive signage or displays that provide valuable information about the village's history and culture. Moreover, including public spaces or plazas for social gathering and interaction is another design element that respondents agree would be well-suited for exploring Kuala Muda as a tourist place.

### Discussion

The Kuala Muda fishing hamlet, known for its cultural diversity, historical significance, and harmonious co-existence with the natural environment, is the subject of this study. We aim to illuminate this village's distinctive characteristics and provide a full understanding of its cultural, historical, and ecological aspects through an in-depth examination. This research

explores Kuala Muda's unique tapestry to add to the knowledge of traditional fishing communities and its relevance in human-environment interactions. These components have great promise for the region because they offer various activities that attract visitors. The fishing community can diversify their livelihood beyond fishing with visitor-friendly activities. Kuala Muda's "Pasar Bisik," or whispering market, is its most notable feature. This study examines market behavior as a cultural practice passed down from generation to generation, which is still alive now. In this market, purchasers individually bid on prices with fishermen. Buyers can try their luck and negotiate rates in a unique way. This inclusive exercise allows anybody to participate, including fish trade experts.

Fresh seafood defines Kuala Muda. People regularly eat fish, crab, cuttlefish, prawns, and other seafood. The fishing village's location enhances Kuala Muda's atmosphere. The community is conveniently positioned near a beautiful beach and the Sungai Muda riverside. Migratory birds forage in coastal and mangrove environments. During low tide, Malaysia's Kuala Muda district experiences '*musim kepah*,' a time with low water levels. These phenomena attract clam gatherers. This study seeks to define Kuala Muda, Penaga, and its distinctive attractiveness as a destination. We aim to fully grasp this place by analyzing its many facets. Kuala Muda, Penaga is unique. Collectively, these traits define its identity. We strive to illuminate the region's appeal through in-depth investigation. Kuala Muda, Penaga, is known for its rich culture. A varied society has kept its traditions and customs for years. Local cuisine, architecture, and festivals reflect this cultural tapestry.

The article "Exploring the Allure of Kuala Muda, Penaga: An Analysis of Key Touristic Factors Abstract" explores what makes Kuala Muda, Penaga, a popular tourist location. This study analyzes what makes Kuala Muda, Penaga, a tourist destination by studying its unique traits, natural attractions, cultural history, and accessibility. This study shows the importance of these elements in boosting tourism and offers suggestions for improving the region's tourism potential. 1. Pasar Bisik attracts tourists with its excellent seafood and unique culture. Kuala Muda's ecology and biodiversity attract migratory birds annually, making them interesting. This study examines how the indigenous population's friendliness affects the destination's appeal, creating a welcoming atmosphere for tourists. This investigation focuses on the stunning beach scenery and village cleanliness of Kuala Muda. This study examines these criteria to determine Kuala Muda's appeal. In conclusion, the destination's proximity to the sea and river has made fishing and boating popular recreational activities, boosting its appeal. Kuala Muda has three types of attractions: natural, cultural and traditional. Kuala Muda's fisheries are a major natural attraction tied to the region's geography and main industries. The region's migratory avifauna, mangrove habitats, rivers, and beaches enhance its natural beauty. After analyzing Kuala Muda and its main attractions, various tourist attractions emerge. Fish whispering auctions or marketplaces let tourists experience the unique bidding procedure. Fishing tours are a popular way to immerse people in the sport. One option is to spend a day with local fishermen, learning about this traditional practice. These trips allow participants to see and participate in fishing, enhancing their grasp of the skill. This immersive experience will enable people to engage with the local fishing community and understand their lifestyle.

Culinary experiences draw travelers to food tourism. Due to its unique flavors and cultural significance, fish is a potential draw. This article examines the popularity of seafood cuisine and its impact on tourism. Foodies love seafood for its various flavors and textures. Seafood meals frequently represent coastal communities' traditions, adding to their attractiveness. Juicy lob, the production of indigenous delicacies like "*dodol*," "*kuih karas*," coconut oil, and

“*keropok lekor*” offers tourists a unique opportunity to learn about and participate in local customs. The “Village Walk” lets travelers experience the charming fishing community by boat and coastline cruise. Bird-watching excursions allow birdwatchers to see the region’s diverse birdlife. This study investigates the possibility of organizing coastal or river fishing trips for interested parties. Cultural events and festivals can also draw travelers. The above events showcase Kuala Muda’s culture through local traditions, performances, and festivities.

Kuala Muda, a fishing community, has a charming Malay architectural style. Design must maintain its uniqueness and sense of belonging in a peaceful setting with traditional Malay cottages, fishing boats, and a stunning fishing landscape. Malay culture and architecture promote tourism and a sense of location. This study examines the pros and cons of incorporating traditional Malay structures into Kuala Muda’s urban fabric by examining its history and architecture. The findings emphasize the need to preserve and present traditional Malay architecture to create a unique and captivating tourism destination. All design features must embrace and exemplify traditional Malay architectural style to retain the village’s cultural character and attract visitors. The design will honor the village’s tradition and enhance its appeal.

Kuala Muda’s architecture reflects its culture. This area’s main draw is Pasar Bisik. Thus, the suggested intervention must prioritize Pasar Bisik’s cultural legacy. This means preserving Pasar Bisik’s tradition without compromise. This study shows that Kuala Muda has abundant natural beauty and biodiversity. Design aspects should include mangrove and migratory bird conservation. Viewing towers or decks can increase the appreciation of scenic beauty, natural landscapes, and coastal regions. These platforms would allow tourists to see breathtaking views, enhancing their experiences. Increasing local cuisine and eating options attracts tourists. In this discussion, we propose a seafood restaurant on a scenic river and a floating restaurant. These recommendations aim to improve the food scene by giving customers a unique and immersive experience. Shopping at Kuala Muda also draws visitors. A shopping bazaar with locally supplied goods and a cultural fish market can capitalize on this beneficial scenario.

Chalets and homestays allow guests to spend overnight in the village’s atmosphere. Tourism is increasingly combining fishing with lodging. This article discusses how fishing trips, leisure expeditions, and immersion encounters with local fishermen can be smoothly linked with hotels. Tourists can fish on fishing tours, and local fishing experts lead these expeditions. Tourists may easily access popular fishing places and improve their fishing experience by staying near them. Recreational fishing is more laid-back, and its accommodations often provide visitors with equipment and facilities. These accommodations may have well-stocked fishing ponds or lakes where guests can enjoy a day of fishing to meet entertainment needs, and the design must include amenities like an expansive plaza and communal areas suitable for cultural events. Strategically arranging the various aspects will make Kuala Muda, Penaga, an attractive tourist destination.

## **Conclusion**

This study shows Kuala Muda’s potential as a tourist attraction. The area offers several opportunities for visitor involvement and fishing community diversification. Tourist locations must develop tourism-related design aspects to succeed and survive. These design features include critical tourism infrastructure and facilities. This document emphasizes the importance of tourist locations having public bathrooms, parking, lodgings, restaurants, local transit, and information centers. Tourism design requires good public restrooms. Clean toilets

improve tourist experience and destination hygiene and sanitation. Tourism vehicles need public bathrooms and enough parking to reduce congestion and protect visitors' cars. Well-designed parking areas also improve the destination's aesthetics. Tourism design also requires proper accommodations. Tourists need varied hotel alternatives to meet their needs; luxury hotels and cheap guesthouses are available. Due to its tourism appeal, Pasar Bisik must be preserved. Respondents showed strong support for Kuala Muda's growth as a tourism destination. A well-appointed space in the fishing village could attract people, create new jobs, boost economic growth, and improve the village's and fishing community's reputation. This study examines the Kuala Muda fishing community as a tourist attraction. To diversify fishing community livelihoods, this study also provides infrastructure and amenities to another fishing town to improve the environment for tourists and the fishing population. Note that different localities have varied potentials to meet these demands. Future studies may focus on farming practices that attract tourists. Researchers can create novel, compelling agricultural tourism experiences by studying this area. This study emphasizes tourist interests and sustainable, responsible farming. This study can inform agricultural tourism research. Agri-tourism, sometimes known as farm tourism, combines agricultural with recreational activities and has gained popularity recently. This trend lets tourists gather vegetables and milk from animals and enjoy farm-to-table meals. These activities help rural economies while being educational and entertaining. While agricultural tourism has been studied, people have shown a great affinity for agricultural activities in diverse circumstances. Farm activity is defined by a passion and excitement for crop cultivation, livestock raising, and agricultural management. Working hands-on brings such people great joy. Farming in Kuala Muda offers local fishermen a new and possibly lucrative source of income. Paddy fields, coconut plantations, and fruit and fish farms allow economic diversification. Other fishing villages provide unique chances for fisheries tourism integration. Thus, future studies may also examine their potential. These alternative fishing towns can help researchers comprehend the wide range of fisheries tourism options. This research will strengthen and broaden fisheries tourism management.

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