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AN ASSESSMENT ON THE IMPACT OF PHYSICAL DEVELOPMENT OF PERHENTIAN ISLAND, TERENGGANU, MALAYSIA TOWARD THE QUALITY OF LIFE OF ITS RESIDENTS

Asniza Hamimi Abdul Tharim¹, Aqil Irfan Ahmad Sayuthy², Noraziah Wahi³

*^{1,2}Department of Built Environment Studies and Technology,
College of Built Environment,*

UNIVERSITI TEKNOLOGI MARA, PERAK BRANCH, MALAYSIA

³College of Built Environment,

UNIVERSITI TEKNOLOGI MARA, SARAWAK BRANCH, MALAYSIA

Abstract

Development is important to increase residents' Quality of Life (QaL). The development of Perhentian island is far behind the development of other mainland towns and cities in Terengganu which has significantly affected the Quality of Life (QoL) of its residents. Therefore, a proper study on the benefits and strategies of developing an island has to be conducted to fulfil the needs of the island's residents. This research aims to investigate the development of Perhentian Island, Terengganu. The research used a quantitative methodology utilising an observation checklist as its instrument. The checklist comprises 23 elements which are housing area, education facilities, health facilities, entertainment facilities, safety facilities, office buildings, industrial sector, energy resources, water resources, restaurants, hotels, transportation, road, grocery store, scenery, conservation centre, jetty, waste management, drainage system, food resource, network and coverage, worship buildings, and buildings organization. The data collected from the observation were presented in Excel tabulated format with identification of strongly dissatisfied, satisfied, neutral, satisfied, and strongly satisfied. Overall, the findings of this study show that the development on Perhentian Island is at neutral level. It is hoped that the study outcome can provide guidelines for Perhentian Island's future development toward achieving a better Quality of Life for its residents.

Keywords: Island Development, Perhentian Island, Quality of Life

¹ Senior Lecturer at Universiti Teknologi MARA Perak Branch. Email: asniz286@uitm.edu.my

INTRODUCTION

Malaysia is known among tourists for its beautiful islands. For example, Pangkor Island which is situated in Perak, and Langkawi Island in Kedah, are well developed. Other than that, there is also Perhentian Island which is located in Terengganu, Malaysia, and is famous not only among Malaysians but also, among tourists from around the globe as a place to enjoy nature. However, although the island is famous, it is not as well developed as other famous islands such as Pangkor and Langkawi. As reported by Aizat Syarif in Astro Awani (2013), a resident of Perhentian Island insisted that "Perhentian Island needs to develop as it will ease the society." Ghani et al. (2011) stated that Perhentian Island residents have a low quality of life (QoL) due to the lack of development, which has contributed to the increase of the unemployment rate. By 2021, many accommodations like hotels and chalets have been developed due to demands from tourists, but the quality of life for the residents remains the same. An article from Wonderful Malaysia (2019) stated that Perhentian Island is located on the coast of Terengganu and is divided into Perhentian Kecil and Perhentian Besar. As the Monsoon season happens from October to March every year, all islands in Terengganu including Perhentian island, have been instructed not to accept any tourists during that period. Although Perhentian Island is full of modern accommodations such as hotels, homestays, and resorts for tourists, it is not the case for the locals' housing and public facilities. Since Perhentian Island is not as developed, the QoL of its residents is lower compared to the residents of other islands such as Pangkor and Langkawi. Hence, this research paper aims to identify the level of development in Perhentian Island, Terengganu through an observation checklist.

LITERATURE REVIEW

Perhentian Island is famous among tourists and that has increased the number of facilities such as resorts and chalets along its beaches. However, Ghani et al., (2011) reported that the QoL among Perhentian Island's residents is low. This shows that the facilities that are built on the island are only focusing on the tourists while abandoning the comfort of the local residents. The majority of the residents from Kampung Pasir Hantu are part of the workforce in the tourism sector. Many of them have low self-dependence and competence. During the COVID-19 pandemic, many businesses failed to survive especially the tourism sector, the main industry which supports the residents economically. This has become a huge problem for the island residents to survive due to the pandemic circumstances.

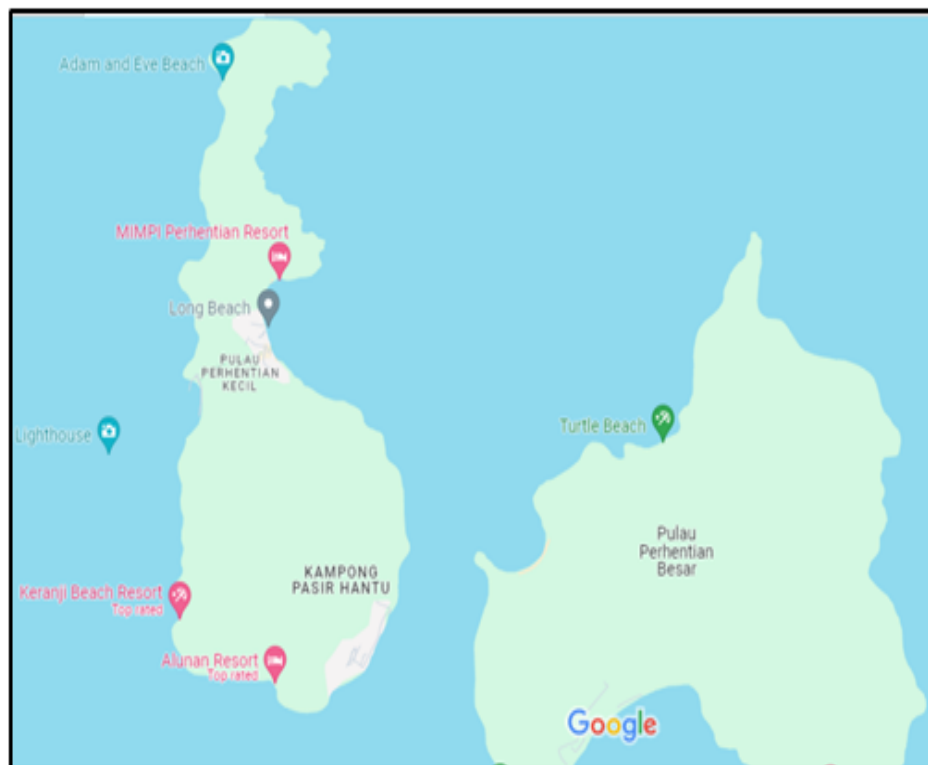


Figure 1: Perhentian Islands Maps (Google Map, 2024)

In addition, another problem faced by Perhentian island is the lack of labour forces who are willing to work on the island. Not many skilled workers want to work on the island due to the high living cost and less favourable social environment. This has affected the construction sector since the number of skilled workers is limited (Ghani et al., 2011). Furthermore, Perhentian Island's residents mainly work in the tourism and fishing industries. The fishermen are the suppliers of marine products to the tourism sector and the residents. However, the fall of the tourism sector during the Covid-19 pandemic has affected the fishermen's livelihood. This paper will discuss the development in Perhentian Island, Terengganu. The development on the island is not as advanced as the mainland since many factors have become obstacles to the government's effort to develop the island. Therefore, this study was conducted to determine the level of development at Perhentian Island, Terengganu, and to measure the residents' QoL by using an observation checklist. Hence, this study focuses on 23 elements of QoL extracted from a previous study by several authors such as Moser et al. (2013), Harry (2022), Bukenya et al. (2003), Muhammad et al. (2008), Grant et al. (2007), Swaffield et al. (2019), Gibbs (2005), Okumus (2020), Dang et al.

(2020), Craglia et al. (2014), Haggblade et al. (2010), Ghani et al. (2011), Swanwick (2009), and Herzog (2011).


RESEARCH METHODOLOGY

This study employed observational research methodology by using an observation checklist as its data collection instrument. An observation checklist was designed based on the objectives of this research. The checklist was filled out by the researcher during the site observation process. The observation checklist consists of one section. The researcher rated the statements on the checklist based on a 5-point Likert scale from 1 (Strongly Dissatisfied), 2 (Dissatisfied), 3 (Neutral), 4 (Satisfied), and 5 (Strongly Satisfied).







ANALYSIS






According to Ramdas and Mohamed (2014), Perhentian Island is made up of two main islands which are Perhentian Besar (867 hectares) and Perhentian Kecil (524 hectares). Perhentian Besar and Kecil which are the main islands, are full of accommodations such as chalets and resorts along their beaches to fulfil the tourists’ demand. In 2014, the number of accommodations accounted for 1000 rooms, from approximately 42 chalets and several resorts. The islands attract many local and international tourists, thus there has been an increase in the number of tourists’ accommodations, infrastructures, and transportation systems being developed to cater to their needs as mentioned by Muhibudin and Mohamed (2014). Ibrahim (2007) states that boats are the most important means of transportation for the locals to get to the mainland and 47.4 percent of the population on Perhentian Island owns boats. Most of the people on the island use the boats themselves, while others use the boats to make a living by transporting passengers. In addition, Ghani et al. (2011) confirmed that 76.9% of Perhentian Island residents own low-cost and low-quality houses since most of them were uneducated and earning low wages. Table 1 indicates the observation analysis using the checklist of Pulau Perhentian Island Development in 2022.

Table 1: Observation Analysis of Pulau Perhentian Island Development

Criteria	Observation
Housing Area [2-Dissatisfied] 	The housing area can be categorized as a rural housing area which is located at the foothill of an island. The gap between each house is too close which resulted in hearing neighbors’ voices when spoken. Other than that, the scenery of each house is messy because of the bushes that have not been cut. The road size is too small that it only can be accessed by riding a motorcycle or walking.
Education Facilities [3-	SK Pulau Perhentian is the only school in Perhentian

Criteria	Observation
Neutral] 	island which is located in Kampung Nelayan. The school provides many facilities to students such as a badminton court, football field, computer room, canteen, and others. The classes are fully equipped with chairs, tables, whiteboards, and fans. It also provides a guard house for the security guard to keep the school safe.
Health Facilities [3-Neutral] 	The only available health facility is Klinik Kesihatan Pulau Perhentian which is run by the government to treat and advise residents on health issues. The semi-concrete clinic employed 5 staff that consisting of doctors, medical assistants, and nurses. No guard secures the clinic. Other than that, the clinic equipment is fully equipped except for birthing. There are two options for birthing which are scheduling with the nearest hospital which is Hospital Besut that are located on the mainland or using a midwife service like in the old days.
Entertainment Facilities [3-Neutral]	Entertainment facilities such as karaoke, cinema, and shopping malls are surely not available on Perhentian Island. Despite this, they have water activities such as snorkeling, kayaking, swimming, banana boat, and others. All the equipment is placed under a tent or wooden store open.
Safety Facilities [2-Dissatisfied] 	Perhentian Island provides safety facilities such as a police station and firefighter station. Both safety facilities' structure is made from concrete. The size and the design are small to suit the number of staff. Unfortunately, during the observation process, the facilities could not be entered because no one was there. The firefighter station's interior design and equipment can be seen from outside of the building. However, the condition inside was seen as messy and the inner design was too simple. There are no firefighter trucks around the area.
Office Buildings [3-Neutral] 	Office buildings are owned by Perhentian Island residents. The office buildings are only a part of the building because the job opportunities are small on the island. However, the design for the office building is durable as it is made from concrete. The location is easy to access as is placed beside the restaurant and grocery stores.
Industrial Sector [3-Neutral] 	The industrial sector in Perhentian Island focuses on accommodation and business. There are so many hotels, chalets, and boats around the island. The fishing industry also become their main industry sector but the number of fishermen is not as much as expected and most of them are elderly.

Criteria	Observation
Energy Resource [2-Dissatisfied] 	Perhentian Island energy resources use 2 methods. The first one is the supply from Tenaga Nasional Berhad uses a power generator. This method is usually used by Kampung Nelayan residents where the electricity supply is 24 hours per day. The second method is using a diesel generator which can supply for half or a full day depending on the management of each hotel and chalet. The TNB station is located on the hillside of Perhentian Island.
Water Resource [2-Dissatisfied]	The water resource in Perhentian Island is provided by Syarikat Air Terengganu (SATU). The office is located in the housing area and 3 water tanks supply water to Kampung Nelayan that are placed at the hillside around the Kampung Nelayan.
Restaurants [2-Neutral] 	Restaurants in Kampung Nelayan can be seen from the jetty. The restaurants are along the seaside and offer ocean views. Many restaurants offer a variety of food but the prices are a bit higher. The existence of restaurants is to fulfill the tourists' demand.
Hotels [3- Neutral] 	As Perhentian Island is famous among tourists, most of the structures of the hotels are made from concrete and the design can be rated starting from budget homestay to 5-star hotel.
Transportation [3-Nuetral] 	The only transportation on Perhentian Island is by boat. There is no road provided for motorcycles or cars. The boat has become the main transportation in Perhentian Island. Any trip to the mainland needs a boat as transportation. During rainy days, residents cannot go to the mainland because the ocean waves can make the trip dangerous.
Road [2-Dissatisfied] 	The road to the housing area, restaurant, and hotel can be accessed by walking from the jetty. Some areas are paved or concreted. There are no roads connecting Kampung Nelayan to Perhentian Kecil despite they are on the same island.
Grocery Stores [3- Neutral]	Grocery stores in Perhentian Island only have basic items such as food or housekeeping items. The structure is made from wooden and concrete beams.
Scenery [4-Satisfied] 	The scenery of Perhentian island is quite impressive. However, some places are not organized in terms of drainage systems and waste management, and that decreases the quality of scenery views.

Criteria	Observation
Conservation Centre [3-Neutral]	Perhentian Island does not have a conservation center. Endangered animals such as turtles are being cared for by the "Pembangunan Pelancongan Maritim". 6 beaches are reserved for the turtles to lay eggs.
Jetty [3- Neutral] 	Jetty in Kampung Nelayan has a T design. There are no customer service or organized payment stalls for passengers to buy tickets. The function of the jetty is for the passengers to take off and depart and also for goods loading.
Waste Management [2-Dissatisfied] 	In Kampung Nelayan, there is no garbage truck. The residents and hostel facility will place the garbage on a spot beside the beach for garbage boats to pick up and transfer them to the garbage truck on the mainland for disposal.
Drainage System [1-Strongly Dissatisfied] 	Kampung Nelayan drainage system is not systematic due to the design of the drain being too open. Even the drains for housing areas and accommodation for tourists are not covered.
Food Resource [2-Dissatisfied]	Every day, there will be a boat that transports goods from the mainland. Orders from shop owners or residents will be taken every day and the cost will be higher than the mainland's cost.
Network And Coverage [2-Dissatisfied] 	Network and coverage in Perhentian Island can be rated as slow. The signal in certain areas is 4G, but most of the time, the internet cannot be connected. However, phone calls can still be made.
Worship Buildings [3 - Neutral] 	Masjid Terapung in Perhentian Island is the only worship building in Perhentian Island as the majority of the residents are Muslim. The design is very beautiful and modern and has all the accessories. It takes about a 10-minute walk from Jetty to this mosque.
Building Organization [3-Neutral]	Kampung Nelayan is not completely organized. This is because the housing area is in squatters while the accommodations for tourists, restaurants, and shop lots are well organized.

Source: Author's Galery (2023)

DISCUSSION

The observation method was used in this research to determine the development level in Perhentian Island, Terengganu, and the observation checklist was filled up by the researcher during the observation. The development observed in this research was classified into twenty-three (23) elements, where each of the elements is discussed below:

Criteria 1-Housing Area: The housing area should be organized and complete with facilities such as a bank, access road, safety, health care, and others to ease the residents' daily lives. Squatters' housing areas need to be redeveloped into organizational housing areas that will increase the Quality of Life (QoL) of the island's residents. This will also increase tourists' perceptions towards island residents' housing area making them attracted to the surroundings of Perhentian Island and increasing the economy of Perhentian Island (Moser et al., 2018)

Criteria 2-Education Facilities: Education is the main thing that needs to be developed for residents to enhance their skills and knowledge for a better life. Perhentian Island only provides schools for primary students which makes it difficult for the local students to pursue their studies at the secondary level (Harry, 2022; Bukenya et al., 2003; Muhammad et al., 2008).

Criteria 3 Health Facilities: There are adequate health care and welfare facilities for the residents, but there is no delivery room for childbirth. The health facilities are rated neutral because the island's health clinic provides the same services as any other mainland clinic. However, because the distance from Perhentian Island to the closest hospital, Hospital Besut, is far, the government clinic should provide maternity services including a delivery room. The need to develop adequate health and welfare facilities is supported by Harry (2022), Grant et. al. (2007), and Bukenya et al. (2003).

Criteria 4: Entertainment Facilities

Residents need entertainment to release their stress and to have a better QoL. On the mainland, there are many entertainment facilities such as karaoke, shopping malls, and others. While on the island, the entertainment facilities only focus on water sports where the focus is to entertain tourists (Harry, 2022; Moser et al., 2018).

Criteria 5- Safety Facilities: The police station and Fire Station are provided by the government in Perhentian Island to ensure residents' safety. The safety facilities should be well-kept to control and maintain the situation. Moser et al. (2018) support that the development of a safety facility will increase the residents'

safety while Harry (2022) agrees that developing a facility will ease the residents' affairs.

Criteria 6- Office Buildings: Office buildings that are located on Perhentian Island are owned by the government, and the buildings are rented by private companies for commercial use. The buildings are well-maintained and function well. The office buildings provide opportunities for residents to start businesses. Swaffied et al. (2019) stated that developing land and structures will open the chance for residents to start a new business.

Criteria 7- Industrial Sector: The industrial sector on the island is very limited compared to the mainland. The main business sectors that are operating on the Island include tourism and fishing. Many areas which may give opportunities to the residents to increase food resources or at least increase the economy of the island have not been explored. The development of structure will allow residents to start new sectors is supported by Harry (2022) and Gibbs (2005) who say that developing an area will provide opportunities for many sectors.

Criteria 8- Energy Resources: Energy resources at Perhentian Island are separated in two because of the limitation of supply by Tenaga Nasional Berhad. The energy resources supply fulfils the residents' demand but not the tourism sector. Any developer who wants to invest in the tourism sector on Perhentian Island needs to spend on electric generators to provide electricity to the client. Full electricity coverage needs to be developed for Perhentian Island to attract investors to invest in Perhentian Island which will give opportunity to the island residents on having jobs.

Criteria 9-Water Resources: Water resources provided by Syarikat Air Terengganu are sufficient to cover for both domestic and commercial use at Perhentian Island. However, the drainage and piping works are not as neat as the mainland's which affect the aesthetic appeal of the island. Proper organisation on piping works needs to be done to improve the landscape of Perhentian Island while increasing the water resources will also improve the development of agriculture sector or other sectors that will employ Perhentian Island's residents. This statement is accepted by Matos et al. (2013), who stated that the development of a public water supply system will improve the economy of places and needs to be considered before developing an area.

Criteria 10-Restaurants: The government provides food courts for residents to start businesses in the food and beverage sector which fulfils the demand of the tourism sector. Other than that, many residents operate food stalls along the walkways. The price of food in general is slightly higher than on the mainland.

However, Perhentian Island does not have any specialty food or beverages to attract tourists to the island. According to Okumus (2020) food and beverage can be one of the factors for tourist to choose their travel destinations.

Criteria 11-Hotels: The hotels and chalets provided in Perhentian Island are mostly owned by outsiders and they provide employment opportunities to the local residents. However, the residents have to compete with outsiders who come to the island seeking for employment as well. The lack of knowledge and skills among the local residents make the outsiders more eligible for the positions offered by the tourism sector. Harry (2022), Dang et al. (2020), Moser et al. (2018), and Craglia et al. (2014) agreed that development would improve the local residents' professionalism and enhance their skills.

Criteria 12 -Transportation: Boats are the only type of transportation that is provided on Perhentian Island. The size of the boats is relatively small to carry people and goods making the cost for each trip pricey. In contrast, in addition to boats other islands such as Pangkor and Langkawi provide ferries for tourists to travel to and from the mainland. The road and transportation issues are commented on by Othman and Ali (2020), Harry (2022), and Muhammad et al. (2008) that development will improve road and transportation to ease residents' daily life.

Criteria 13 - Road: There is no primary road provided on Perhentian Island. Only secondary or village roads are available throughout the island. Pangkor Island and Langkawi Island are well developed due to the availability of primary roads which provide access for the investors to construct new buildings and other infrastructure. This shows that the access road is very important in the development of the island which is supported by Harry (2022) and Muhammad et al. (2008).

Criteria 14 - Grocery Store: The number of grocery stores in Perhentian Island is limited compared to the mainland where they only supply basic household needs. The residents will have a hard time getting any goods that are only available on the mainland. Development in the business sector should be executed to ease residents' affairs and fulfil their demands. Swaffield et al. (2018) supported the statement by saying that development will open the chance for residents to start proper businesses that fulfil the demand of the community.

Criteria 15 - Scenery: The scenery of Perhentian Island is quite impressive and has attracted tourists to come for vacation. However, there are certain problems such as piping system, drainage system, and waste management that become barriers to a perfect scenery of the island. The surroundings and environment

should be well planned so that it will increase the residents' Quality of Life (QoL) and attract tourists to come to the island. This in turn will benefit the island's economy.

Criteria 16 -Conservation Centre: Besut district council declares that 6 beaches in Terengganu as the habitats of the turtles, and these beaches fall under the jurisdiction of Maritim Malaysia. However, there are no conservation centres for flora and fauna which will put the endangered species at risk. The conservation centre has the potential to improve scenery, employment, and economy for the island's residents. Thus, proper development on rehabilitation for flora and fauna could save endangered species while improving the environment

Criteria 17 -Jetty: The structure of the jetty at Perhentian Island is inferior compared to the jetties of other islands such as Pangkor and Langkawi. Pangkor and Langkawi Islands' jetties are complete with many facilities including grocery stores, toilets, and restaurants while Perhentian Island does not have all these facilities. A systematic ticket organization for boat transport will allow funds for upgrading the jetty. However, there is no proper planning to develop this structure for a better output. Haggblade et al. (2010) and Hettige (2006) agreed that the development of infrastructure will improve access and ease residents' affairs.

Criteria 18- Waste Management: Waste management in Perhentian Island is managed by the contractor hired by Besut District Council. There is no issue with the trips provided by the contractor, but strategic rubbish collection points have to be established to improve the landscape of the island. Ghani et al. (2011) supported that organized and proper waste management will improve the surrounding and consequently the residents' Quality of Life (QoL).

Criteria 19 -Drainage System: A proper drainage system will reduce water pollution. However, because of the location of Kampung Pasir Hantu is at the foothill, an open drainage concept is implemented to cater to the flowing water from the hills and mountains. Thus, safety measures must be introduced to ensure the safety of residents and tourists. Crossing an open monsoon drain without safety measures is dangerous. This statement is supported by Swanwick (2009) saying that the development will improve the safety of the surrounding environment.

Criteria 20 -Food Resource: The food resources in Perhentian Island are imported via boats from the mainland. Perhentian Island has no natural food resources, unlike other islands such as Pangkor Island and Langkawi Island. However, those two islands have ferry services to transport goods which makes the cost reasonable. Perhentian Island only uses boats to transport goods making

the resources limited and the cost high because the high number of trips from the mainland to Perhentian Island. Harry (2022) and Muhammad et al. (2018) commented that the development of transportation benefits the resident and will increase their Quality of Life (QoL).

Criteria 21 -Network and Coverage: Internet connection is provided in Perhentian Island. However, the speed and coverage are limited which is not suitable for tourist destinations. It also makes the island far behind in news and updates from the mainland. The government should upgrade the internet infrastructure of the island to improve network speed and coverage. Harry (2022) and Moser et al. (2018) agreed that facilities will ease residents' affairs and have a connection with Quality of Life (QoL).

Criteria 22 -Worship Buildings: Most of the Perhentian Island residents are Muslims. So, the government provides a mosque that fulfils the needs of the residents to perform religious activities. In contrast to the mainland mosques, the Perhentian Island mosque is powered by solar, using solar panels that are attached to the streetlights. It also brings happiness and calmness to the surrounding residents while balancing the economy through zakat and others (Herzog, 2011).

Criteria 23 -Buildings Organisation: Most of the buildings at Perhentian Island are well organized except for the presence of squatters which disrupts the residents' well-being and their Quality of Life (QoL). A new residential area to relocate the squatters can be proposed to improve their QoL while developing the island. Hence, the development will improve the landscape of the island, and Moser et al. (2018) and Hassan et al. (2013) agreed that the development will improve house quality for residents.

Overall, all of the elements observed in Perhentian Island are far inferior compared to the mainland and other islands which underscore that the Quality of Life at Perhentian Island is affected by the lack of development. The development on Perhentian Island only focuses on the infrastructures that are directly related to the tourism sector while sidelining the residents' needs and well-being. There are so many things that need to be reviewed and reorganized to increase the Quality of Life (QoL) for Perhentian Island's residents since the development of the island is not satisfactory and there is no immediate plan by the authority to improve the situation.

CONCLUSION

The objective for this paper has been achieved by observing each of the elements in Perhentian Island as listed. It was noted earlier in this paper that there are 23 elements identified in this study and all the elements were observed which include housing area, education facilities, health facilities, entertainment facilities, safety

facilities, office buildings, industrial sector, energy resources, water resources, restaurants, hotels, transportation, road, grocery store, scenery, conservation center, jetty, waste management, drainage system, food resource, network and coverage, worship buildings and buildings organization. Thus, this can be concluded that the level of overall development on Perhentian Island is neutral. The importance of each element of development has been discussed based on several authors' writing including Moser et al. (2013), Harry (2022), Bukenya et al. (2003), Muhammad et al. (2008), Grant et al. (2007), Swaffield et al. (2019), Gibbs (2005), Okumus (2020), Dang et al. (2020), Craglia et al. (2014), Haggblade et al. (2010), Ghani et al. (2011), Swanwick (2009), and Herzog (2011) who agreed that each criterion is important towards QoL. Overall, the findings of this study to identify current developments on Perhentian Island indicated a neutral ranking. Nevertheless, Perhentian Island seems to be left behind in construction development compared to other famous islands such as Langkawi Island and Pangkor Island. Therefore, this study provides insight into how the development of the island will benefit citizens' daily lives and improve the image and surroundings of the island since Perhentian Island is among the top destinations for local and international tourists.

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REFERENCES

- Aizat S (2019) Retrieved from : <https://www.astroawani.com/berita-malaysia/penduduk-pulau-perhentian-harap-pembangunan-tidak-sekadar-bermusim-18634>
- Bukenya, J. O., Gebremedhin, T. G., & Schaeffer, P. V. (2003). Analysis of Quality of Life and Rural Development: Evidence from West Virginia Data. *Growth and Change*, 34(2), 202–218.
- Craglia, Max & Leontidou, Lila & Nuvolati, Giampaolo & Jürgen, Schweikart. (2004). Towards the Development of Quality of Life Indicators in the 'Digital' City. *Environment and Planning B: Planning and Design*, 31. 51-64. 10.1068/b12918.
- Dang, Y., Chen, L., Zhang, W., Zheng, D., & Zhan, D. (2020). How does growing city size affect residents' happiness in urban China? A case study of the Bohai rim area. *Habitat International*, 102120. doi:10.1016/j.habitatint.2020.102
- Ghani, N. A., Yassin, S. M., Ahmad, W. I. W., & Abdullah, W. S. W. (2011). The quality of life (QOL) of the island people in the state of Terengganu, Malaysia: A Study on Pulau Redang and Pulau Perhentian. *Canadian Social Science*, 7(3), 59-70.
- Gibbs, R. (2005). Education as a rural development strategy (No. 1490-2016-127953, pp. 20-25).
- Grant, A. M., Christianson, M. K., & Price, R. H. (2007). Happiness, Health, or Relationships? Managerial Practices and Employee Well-Being Tradeoffs. *Academy of Management Perspectives*, 21(3), 51–63. doi:10.5465/amp.2007.26421238

- Haggblade, S., Hazell, P., & Reardon, T. (2010). The Rural Non-farm Economy: Prospects for Growth and Poverty Reduction. *World Development*, 38(10), 1429–1441.
- Hassan, N., Mohd Jaafar, N. I., Raja Ariffin, R. N., Abu Samah, A., & Jaafar, M. N. (2013). Perceptions on Quality of Life in Malaysia: The Urban-Rural Divide. *Planning Malaysia*, 11(3). <https://doi.org/10.21837/pm.v11i3.106>
- Harry J., (2022) Rural road network must be improved to boost rural economy. Retrieved from <https://pngnri.org/index.php/blog/183-rural-road-network-must-be-improved-to-boost-ruraleconomy>
- Herzog, H. (2011). The Impact of Pets on Human Health and Psychological Well-Being: Fact, Fiction, or Hypothesis? *Current Directions in Psychological Science - CURR DIRECTIONS PSYCHOL SCI*. 20. 236-239. 10.1177/0963721411415220.
- Hettige, H. (2006). When do rural roads benefit the poor and how?: an in-depth analysis based on case studies. Asian Development Bank.
- Mohamad, M., Yusof, B. M., Mohammad, M., & Ali, A. M. (2008). Modeling Spirituality, Wellness and Quality of Life: A Study in Redang and Perhentian Islands. 2008 Second Asia International Conference on Modelling & Simulation (AMS).
- Moser, A., Peter, H., Fengler, B., & Strohm-Lömpcke, R. (2018). Improving the quality of life with rural development programs in Germany (2007–2013): Evidence from the Evaluation. *European Countryside*, 10(2), 321-339.
- Muhibudin, M., & Mohamed, B. (2014). An Assessment on Destination Characteristics: The Case Study of Pulau Perhentian. *SHS Web of Conferences*. 12. 10.1051/shsconf/20141201095.
- Okumus, B. (2020). Food tourism research: a perspective article. *Tourism Review*.
- Othman, A. G., & Hj. Ali, K. (2020). Transportation And Quality of Life. *Planning Malaysia*, 18(13). <https://doi.org/10.21837/pm.v18i13.774>
- Ramdas, M & Mohamed, B. (2014). Impacts of Tourism on Environmental Attributes, Environmental Literacy and Willingness to Pay: A Conceptual and Theoretical Review. *Procedia - Social and Behavioral Sciences*. 144. 378–391. 10.1016/j.sbspro.2014.07.307.
- Swaffield, S. R., Corry, R. C., Opdam, P., McWilliam, W., & Primdahl, J. (2019). Connecting business with the agricultural landscape: business strategies for sustainable rural development. *Business Strategy and the Environment*. doi:10.1002/bse.2320
- Swanwick, C. (2009). Society's attitudes to and preferences for land and landscape. *Land Use Policy*, 26, 62–75.
- Wonderful Malaysia (2019) Retrieved from <https://www.wonderfulmalaysia.com/>

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