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Beach Users' Perceptions Toward Beach Quality and Crowding: A Case of Cenang Beach, Langkawi Island, Malaysia

Hamed Mehranian and Azizan Marzuki

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Abstract

This chapter focuses on beach users' perceptions toward beach quality aspects and crowding as well as investigating beach users' main preferred activities and their motivations to choose Cenang beach in Langkawi Island as a major destination for holidaymakers in Malaysia. Questionnaire surveys on a total of 400 local and international beach users were carried out (January and February 2014). This study revealed that physical and morphological aspects of the beach have been recognized by beach users as the most important aspects of beach quality while environmental issues were ranked as the less important. Swimming and sunbathing were identified as the main preferred activities by users and landscape, water and sand cleanliness were identified as the most important reasons for choosing Cenang beach to visit. This study also found that the increased beach's sand availability does not necessarily reduce the degree of crowdedness felt by beach users.

Keywords: beach user, perception, beach quality, crowding, Cenang beach

1. Introduction

Tourism, in its all types and activities, is dependent upon the consumption of environmental resources and there is a mutual dependency between environment and tourism as the quality of environment is strongly in danger by tourism growth, and on the other hand, tourism development is vastly reliant on the quality of environment [1]. According to UNEP [1], coastal tourism is highly reliant on natural resources such as climate, landscape and ecosystem, and cultural resources like historic and cultural heritage, arts and crafts, tradition, and so on. Coastal

tourism brings up the image of the resorts on the seaside, beaches, warm sands and plenty of sunshine [2] and according to Roca [3] sun, sea and sand tourism leads to an influx of people to the beaches. However, tourists nowadays anticipate to have an experience on the beach that is more than sun, sand and sea. They seek a diverse range of recreational experiences like culinary, culture, natural beauty, sports, and so on. One of the main aims of this study is to understand the mutual interactions between beach user's and the physical environment.

One of the possible outcomes of coastal tourism would be a discrepancy between recreationists' demand and available sand [3] and perception of crowding happens when the quantity of encountered or observed people in a zone is too big [4] or when users' behavior interferes with an individual's own norms or objectives [5]. According to Manning [6], if visitors rate the environmental conditions worse than expected, this will have a fundamental influence on their perception of crowding. An increase in available sand on the beach elevates the satisfaction of visitors; however, not that much, since some other factors are also strongly important in beach users' perceptions toward the quality of the beach like its physical properties, facilities and landscape [7, 8]; therefore, an integrated management strategy that includes both social and natural resources conditions should be applied for managing perceived crowding [9].

The increasing attractiveness of an area which is conducted by local stakeholders and or investors results in concerns about overcrowding in that particular region [10]. This trend will emerge imbalance and disorder in the area which in long term will have numerous negative effects on natural and physical environment of the region. This issue has been in the center of attention of beach managers since mid-1970s; therefore, they should implement a multipurpose plan that is adaptable to changes in order to fulfill human and environmental requirements [3]. According to Van Maele et al. [11], in effective beach management, some elements should be considered; firstly natural environment and its dynamics life (the chemical, physical, and biological exchanges), secondly the necessities and opinions of the beach users and finally benefits for local residents and stakeholders. In general, managers should apply a quality-based strategy that public perception is a chief tool to improve the quality [12].

According to Williams and Micallef [13], better understanding of how individuals perceive the beach quality is very applicable for managers for planning strategies in integrated management. Pendleton et al. [14] also stated because of the complexity of the relationship between the natural environment and the human beings, trying to find how public, shape their attitudes and perceptions toward the quality of environment is essential; on one side, the quality of environment indirectly affects individual's recreational behavior through individual creations of perception of the environment. Alternatively, the human beings are able to directly influence the natural environmental quality via their behavior that is reliant on individual's perceptions of the environment. Once a resource like a beach undergoes degradation, the result would be a reduction in the quality of the experience of visitors [15].

As it was mentioned, one basic factor of natural resource management is implementation of users' perception [13, 16]. Beach management strategies are prepared on the basis of a broad understanding of coastal processes, provided by surveys and analysis. In other words, to improve the quality of beach and develop the facilities for beach users, there is a need to understand beach user's perceptions and priorities [17]. In this regard, the ability to meet

different desires and requirements, and shifting priorities and opinions that are reported by policy-makers and beach users should be considered. Better understanding of how individuals perceive beach quality is very applicable for managers for planning strategies in integrated management [13]. This kind of beach users' analysis is an important part of sustainable beach development and affects managers' decision-making process. Numerous authors have also focused on the importance of users' perceptions of beach quality and discussed its dimensions [3, 18–20] and emphasized on the importance of assessment of people's opinions and requirements of recreational areas in order to guide beach management strategies [20–23]; however, it has been a big gap in South East of Asia's beach tourism and especially in Malaysia to do better planning and organize the visitors based on their perception and preferences. In other words, there is a lack of understanding of the beach goer's perceptions who are main customers to use tourism products in coastal area.

As studies on users' perceptions of beach quality have been conducted over the years, but little work has concentrated on Malaysian beaches, this research explores beach users' perceptions toward beach quality to contribute to better understanding of beach goers' attitudes. This objective can be achieved by investigating the perception of different aspects of beach quality of beach users on Cenang beach in Langkawi Island to draw planning recommendation. By knowing the beach user's opinion about that region, beach managers will identify their weakness and strength to do better planning and implementing proper strategy to overcome the shortage in that area.

2. Literature review

The quality-based strategy's objective aims at obtaining sustainable development [12]. The importance of these strategies is based on their holistic, systemic and dynamic characteristics. These strategies are achievable by applying regional schemes. In these schemes, for all stakeholders (decision-makers, economic actors, NGOs and users), quality is a common aim and is a tool to obtain coastal zone management. In majority of quality-based strategies, public perception is a chief tool to improve quality. Beach quality is a key element of mass tourism [3]. In the perspective of tourism, the quality of a beach can be evaluated based on some elements like its setting, local access, security, the availability of services and infrastructure, and the quality of its sand and water [24–26]. In the perspective of tourism, the quality of a beach can be evaluated based on some elements like its setting, local access, security, the availability of services and infrastructure, and the quality of its sand and water [24–27]. According to Roca and Villares [28], in semi-natural beaches, users' satisfaction of beach quality is affected by natural beauty and conservation of the beach, and the beachgoer's profile. According to Espejel et al. [9], the ideal beach should be sandy where water is not deep with pleasant temperature, dangerous animals are absent, sand and water are clean, and no bad smells should be existent; it must be safe and basic infrastructure and services like access, lifeguards, bathrooms, lifeguards, shade, security, and minor shopping zones should be present.

According to Williams and Micallef [13], five elements, which are very significant in ascertaining a successful beach setting, are safety, water quality, facilities, scenery and litter. Williams

and Micallef [13] also stated the importance of a variety of physical (local geology and geomorphology), biological (flora and fauna), socio-economic (recreational amenities, access, safety, landscape, archeology, and commercial interest) and environmental quality elements (hygiene, cleanliness and toilet facilities) which have been determined in the previous studies regarding the assessment of the beach quality.

Roca [3] assessed the beach occupancy and public perceptions of beach quality in six beaches in Spain. They divided quality parameters into four general groups as physical and morphological, environmental, facilities and services, and image and comfort. Characteristics of water, sand, beach dimensions and presence of waves, wind and rocks were studied in the physical and morphological group. The presence of items like waste and wastebaskets, toilet and shower, rain run-off, vegetation, fish and oil on water or sand, noise and animals were placed in environmental features group. Facilities and services group was divided into of stalls, deckchair, restaurants, life-saving equipment, walkway, beach and water game facilities, parking areas, and access subgroups. Finally, the quality of landscape, beach comfort, quality/price ratio and crowdedness were studied in image and comfort category. This study revealed that principal motive for visitors to choose a beach was landscape and the most favorable aspect for selecting a beach was cleanliness and sanitary conditions, followed by safety, attractiveness of landscape, tranquility, good accessibility and facilities. Beach goers were satisfied with morphological and physical aspects (water temperature and beach length are major parameters). Although noise that is considered as an indicator of crowding was perceived high in urban beaches, it still was above acceptable degree. Restaurants and bars were the highest and parking was the least scored parameters of facilities. Landscape was the most and number of users was the least favorable aspects related to image and comfort. It was concluded that evaluation of beach quality should be based on considering a variety of factors, not just density of beach users. Moreover, beach occupancy and users' perception are correlated but high degrees of occupancy do not essentially suggest low degrees of satisfaction. This implies that in beach users' perception, other factors like physical features, facilities, and landscape are vital in assessing beach quality and overall enjoyment of visitors' experience is not reduced by factors, which are associated with the quantity of users.

Duvat [12] conducted a study in France beaches in order to find users' perceptions of beach quality. In the study of Duvat [12], four major elements that affect the quality of the beach include coastal landscapes, the quality of the environment, quietness, and the natural properties of the beach. This study showed that users paid less attention to facilities in comparison with natural components. Majority of respondents expressed that physical characteristics of beaches play an important role in the quality of their visit including beach width and materials, sand quality and vegetation. Cervantes and Espejel [8] also conducted a study in four beaches in USA and Mexico. The results revealed that beaches with higher facilities and services were more appreciated by respondents. Marin et al. [18] also carried out a study in Italy to understand beach users' perceptions which beach and sea cleanliness were judged to be much more important than other issues. Majority of respondents reported beach quality and safety as good. About half of respondents judged that water quality is sufficient and the availability of recreational activities was stated as poor. In addition, crowding and its related noise were perceived high.

In a study to evaluate visitors' satisfaction and perception of crowding in a German national park on the island of Hallig Hooe conducted by Kalisch and Klaphake [5], it was found

that natural environment was the main motive for visiting Hallig Hooge for the majority of visitors. Most of the respondents did not feel disturbed by the quantity of other visitors they bumped into during their visit. Graefe and Moore [10] conducted a study in the Buck Island to measure certain indicators of quality in the visitor experience and probing the relationships between these indicators in which only few respondents reported that the encounters with others decreased their enjoyment. While 67% answered that other visitors had no influence on their experience and 33% noted that their enjoyment increased by encounters. It was revealed that perception of crowding is related to the level of experience, contact's location, expectations of visitors, and the number of other users contacted.

Needham et al. [29] conducted a survey in order to evaluate social and facility indicators at Kailua Beach Park on the east coast of Oahu, Hawaii. The findings revealed that swimmers/waders and sunbathers were the major activity groups. Overall satisfaction of visitors was extremely high (90% were satisfied). Moreover, most of the respondents were satisfied with majority of features, particularly with not having to pay a fee to visit the park, the clean ocean water, and the absence of litter. On the other hand, they were most dissatisfied with the bathrooms. Totally, 38% of users reported that they felt crowded by the amount of people encountered. The number of sunbathers and swimmers encountered (32%) was the main reasons for visitors to feel crowded. In this study, majority of visitors encountered fewer people than the maximum number of people they would accept observing and felt that the number of encounters did not affect their enjoyment.

In the study of Silva and Ferreira [30], in Portugal beaches, results showed that most of the people did not feel crowded in general, although the beach users stated that Tarquínio/Paraíso beach was slightly crowded by surfers in the water plane. The findings revealed that the presence of many people on the beach for majority of users increased their enjoyment, and it was not considered an important issue for them to escape the crowds. In order to identify negative and positive features of the beach quality regarding guide management and development of beaches, this study aims at analyzing beach users' perceptions of a variety of beach aspects based on the previous studies' findings. In future, this study investigates users' main preferred activities and their motivations to choose Cenang beach of Langkawi island.

3. The study area

South East Asia is currently one of the most important and fastest growing tourist destinations in the world with Singapore, Malaysia and Thailand in the top league possessing the basic resources for coastal tourism like sandy beaches, coral reefs, thousands of islands and a rich cultural heritage to complement coastal tourism development. The strong demand for coastal tourism in South East Asia comes not only from Europe, East Asia and Oceania but South East Asia itself [31].

Tropical islands with their insularity and unique combination of land forms and water and year round sunshine are particularly attractive for resort development [2]. The extraordinary beauty, cultural wealth, great variety of coastal areas, and duty-free zones have made Langkawi Island the preferred destination for many holiday makers in Asia and abroad, making coastal tourism an important tourism sector which employs a lot of people and generates

a noticeable share of gross value added. The main reason of choosing Langkawi Island as the research area is the growing number of tourists during past years. According to the official website of Municipal Council Langkawi Island, this Island is situated in North West of Peninsula Malaysia that is next to the Thai border and only 30 km away from mainland of state of Kedah. There are 104 beautiful islands that have made Langkawi Island as the jewel of Kedah. Since 2007, UNESCO has given the name of world Geo-park to this island. The most well-known beach of the island is Cenang beach, although there are some other famous beaches like Tengah beach and Datai beach, Cenang beach is the most popular and urbanized with suitable facilities and accommodations for beachgoers. This scenic beach is located in Western part of the Island and is covered by fine white sand and tall coconut trees and faces to the setting sun; therefore, the focus of tourists is in this particular beach.

4. Methodology

In order to identify beach users' profile (socio-demographic characteristics, main activity and the reason of their choice) and perceptions toward beach quality and crowding, the questionnaire survey was carried out to collect the data from a total sample size of 400 respondents who were on sandy area of Cenang beach (January–February 2014). To obtain data from respondents, the questionnaire was prepared in four parts: the first part for identifying beach users' profile (17 items); the second part for evaluating beach users' perceptions toward beach quality regarding physical and morphological, environmental, facility and safety, landscape and design aspects (38 items) in a 5 Likert scale range from very unacceptable to very acceptable; the third part for evaluating beach users' perceptions toward beach crowding (8 items) in 4 Likert scale range from not at all crowded to extremely crowded and one multiple choice style; and the fourth part that aimed to identify beach users' future decision for visiting the beach based on their perception of the beach quality and crowding (5 items) in 5 Likert scale range from strongly disagree to strongly agree. This survey was carried out during peak hours in January 2014, which is according to Langkawi Development Authority (LADA) considered as one of the months that have the most visitors in Langkawi Island by 235,560 visitors in January 2013. Based on the researchers' observation, beach goers desired to come to the beach during 12–3 pm (for using more sunshine), and 5–7 pm (to watch the sunset).

In a further step, by applying Roca [3] methodology, in order to calculate the available sand per person, we measured Cenang beach's sandy area surface by using GPS and counted people on the beach during the peak hours when the weather was pleasant with plenty of sunshine, gentle blowing of wind and a good temperature. The sandy area of the beach was 81,000 m² and the maximum number of beach users was 1273 persons. Individuals were selected through a systematic random sampling procedure. The starting point was chosen randomly, and a zigzag route was followed trying to cover the whole beach. The questionnaire was given to the person in every 15 steps on the way in order to ensure that there is a minimum separation of 5 m between respondents to minimize collective responses. The researchers tried to cover people with different nationalities, ages, sexes and different activities on the beach. Then, data were inserted in SPSS v.20 and the descriptive analysis was applied for all three parts of questionnaire.

5. Findings and discussion

As it is shown in **Table 1**, the respondents were divided into two groups in terms of nationality; 44.2% were domestic tourists and 55.8% were international tourists which were from all five continents with Chinese and German visitors on top of the list. The statistics showed

Origin	Percentage	Marital status	Percentage
Malaysian	44.2	Single	69.4
Others	55.8	Married	23.6
<i>Gender</i>	<i>Percentage</i>	Others	7
Female	52.8	<i>Educational background</i>	<i>Percentage</i>
Male	47.2	No formal education	1
<i>Age</i>	<i>Percentage</i>	Primary	0.7
≤ 24	49	Secondary	16.1
25–44	42.9	Tertiary	82.2
≥ 45	8.1	<i>Monthly income</i>	<i>Percentage</i>
<i>Number of travel companion(s)</i>	<i>Percentage</i>	≤USD1500	75.7
1–3	51.3	>USD1500	24.3
4–8	24.8	<i>Number of visit to Cenang beach</i>	<i>Percentage</i>
>8	16	1st time	45.4
Alone	8	2–5 times	38.1
<i>Number of hours spent at Cenang beach</i>	<i>Percentage</i>	>5 times	16.5
<1 hour	9.5	<i>Amount of money spent at Cenang beach</i>	<i>Percentage</i>
1–3 hours	43.1	< RM50	53.9
>3 hours	47.4	RM50–100	29.6
<i>Main activity of beach users</i>	<i>Percentage</i>	>RM100	16.5
Swimming	32.3	<i>Reasons of choosing beach</i>	<i>Percentage</i>
Sunbathing	31	Nature and landscape	31.4
Variety of beach games	10.3	Water cleanliness	19.3
Exercising	3	Facility	8.5
Water-based activities	17.9	Reputation	13.3
F & B	5.5	Safety	4.1
		Others	23.4

Table 1. Beach users' profile.

almost an equal representation of male and female respondents (47.2 vs. 52.8%). About 92% of respondents were below 45 years old. The majority of them were single (69.4%), and almost all of them attended at least secondary education (98.3%). Concerning their monthly income, 75.7% visitors claimed that they earn more than USD 1500 per month. More than half (51.3%) of the respondents were accompanied by 1–3 person(s) while about 41% had more than three companions and only 8% of them were alone on the beach. About 54.6% of recreationist visited Cenang beach more than 1 time and around 90% of them spent more than 1 h on the beach. The majority of beach users spent less than RM50 (USD16) while they were on the beach.

Three main activities of the beach users were in order: swimming (32.3%), sunbathing (31%) and water-based activities (17.9%). In terms of beach users’ motivation for choosing Cenang beach to visit, three major reasons were nature and landscape (31.4%), water and sand cleanliness (19.3%) and its reputation (13.3%). It is notable that the reason of choosing the beach is different in every context. For example, Botero et al. [32] compared beach users’ preferences in Caribbean and European settings. **Table 2** illustrates the differences of beach users’ motivations in Malaysia with two previously mentioned regions. Regarding to their experience, a vast majority of respondents (85%) were satisfied with their visit in overall, and they evaluated overall beach quality as good by 94%. In specific, beach users identified that they were satisfied with landscape (16.6%), relaxed-friendly atmosphere (16.6%) and good weather (16.5%). On the other hand, they were dissatisfied with crowdedness (23.6%), litter on sand (18.1%) and noise (16.5%), which Marin et al. [18] stated that litter and dirty sea are the major elements of dislike in many beaches. Finally, in response to a question which asked them if they recommend this beach to their family and friends, almost all the respondents (96.2%) gave positive answer.

5.1. Beach users’ perceptions toward beach quality

In this study, beach quality was analyzed in four different aspects: (1) physical and morphological, (2) environmental, (3) facility and safety and (4) landscape and design. In this study like studies of Roca [3] and Silva et al. [26], physical and morphological characteristics of the beach were highly appreciated by beach users while environmental aspects were the least scored. **Figure 1** shows the results for physical and morphological aspect of the beach that were the most highly scored by beach users, in comparison with other three aspects, for almost all the items. Items that are related to the beach dimensions (beach length and width)

Preference	Caribbean	Europe	Malaysia
1	Water and sand quality	Safety	Nature and landscape
2	Relaxed/friendly atmosphere	Water quality	Water and sand cleanliness
3	Facilities	Facility	Reputation
4	Security and safety	Scenery	Variety of activities
5	Family/friendly atmosphere	Litter	Facility

Table 2. Beach users’ preferences between Caribbean, Europe and Malaysia.

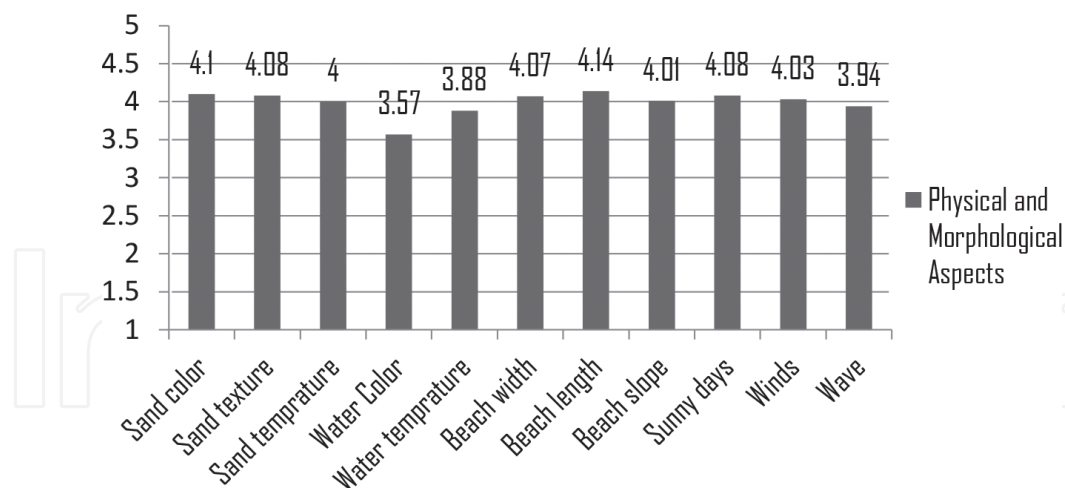


Figure 1. Physical and morphological aspect.

were scored highly, that indicates the presence of enough space for users to do different beach activities like exercising; moreover, vast beach dimensions (in this case approximately 2700 m length and 30 m width) increases the amount of available sand per person that may reduce the feeling of crowdedness among beach users. According to Roca [3], increase in sand availability makes beach users more satisfied. The sand of Cenang beach with its white color and fine texture positively affected the beach users. In addition, pleasant weather with average temperature of 28°C, the high number of sunny days with at least 8 h sunshine and the absence of intense waves and winds, which were highly appreciated by recreationists, made Langkawi Island and especially Cenang beach a desirable destination for holiday makers, in particular for those who are experiencing freezing winter days in their own countries. The respondents gave the lowest score for the color and temperature of water. This fact may imply that beach users expected more crystal clear and warmer water because of the popularity of the region for the mentioned characteristics. Yet, as coral reefs are absent and due to the high number of boats and jet skis that spill oil into the water in the vicinity of this beach, the color of the water was not appreciated much from the beach users' point of view.

Beach users' rates for environmental aspect are shown in **Figure 2** that is the least evaluated among four aspects that might represent the high sensitivity of beach users to this aspect. The most accepted items in this group were the presence of vegetation which is one of the natural environmental quality features and shows the nature conservation in this beach in spite of its urbanization. Based on researchers' observation, there were some amount of fish (e.g., dead jellyfish) and algae on the beach, but users evaluated the absence of fish and algae as satisfactory items. Respondents scored sand cleanliness items in terms of the presence of abrasive and waste material on the sand below the level of acceptance. On the basis of researchers' observation, although mechanical cleaning of the beach was performed once a day every morning, this kind of machine could only remove gross objects and left back sharp and small items. Later in the day, plastic bags, cigarette butts, cans and pieces of broken glass could be found easily everywhere on the beach. This fact may imply the inadequate effort of local management to maintain the beach cleanliness and control the pollution due to the high use

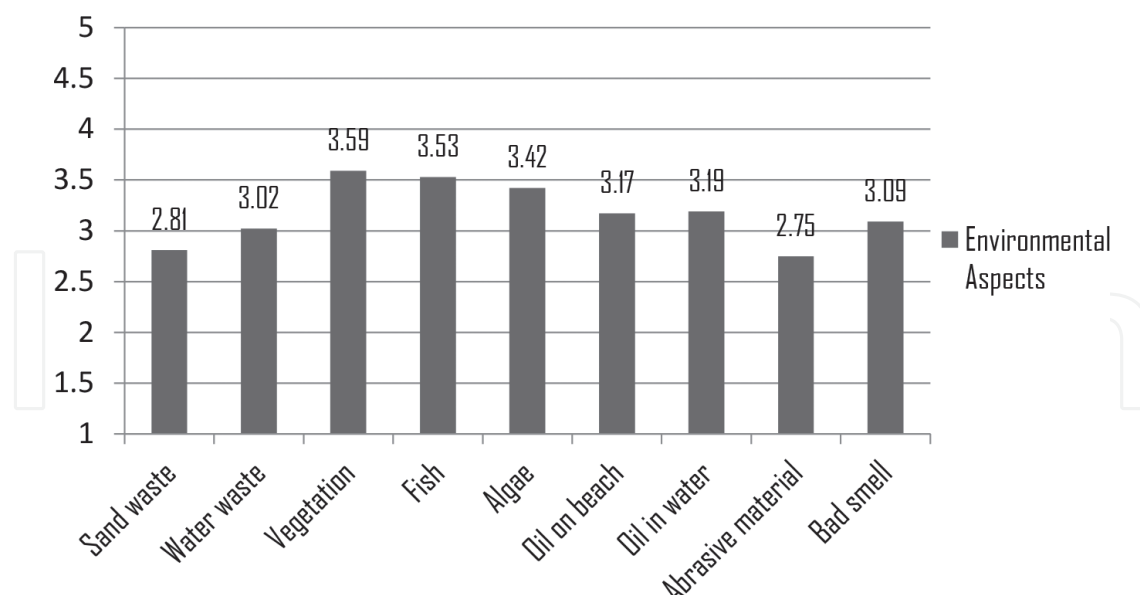


Figure 2. Environmental aspect.

level and the high number of jet skis, boats and cars that are the possible sources of oil that contaminate the sand and water in Cenang beach.

Figure 3 illustrates the mean scores of the items in facility and safety aspect. Results indicated that three most accepted items in this group were in order, access to the beach, restaurant/bar and deckchair/umbrella, as they are anticipated to be adequately and in good condition in resort beaches, there are 20 restaurants/bars and around 802 deckchairs/umbrellas which seems good enough for Cenang beach. According to Roca [3], in tourist beaches, toilet and shower facilities should be in good conditions, but in our study, three items of public toilet, shower/foot-wash and trash-bins received the lowest rank in this group that may be because of low number or poor maintenance of these facilities.

Researchers recorded only three public shower/foot-wash, two public toilets and seven trash-bins which seem to be few regards to beach dimensions. The probable reason for this deficiency can be due to the high number of beach accommodations and restaurants/bars, which mislead local authorities for providing more public services. Interestingly, 33.5% of respondents stated that security kiosk was absent; moreover, 30 and 26.8% reported that life-guard tower and signposting of dangerous areas were not present on the beach. According to Williams and Micallef [13], the safety and security aspects are vital in urban beaches, but the absence of security kiosk, inappropriate location of lifeguard tower and few numbers of signposts of dangerous areas, based on researchers' records and beach users' perceptions may reveal that beach managers and authorities did not or paid less attention to the aspect of security and safety of the beach. In general, parking areas are controversial issues in overcrowded and urbanized beach [3]. Hence, in Cenang beach, as it is situated in an island, majority of beach users use the public transportation; as a result, the presence or absence of parking was not considered as a vital issue for them and it was evaluated as acceptable.

Figure 4 shows the mean scores of users' perceptions of landscape and design aspect of the beach quality. Respondents had almost positive perceptions toward all items in this group, and

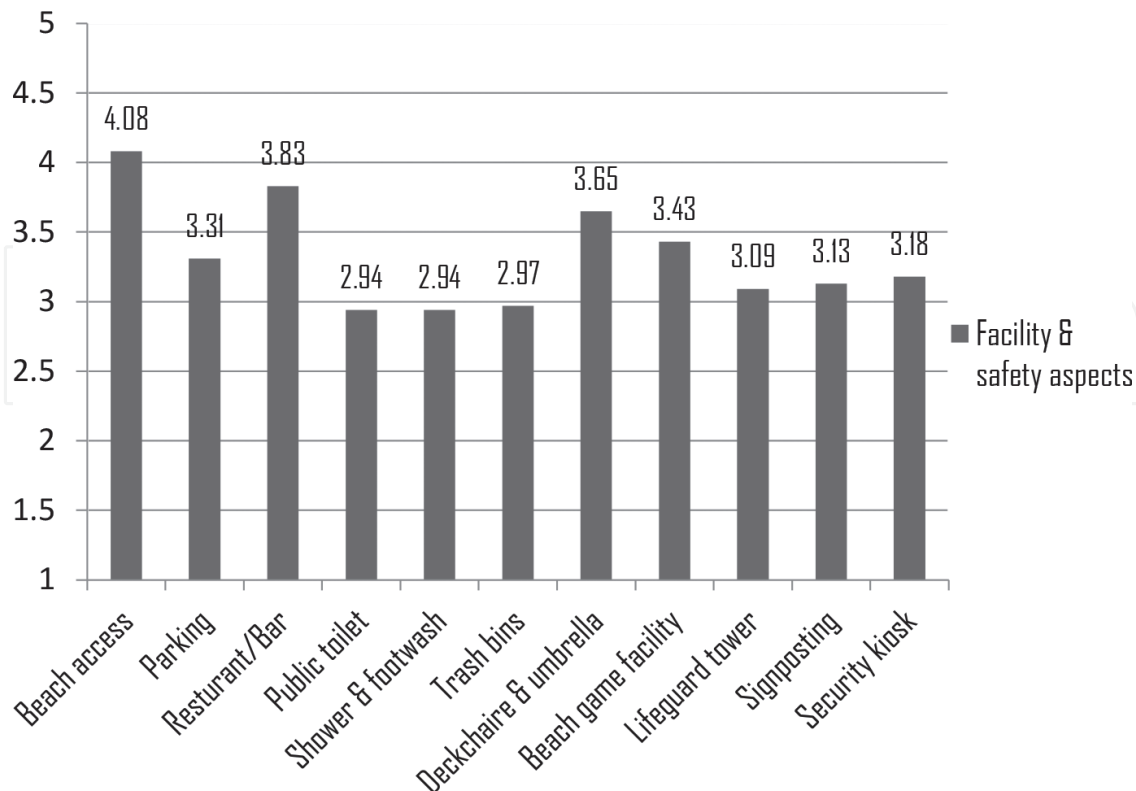


Figure 3. Facility and safety aspects.

in overall, it was the second most desirable aspect of the beach following physical and morphological aspect. Richness of landscape, comfort of beach, ease of access to the beach, and walkway on the sand were the four items that were valued highly and almost equal that show beach users desire to experience a comfortable recreational experience on the beach. Ease of access to the beach is due to the high number of access ways to the beach (five public pathways and numerous access through the private resorts and motels) and the high accessibility of Cenang beach which is close to the resorts and the most alive and active part of the island. Although Williams and Micallef [13] indicated that scenery is not a priority for users in urban beaches, the high score of the item of landscape richness indicates that users value the beautiful scenery in resort beaches like Cenang beach, as their first motive for choosing this beach to visit was also nature and landscape. Items of beach infrastructure (BBQ stuff, picnic table, sunshade and etc.) and signage were the least scored, and 16.5% of respondents stated that infrastructure was not present on the beach. This fact reflects the demand of beach users from local management authorities to provide them with these elements while designing an urban beach.

5.2. Beach users' perceptions toward beach crowding

Findings of analysis of beach users' perceptions of beach crowdedness are summarized in this section. **Table 2** illustrates the degree of crowding that respondents felt by different groups of beach users. About 70% of respondents felt crowdedness by total number of beach users and water-based activity participants; moreover, almost 65 and 55% of beach users reported crowdedness was felt by sunbathers and swimmers. On the other hand, about 80 and 50% of beach users stated that they did not feel crowdedness by fishers and boaters respectively.

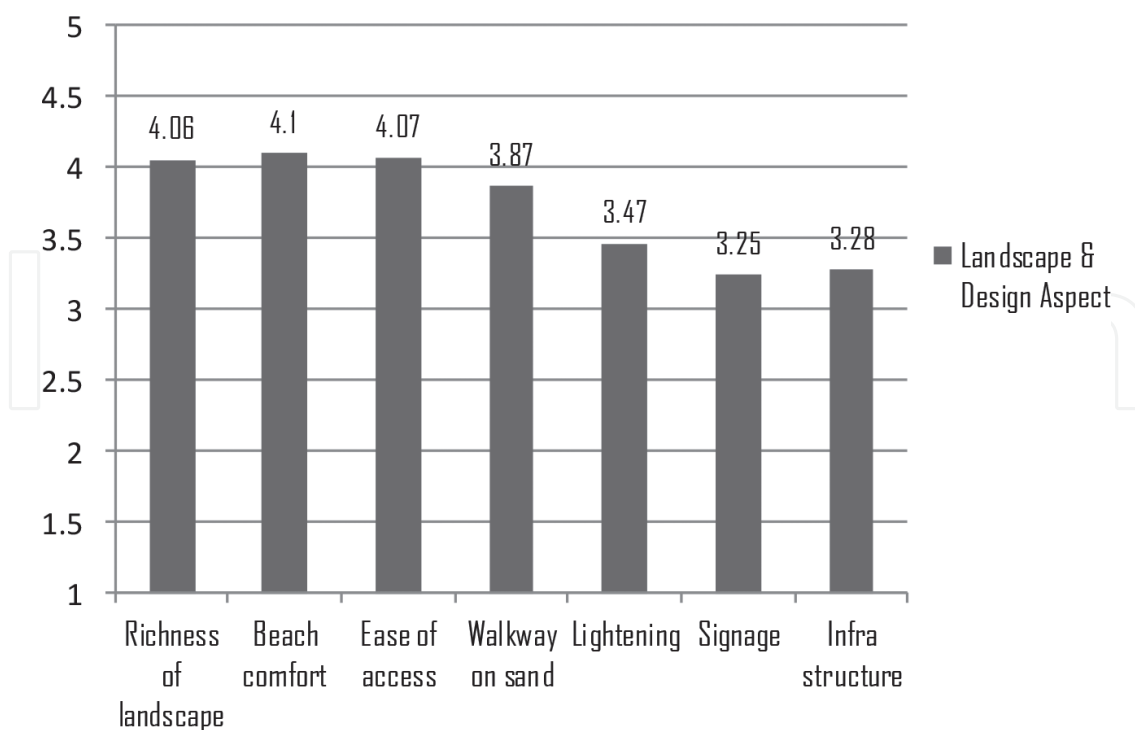


Figure 4. Landscape and design aspects.

In this study, the calculated available sand surface per user was about 63 m². According to Sousa et al. [33], the results of studies from different parts of the world show that suitable sand availability is 5–25 m²/user. The comparison between these numbers with the result of present study indicates that the sand availability in Cenang beach is much more than its global rate. Therefore, the beach users reported feeling of crowdedness is because of uneven distribution of facilities on the beach that cause beach users to concentrate in specific zones. It can be concluded that local management should implicate proper planning to de-concentrate facilities and services in order to avoid aggregation of beach users in particular spots in order to guarantee user's satisfaction during peak season. In this research, the result of analysis shows that the increased beach's sand availability does not necessarily reduce the degree of crowdedness felt by beach users.

Users were asked if the number of other people they have seen on the beach that day affected their enjoyment or not. The result shows that only 25.5% of respondents reported that their enjoyment was decreased by the number of other people, while the other 75% of them stated that their enjoyment was not affected or was increased due to the number of people they encountered on the beach. This finding is supported by the study of [10, 27, 29] that majority of respondents stated their enjoyment was not reduced by presence of other beach users. According to Needham et al. [29], although issues of crowdedness and high use levels are concerned in social aspect, crowding does not necessarily influence beach users' experience. It can be concluded that the perceptual carrying capacity of Cenang beach has not reached yet by this level of use.

5.3. Beach users' decision for their future trip

This section describes the future actions that respondents would take (based on their experience of beach quality and crowding) in case, if they could travel to Langkawi Island. Around

half of the respondents (48.1%) stated that they will come back to Cenang beach, but not during peak season. About 42% of users indicated that they will come back to Cenang beach but earlier or later in day when less people are there. It means that many respondents are willing to be temporarily displaced as a result of the conditions they experienced that day. Moreover, 28.8% expressed that they will come back to Cenang beach, but they will change the way they think about this area. Majority of beach users are unlikely to try a product shift through shifting how they think about the beach and decide that it offers an altered kind of experience compared to what they first believed. Yet, 26% agreed that they would change their destination to other nearby beach and 37.8% agreed to go to other parts of Langkawi Island. In other words, most of the respondents are not willing to experience a spatial displacement.

6. Conclusion

Although overall satisfaction of respondents in Cenang beach was very high, according to Needham et al. [29], global evaluations of satisfaction do not have much benefit for managers. Beach users were not satisfied with all aspects of beach quality. They were most satisfied with natural and physical characteristics of the beach and the most dissatisfied with environmental issues. These findings highlight the need of the attention and consideration of local managers and authorities. Nature conservation should be prioritized to other functions of the beach in order to assure satisfaction of users, as nature and landscape were the primary reasons for choosing this beach to visit. Moreover, based on beach users' perceptions, managers should pay more attention to beach sanitary and cleanliness issues and improve the facilities and services to the extent that there is no harm to the ecosystem. In specific, the result of this study reveals that beach users expressed the need for removing litter and abrasive material and install more public toilets, shower and foot-wash with better maintenance. In addition, more attention should be paid to beach's security and safety. For example, local management needs to apply security kiosks and adjust lifeguard tower in a better area.

Although available sand per person in Cenang beach was adequate, some respondents expressed that the beach was crowded. However, they reported that this feeling did not have much effect on their overall satisfaction; therefore, the perceptual carrying capacity of the area is not yet reached. This study confirms Roca [3] which stated that sand availability is not the only factor that increases users' satisfaction. Tourism is a family-based activity and especially people come in groups, so users of urban beaches expect the crowdedness and they can cope with it.

As tourism is a very fast growing sector in South East Asia, and Malaysia is one of the leaders in this field, tourism managers and local authorities should pay more attention to the tourists who are the end users of tourism product. Langkawi Island with its spectacular natural resources, especially its unique beaches has a great potential in tourism sector; therefore, any effort done for improving beach quality aspects along with consideration to the natural and heritage resources will increase the satisfaction of beach users. Consequently, this study attempted to fill the gap in knowledge about the importance of beach user's perceptions for beach managers in order to do better understanding of user's feeling about that particular region and help the managers to implement or improve their plans and strategies. The empirical findings of this research provide useful insight for the tourism marketers and local

managers to improve the current situation of beach tourism in Cenang beach and help them with the data to attract more beach tourists to that area while conserving the natural environment. Hence, by attracting more international and national tourist, the revenue will be increased and it benefits many other related industries.

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Author details

Hamed Mehranian¹ and Azizan Marzuki^{1,2*}

*Address all correspondence to: chik72@usm.my

1 School of Housing, Building and Planning, Universiti Sains Malaysia, Penang, Malaysia

2 Faculty of Education, Humanities, and Law, Flinders University, Adelaide, Australia

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