

Assessing Public Perception of Beach Quality for Ecotourism Development: A Case Study in Kokrobite Beach in the Greater Accra Region, Ghana

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Abstract

Tourism has become a major economic force in the world in recent times and seen as one of the fastest growing sectors of the 21st century. Over the years, tourism sector in Ghana has seen a drastic growth and ranked as the fourth foreign exchange earner for the country with a contribution of 6.2% to GDP in 2008 and 6.9% in 2011. However, tourism in Ghana still remains largely undeveloped and leaves much to be desired; with minimal support for tourism infrastructure. The objective of this paper is to assess the public preferences in selecting a beach and their perceptions of the quality of Kokrobite beach to recommend some management strategies and policies toward tourism development. A reconnaissance survey was conducted, followed by a survey of 150 beach users to collect relevant data. The study revealed that the preference for Kokrobite beach is influenced by specific characteristics such as less noise, security and landscape. Most of the tourists were satisfied with the availability of restaurants and bars, accommodation, noise level and access to the beach. They were, however, not satisfied with the level of sanitation and toilet facilities. It is recommended that the conservation of the natural environment, sanitation and an improvement in toilet facilities should be treated with utmost priority by managers of the beach to promote its patronage. Fencing of the beach was also recommended to prevent intrusion by humans as well as animals. Sea defense is also recommended to be built to check erosion, and lighting systems provided to promote the use of the beach at night.

Key words: Environment, Greater Accra, landscape, Kokrobite beach, tourism and sanitation.

1. Introduction

Tourism has become a major economic force in the world in recent times and seen as one of the fastest growing sectors of the 21st century (Aniah et al, 2009; Dwyer and Spurr, 2012 and Tunde, 2012). The rapid growth of the industry is linked to the economic, social, cultural and environmental benefits of a country. Studies show that economic advantages are the main driving force for tourism development.

The role of tourism to the economy of Ghana cannot be over emphasized. Tourism is becoming one of the most promising sectors of Ghana's economy, ranking as the third highest foreign exchange earner until September 2007 (GIPC 2013). Over the years, the sector has seen a drastic growth (Figure 1a and b) and ranked as the fourth foreign exchange earner for Ghana with a contribution of 6.2% to GDP in 2008 and 6.9% in 2011 (GIPC 2013). The potentials for reducing poverty and wealth creation for the people are enormous.

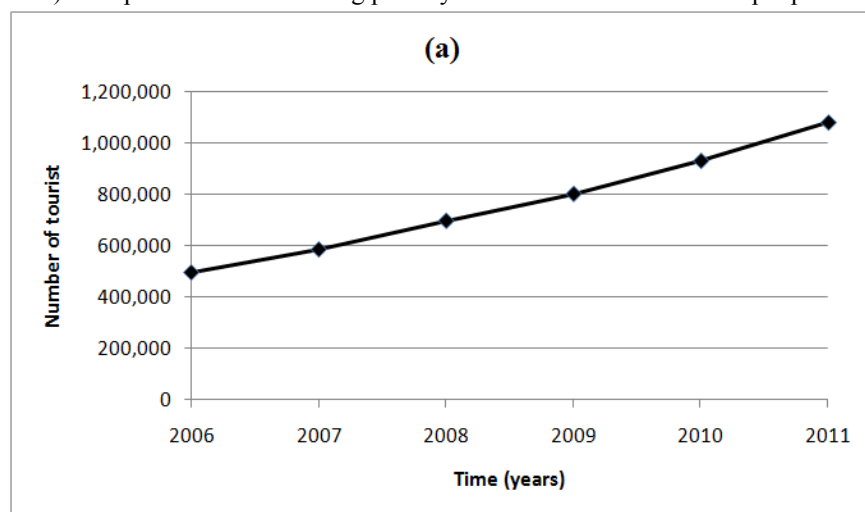


Figure 1a: Tourist arrivals in Ghana (From Ghana Tourist Board cited in GIPC 2013)

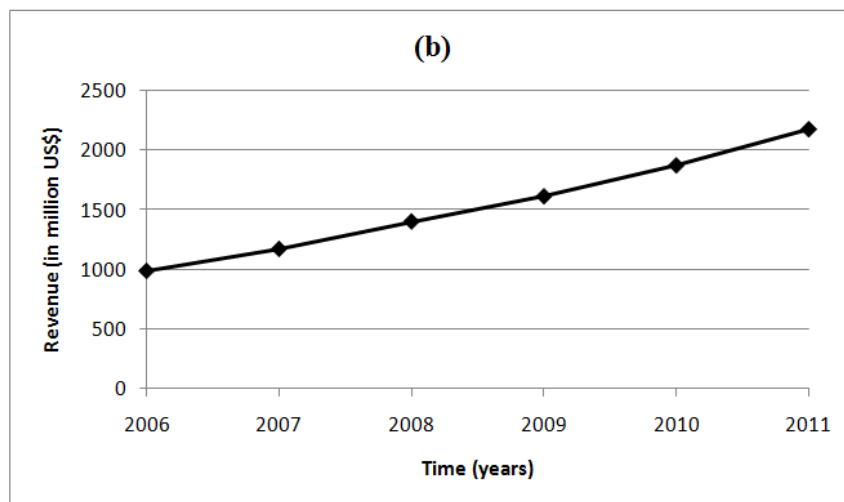


Figure 1b: Revenue generated per year (From Ghana Tourist Board cited in GIPC 2013)

However, tourism in Ghana still remains largely undeveloped and leaves much to be desired, with minimal support for tourism infrastructure. Ghana is endowed with beautiful beaches in all her four coastal regions, namely Western, Central, Greater Accra, and Volta Regions. These beaches are ideal for all water sports, including surfing, water skiing and swimming. Some of the beaches include La pleasure beach, Coco beach, Busia beach resort, Labadi and Kokrobite beach are well patronized. Although beaches in Ghana attract a lot of tourists who visit for entertainment and relaxation, they are being used by the local communities as places of public convenient and rubbish dumping sites with little infrastructure development. The Greater Accra Region of Ghana offers a considerable diversity in natural scenery, as well as in rich cultural traditions. Prominent among the region's natural scenery is the Kokrobite beach, which is 25km west of Accra and is a unique tourist attraction because of its secluded nature and serene atmosphere, coupled with the cultural and proverbial warmth and hospitality of the people. Over the years, the natural scenery at the beach has reduced as a result of human activities. As the demand for tourism increases, the demand for quality coastal environment and facility for recreation also increases.

In order to satisfy tourist demand, there is the need to have a set of instruments to evaluate beach quality in order to manage both environmental degradation and recreational uses.

A number of authors (Villares 1999; Villares et al. 2006; Nelson et al. 2000, Priskin, 2003) have reported the need to consider beach user's preferences, opinions, concerns and demand to inform management for proper delivering. The understanding of how individuals perceive beach quality is very important for beach managers to engage a particular strategy or policies towards integrated coastal management (Roca and Villares, 2008). The improvement of infrastructure and services are crucial in tourism development (Aniah et al., 2009).

Little is however, known on the public perception of the quality of Kokrobite beach.

It is against this background that it has become necessary to assess beach user's perception on the quality of Kokrobite beach in order to propose ways to improve on the quality of the beach to promote its patronage.

2. Assessment of the landscape

Landscape plays an essential role by providing quality environment that affects the economic well-being, as well as the physical and psychological health of mankind (Huda 2012). It also helps to conserve and preserve natural resources such as plants, animal species and water bodies in the environment that support tourism. As such, suitable landscaping is an important component of any tourist facility development (Linkorish and Jenkins, 2012) and is essential in order to provide an attractive environment for visitors.

Landscape survey seeks to determine problems or constraints and potential or opportunities offered in an existing condition on a site (Laurie, 1986). This includes the environs beyond the specific boundaries of the site, which affect the site one-way or the other (Motloch, 1991).

Landscape survey forms the basis of any landscape scheme. Information obtained with respect to problems and opportunities offered would enable the designer to recommend purposeful changes that will suit users of the site.

An environmentally sound landscape begins with a good design based on a solid assessment of the site (Black, 1994). It requires a rational systematic approach and for this reason, it is helpful to divide the many and varied characteristics of the site into broad categories, which include related aspects such as physical, visual and social surveys (Robinson, 1992).

The knowledge of existing access and circulatory route and the volume of traffic facilitate the design of the

landscape with unimpeded smooth routes, connecting different places and facilities on sites.

3. Methodology

3.1 Study area

The study was conducted at Kokrobite in the Ga Rural District of the Greater Accra Region. Greater Accra is the smallest region in Ghana in terms of land size, but the most densely populated region. It has a total land area of 1,500 square miles or almost 400,000 hectares. The region lies in the southeast of the country between latitude $05^{\circ} 29' N$ and $06^{\circ} 14' N$ and longitude $0^{\circ} 23' W$ and $0^{\circ} 41' E$. The total population of the region is estimated at 4,010,054, with 1,938,225 males and 2,071,829 females. Kokrobite is located at the Ga West Municipal Assemble which have a total population of 262,742 (Ghana 2010 Population and Housing Census). The natives of Kokrobite are Gas. Its beach has a shoreline of approximately $236,902.27m^2$ and is predominantly a fishing community. The sea offers ready access to outlying fishing communities, who use canoes and small boats for fishing. Fishing is a major economic activity, while swimming and sunbathing are recreations that largely attract tourists to the beach.

The area has a mangrove located at the middle of the coastline, and has a relatively flat landscape (topography). The area has low vegetation cover, which has exposed the land to erosion. The study area is a coastal savanna zone with two defined rainy seasons. Figure 2 presents rainfall in the area for the period 1993- 2002 (10 years). The major rains start in March and end in July, with the peak in June. The minor rains begin in September and end in November. The annual rainfall for the area is 730mm. The maximum temperature for the area is $32^{\circ}C$ with a minimum of $24^{\circ}C$.

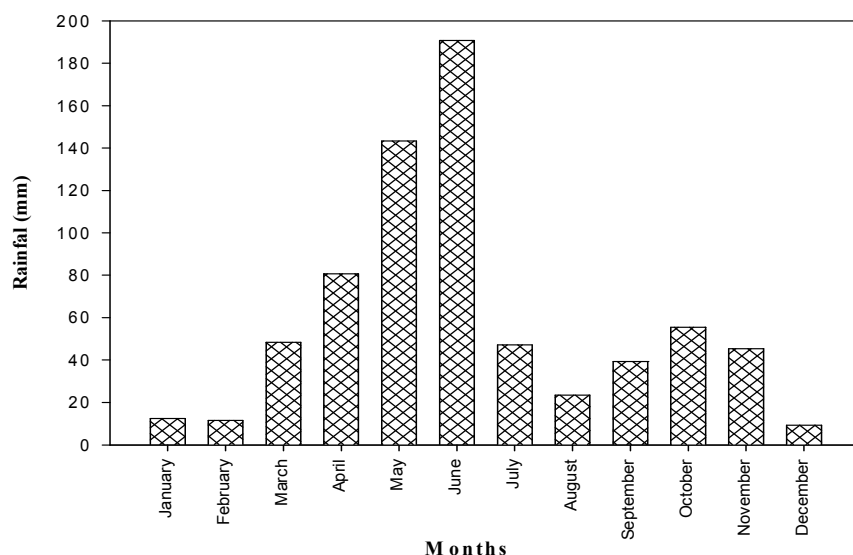


Figure 2: Mean monthly rainfall (mm) in Accra (1993-2002)

3.2 Survey

A reconnaissance survey of the study area was conducted, after permission was sought from and granted by the chief and elders. This was followed by several visits to the site to administer questionnaires and collect data. A total of one hundred and fifty questionnaires were administered in 2004 and 2005. Out of the 150 interviewees, 90 were tourists while 60 were local beach users. Structured and semi-structured questionnaires were designed and administered to collect information on public perception of the quality of the beach, structures and facilities and the need to improve on the landscape of the area. A focus group discussion was also held with the opinion leaders and chief of Kokrobite as well as some residents.

3.3 Statistical Analysis

Both quantitative and qualitative data obtained from the administered questionnaires were analyzed statistically using frequency, percentages and pie charts. SPSS version 10 was used for the analysis.

4. Results and Discussion

4.1 Respondents' characteristics

Analysis using SPSS showed that males predominate in the sample representing 60.1% while the females were 39.9%. Majority of the respondents were within the ages of 20-30 years, accounting for 48%. The age group 31-40 years accounts for 36.2% and the age group 41 – 50 accounts for 11.8%, with year group 51-60 years accounting for only 4%. The survey reveals that majority of the respondents (43%) had tertiary education, with

only 27% and 24% having secondary and primary education respectively while 16% had no formal education.

4.2 Preferences for choosing a beach

Figure 3 presents the results on preferences or factors beach users consider when selecting a beach. Respondents were asked to value a set of items, from 1 (minimum satisfaction) to 10 (maximum satisfaction) with 5 as the acceptable level. The items set was put into three groups; namely facilities and services, environmental and physical characteristics. From the chart below, beach users see noise levels and security conditions as the most desirable condition for selecting a beach, as these scored the highest value of 9. They indicated that, because Kokrobite is at the outskirts of Accra, the level of noise is low and security issues such as physical attack and theft issues are very low. Most interviewees said they come to the beach to relax their body and mind and hence like quiet beaches. As the population of the city of Accra increases with an increase in vehicular traffic, noise pollution is becoming a major source of pollution and nuisance. From the results, the next important factor is the security issue, rating the next highest value, rated at 8.6 by tourists and 8 by locals. This is contrary to the report of a study done by Breton et al (1996) in Barcelona and Roca and Villares (2008) in Costa Brava which indicated that health and safety issues and clean water respectively are the top important factors beach-users consider when selecting a beach. In addition, Nelson et al (2000) also found that in 44 Welsh beaches, the scenery of the place, followed by beach safety and water quality were the top three most important factors for beach users when selecting beaches. The difference in this result compared to the others could be due to the fact that security has become a big cause for concern to many people, due to reported incidence of attacks at beaches. Beach users are sensitive to noise levels and security rather than issues concerning aesthetic, sand and water quality. Thus, to increase tourism development, noise levels need to be reduced at beaches and security improved.

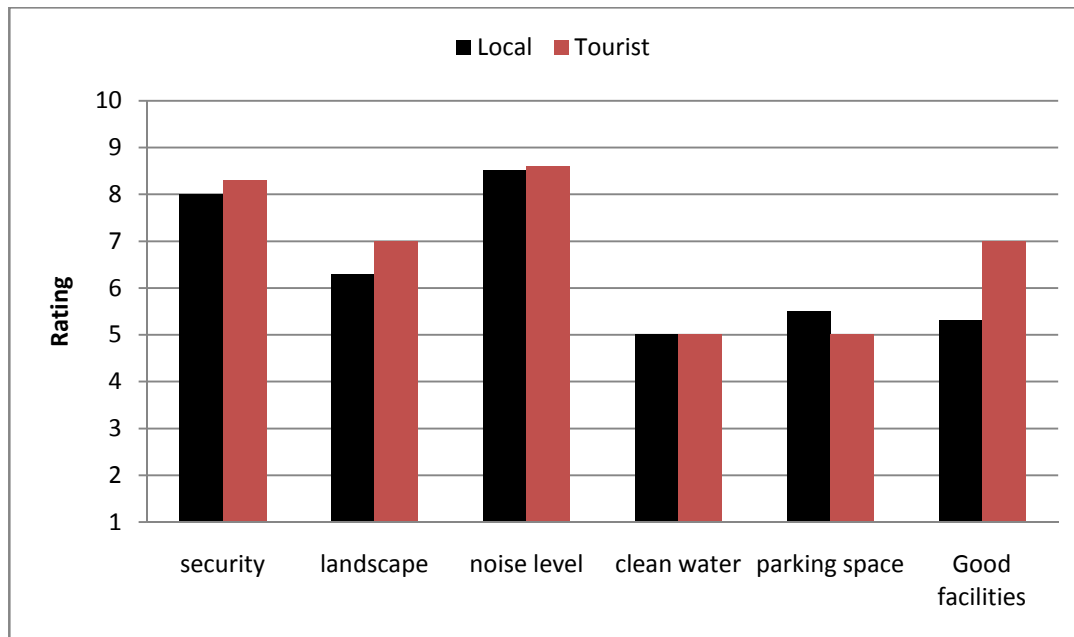


Figure 3: Factors influencing the preference of tourist to a beach

4.3 Facilities and service conditions

Figure 4 presents respondent view on facilities and services at the beach, and a need to improve on them to increase tourist patronage. From the results, beach users rated restaurants and bars as the most satisfying facilities and services, with a rating of 8; followed by accommodation and access to the beach. They were, however, dissatisfied with the toilet facilities, litter bins and the packing space, which received the lowest rating of 4. They complained that there are virtually no toilet facilities and litter bins at the beach. An observation of the beach confirms this.

The study has revealed that the status of the beach has been declining over the years, partly due to a lack of social amenities, especially infrastructure as well as poor maintenance culture. Sanitation is a major problem due to lack of toilet facilities in the community, forcing residents to use the beach as a public place of convenience. Majority of the residents representing 50 percent defecate at the beach, while 30 percent go to the nearby bushes and a mangrove near the beach. Only 20 percent have toilet facilities at home. This affects the quality of water, as some of the human waste is washed into the sea polluting the water and making it unsafe for use.

The low score of packing space is a reflection of beach users' dissatisfaction of it. Beach users complain of the difficulty of getting a place to park, as there is no space designated for it, probably due to poor planning and high

cost of land in the area.

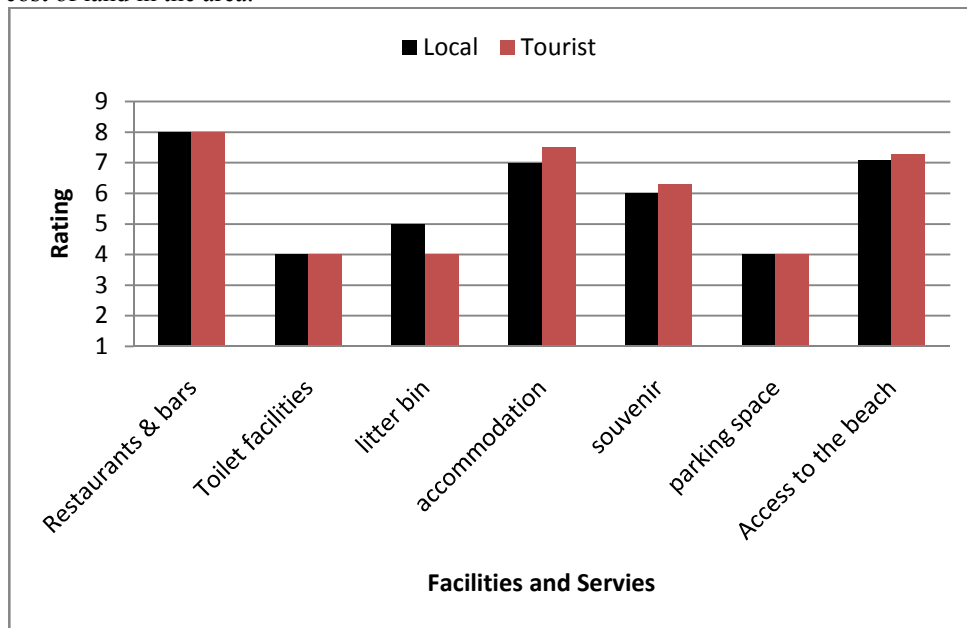


Figure 4: Public perception of the quality of facilities and services at Kokrobite beach

This result is in line with a research report by Roca et al (2009) in Costa Brava, where beach users evaluated the quality of the beach below acceptable level (with value below 5) for items such as toilet facilities and their maintenance, shower facilities and their maintenance and parking space. To improve on the beach patronage, the respondents indicated the need to provide litter bins, toilet facilities, as well as parking lots. According to Transportation and Land Use Coalition (2002), the opportunity cost for parking space can be quite high, as each on-site parking space can reduce the number of new housing units or other users by 25 percent or more. However, lack of parking space greatly affects patronage of public facilities such as malls, beaches, and banks among others.

Beaches are sometimes overcrowded, especially during festive seasons (Roca and Villares, 2008), resulting in competition for a very limited space. Therefore, there is a need for beach planners and or managers to consider beach users' diversity and the seasonal demand for these facilities for efficient planning.

4.4 Perceived environmental quality of Kokrobite beach

Figure 5 presents results of the perceived environmental quality of Kokrobite beach. Most of the environmental issues were rated to be at the acceptable level with noise level rated the highest satisfactory level at 8.6. There were, however, differences in the view of beach users in terms of the locals residents and tourists. Beach users who are not resident of Kokrobite were more sensitive to vegetation and general landscape of the place and gave a lower rating to these items, compared to their counterparts who are residents of the beach. They could not, however, make a connection between the surrounding environment and the landscape of the resort.

The locals (resident beach users) and the tourists were both satisfied with the level of noise at the beach, with the tourists giving a slightly higher rating for noise level than the resident users. This could be due to the fact that most of the tourists came from bigger cities and communities where noise levels are higher as a result of commercial activities.

The state of sanitation at the beach had the highest degree of dissatisfaction, with the lowest rating of 4 from the tourists and 3 from the local resident users. The nearby areas of the beach are polluted with solid waste such as polythene bags and human excreta, because the local people are using those areas as a place of public convenience and a dumping site for refuse.

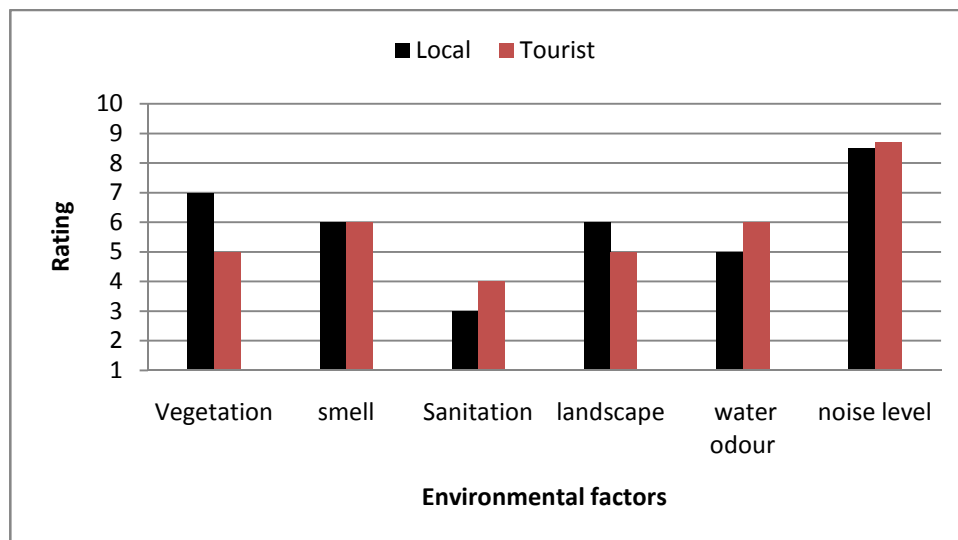


Figure 5: Public perception of the environmental quality of Kokrobite beach

The study also revealed that the community lacks refuse dumping site and the residents are therefore compelled to dump waste generated from the community into the sea and the nearby bushes. Forty five percent (45%) of the respondents dispose of refuse into the sea, whereas fifty five percent (55%) dispose of their waste in a nearby bush. These account for the insanitary nature of the environment around the beach. Interview with residents indicates that they are not happy with the status of the beach. However, they have limited capacity to provide bins and toilet facilities for themselves.

Another major problem pertaining to the site that was observed was the lack of sea defense structures, which make the place vulnerable to erosion. The resident beach users rated sanitation lower than visitors or tourists because of their understanding of its origin. Similar findings were reported by Roca et al, (2009) in Costa Brava, where sanitation related items received the lowest ratings. The lower ratings of local residents on the sanitation of the beach could be due to a strong relationship with the territory, as they perceive the level of tourism as an increasingly disturbing factor as argued out by Cihar and Stankova (2006). In concluding remarks, Roca et al (2009) stated that environmental attitudes of beach users can be promoted if information on their perceptions can be used to develop awareness campaigns, to improve information policies, and to enhance certain unknown elements (e.g. the natural or cultural values of a beach).

4.5 Perceived physical characteristics of Kokrobite beach

Results of the physical characteristics of the beach (Figure 6) revealed to be the most satisfied features of the beach with high rating with the exception of erosion. There were however different rating of both the resident beach users and the tourist. The beach users were dissatisfied with the level of erosion at the beach. They complained that some houses close to the sea are virtually hanging which poses danger to the inhabitants as well as beach users. Observation of the beach shows serious erosions with some houses close to the sea almost hanging.

The beach users were satisfied with the types of rocks at the beach, the slope of the land into the sea, stating that the gentle nature of the land makes the beach safe for swimming. This result is in line with the finding of Roca and Villares (2008) who reported that beach users at an urban and semi-natural beach were very satisfied with the physical and morphological aspect of the beach. The wave current and wind at the beach were rated satisfied. However, beach users explained that towards late evening the wave current builds up and poses danger to swimmers. They suggested that intensive education and alertness of beach users be made on the time of usage of the beach to save lives. The characteristics of the sand were much appreciated as this item influenced the perception of the beach users. Some indicated that the clean nature of the sand makes them to have sand bath for relaxation. Although respondents gave impressive views of the attributes of the beach, none of these factors however influenced their preference of selection of the beach as shown in figure 3.

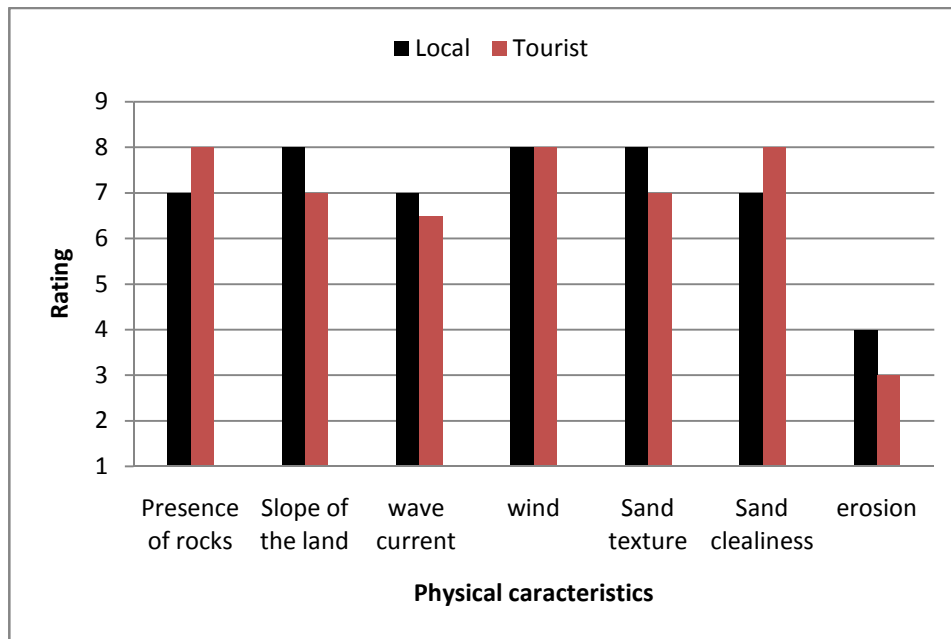


Figure 6: Public perception of the physical characteristic of Kokrobite beach

4.6 Economic impact of tourism on Kokrobite inhabitants

An interview and focus group discussion with the local people, chief and elders of the community (Kokrobite) revealed that leaders are charged with the responsibility of supervising the beach for effective management. They indicated that the leaders usually mobilize the people in the community in the form of communal labour, to clean up the beach when the need arises.

The research also revealed the major economic role of the beach in the livelihood of the people. Economic benefits derived from the beach include revenue generation from the sale of fish and souvenirs, as well as from the hotels and tourists. Other benefits include food in the form of fish, as well as sand for building. The sea also serves as a means of transport to neighbouring communities such as Oshiyie and Amuade. The major activities carried out at the beach include fishing, entertainment and the transport business. The study revealed that majority of the residents (40%) derives both income and food in the form of fish from the sea. Twenty-five percent (25%) obtained only income through the sale of fish products, other food items, African wear and handicraft production. Only 15 percent derived food in the form of fish while 12 and 8 percent benefits in the form of entertainment and all three respectively. This thus improves on the livelihood of the people as the beach serves as a source of employment for the local people. In order to promote the economic benefit of coastal tourism, it is important to identify and promote specific enterprises that local people can undertake.

4.7 Landscape and Ecotourism Potentials of the Beach

An observation of the area revealed the availability of large land size which is adequate for landscape development to attract tourists. The location of the beach is ideal for the creation of large outdoor recreation facilities due to its isolation from the busy city, easy access and quietness of the place. In addition, the flat and plain nature of the site offers little or no effort for excavation. Hence, high costs for ground modeling will not be necessary.

Conclusion

Beaches serve as recreational centers and icon of mass tourism in most coastal countries. Hence, the strategies for managing them require much effort. The study was to assess public perception on the quality of Kokrobite beach for improvement towards tourism development. The items set was put into three groups; namely facilities and services, environmental and physical characteristics. The study revealed that most tourists were attracted to Kokrobite beach due to the quietness, coupled with relatively high level of security. These parameters scored the highest value of 9. Respondents indicated that security is not a major challenge at the beach, because it is located outside the busy centre of Accra. Most interviewees said they come to the beach to relax their body and mind. The beach users were highly satisfied with environmental aspect such as noise levels, the landscape status, amount of vegetation, facilities and services such as restaurants, bars, accommodation and access to the beach. Beach users were, however, not happy with the sanitation level of the environment in terms of toilet facilities, and the availability and distribution of litter bins. Lack of parking lot is also another major problem identified by the respondents. There were also differences in terms of levels of satisfaction between the local beach users and the tourists for some parameters. In order to attract more tourists to the beach, there is the urgent need to improve

on these facilities.

Policy implications are that conservation strategies need to be prioritised in natural environments, while interventions are made to improve the functions of the beach in order to increase patronage at the same time preserve the natural resources. The beach environs can be beautified by the use of soft and hard landscape elements to attract tourists and visitors. This will directly boost investment and or employment opportunities for the local people, as some indicated that they go there for entertainment, while others said they go there for entertainment and business.

Natural and man-made elements such as plants, flowers, rocks, garden chairs among others will improve the beautification of the beach. Trees and shrubs can be used along pathways to direct as well as provide shade. The involvement of landscape experts in the improvement of the beach is thus important.

Recommendations

It is recommended that the study area be secured by fencing with metal chain link to the height of about 3m to prevent intrusion and encroachment by both, animals and human beings. The beach should also be provided with gates where there will be clearly defined entry and exit points to control vehicular and human traffic at the site.

The creation of a sea defense structure is necessary to control erosion at the site. Unwanted vegetation should be cleared and the space properly used for landscape development. To modify the microclimate and make it more hospitable, more trees and shrubs should be planted.

For aesthetic and health reasons, hygienic conditions such as the provision of toilet facilities, litter-bins and proper disposal of refuse should be maintained in and around the site.

The entire stretch of the Kokrobite beach should be provided with lighting systems to ensure maximum security and also make the place accessible to tourists at all times. Playing fields for lawn tennis, volleyball, basketball and football for both the young and old would make the beach more interesting to users.

Provision of summer huts for shelter and socializing would be most appropriate. Garden seats should also be placed at vantage points for relaxation. Walkways should be provided to connect the entire beach for easy access and circulation. Private investors should be encouraged to invest in the development of the beach.

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References

- Aniah, E. J., Eja, E. I., Otu, J. E., and Ushie, M. A. (2009), Resort Potentials as a Strategy for Sustainable Tourism Development in Plateau State, Nigeria. *Sustainable Development*, 2(2), 73-79.
- Breton F, Clape's J, Marque's A, Priestley., G. K (1996), The recreational use of beaches and consequences for the development of new trends in management: the case of the beaches of the Metropolitan Region of Barcelona (Catalonia, Spain). *Ocean & Coastal Management* 32(3), 53 - 80.
- Black, R.J., (1994), Horticulture Society Journal, Florida.
- Cihar, M., and Stankova, J. (2006), Attitudes of stakeholders towards the Podyji/Thaya River Basin National Park in the Czech Republic. *Journal of Environmental Management*, 81, 273-285.
- Dwyer, L., and Spurr, R. (2012), Tourism Economic Summary. Retrieved from www.crcetourism.com.au Accessed on 1st December, 2012.
- Ghana (2010) Population and Housing Censu, Statistical Department, Accra.
- Ghana Investment Promotion Center (GIPC) (2013), Investing in Ghana's Tourism Sector, Sector overview. <http://www.gipcghana.com/invest-in-ghana/sectors/tourism/investing-in-this-sector.html>. Cited on the 29th April 2014.
- Huda, N. (2012), Importance of Landscape. Retrieved from www.slideshare.net/senggora/importance-of-landscape-presentation. Accessed on 3rd December 2012.
- Laurie, M. (1986), An introduction to Landscape Architecture. 2nd Ed, Elsevier Science Publishing Company Inc, New York.
- Motloch, J. L. (1991), An introduction to Landscape Design. Published by Van Nostrand Reinhold. New York.
- Nelson C, D, Botterill., A.T. Williams. (2000), The beach as a leisure resource: measuring beach user perception of beach debris pollution. *Journal of World Leisure and Recreation*;42:38-43
- Priskin, J. (2003), Tourist perceptions of degradation caused by coastal nature-based recreation. *Environmental Management*; 32(2):189 – 204.
- Transportation and Land Use Coalition, (2002), "Housing Shortage/Parking Surplus. Silicon Valley's Opportunity to Address Housing Needs and Transportation Problems with Innovative Parking Policies." Oakland, CA: Transportation and Land Use Coalition and Nelson/Nygaard Consulting Associates. www.transcoalition.org/southbay/housing_study/index.html.
- Robinson N.H., (1992), Planting Design. Gower Publishing Company Limited, Aldershot.

- Roca E and M., Villares. (2008), Public perceptions for evaluating beach quality in urban and semi-natural environments. *Ocean & Coastal Management* (51), Pp 314 – 329
- Roca, E., M., Villares, M.I. Ortego. (2012), Assessing public perceptions on beach quality according to beach users' profile: A case study in the Costa Brava (Spain). *Tourism Management* 30: 598–607.
- Tunde, A. M. (2012), Harnessing Tourism Potentials for Sustainable Development: A case Study of Owu Waterfalls in Nigeria *Sustainable Tourism Development in Africa 14* (1), 119-133.
- Villares M. (1999), *Percepció dels Impactes Estètics i Mediambientals de la Regeneració de Platges*. Ediciones UPC, Forum Virtual, Barcelona, pp 465.
- Villares, M., Roca, E., Serra, J., Montori, C. (2006), Social perception as a tool for beach planning: a case study on the Catalan Coast. *Journal of Coastal Research* 48: (1) 18- 23. Special Issue.

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