

Sustainability, Tourism and Africa: A natural link

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The 'romance' of mining in light of tourism: A case study of soapstone in Tabaka, Kisii County, Kenya

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Introduction

Mineral products are at the core of today's civilized world that we live in. The manufacturing sector, the high technology industries and even the resource industries are all dependent, in one way or the other on the mining industry. According to geological surveys there is approximately 22 billion tons of soapstone in the Kisii Hills (Kenya Geological Survey, 2008). Mining the stone is all done by hand with hammers, picks and chisels. The stones are made into the approximate shapes with machetes, axes and handsaws. The stones are then carried by manpower out of the mines. Different mines have different colours and densities of stones. The carver will often go down into the mine himself to find what he needs. In order to achieve national and industrial development, any country including Kenya requires processing their minerals.

In the past century, Kenya has become renowned for its soapstone (called Kisii stone in Africa) carvers (http://www.kisii_soapstone/kisiisoapstones/kisiionline.com). Soapstone carving didn't catch on in Kenya until the 1940s, after Indian labourers arrived to build the railroad from the Kenyan coast to Uganda (Mong'are, 2006). Soapstone is actually a variety of talc, a soft mineral of a soapy feel and a greenish, whitish, or greyish colour, usually occurring in foliated masses. It is a hydrous silicate of magnesia and forms by alteration of these magnesium-rich rocks and minerals at low temperatures and high pressure. Rocks consisting mainly of talc are known as steatite or soapstone, and are soft enough to carve into various shapes. In fact, soapstone is the softest mineral on the Mohs hardness scale (soapstone being a 1, or the softest and 10 being the hardest, i.e. diamond). Kisii stone typically exhibits coloration ranging from creamy white to yellow to red to dark grey, depending on the mineral(s) present in the stone.

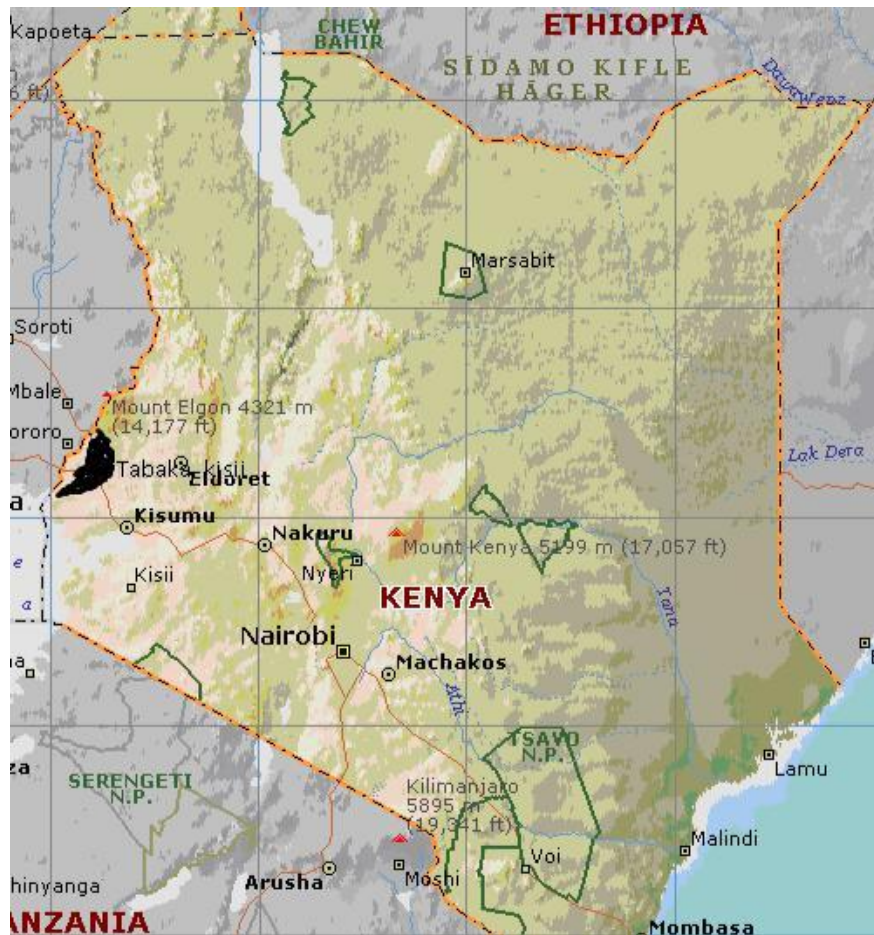
The soapstone in Kisii stone is only available in the Tabaka Hills of Western Kenya and the stone is carved by the community. The stone is mined using hoes, picks, axes, shovels, iron rods and pangas (which are large knives used to chop the stone into smaller pieces). Most of the carvers are not professional carvers, but are actually subsistence farmers who carve mainly in the evening and in the dry season. Soapstone has created some of the most beautiful images in the world. These images have been continuously sold to the local communities sometimes at a very low price. Although some of the Kenyan arts including the chiondo, kikoi and other carvings are instant tourism attraction, this same has not been said of the soapstone mines in Kisii. This study was therefore designed to explore the unexpected the 'romance' of soapstone mining and tourism in Kisii, Kenya.

Methodology

Study area

The study was conducted in the Tabaka areas of the Kisii district (Figure 1). The district shares common boundaries with Masaba South district to the north, Rongo district to the west, Trans Mara district to the south and Gucha district to the east. The district covers an area of 200.2 km² and is located between latitudes 0°30' and 0°58' South and longitudes 34°42' and 35°05' East (Kisii District Development Plan 2008-2012) and has a population of 150,049 people (KNBS, 2010). The area contains numerous soapstone mines that are exploited by the local community members.

Figure 1: Map of Kenya, identifying the location of the study area. The shaded region represents the geological survey projections of the area under soapstone mines (Kenya Geological Survey, 2008)



Study design

This was a cross sectional survey and involved investigations regarding the association between soapstone mining and tourism.

Study population

The study population consisted of adults aged above 18 years in the Kisii soapstone mining industry and tourist visiting Kisii. Currently there are a total of 1200 people working in the Kisii soapstone mining area and the number of tourists visiting the area is currently estimated at 200 per year (KTB, 2010)

Sample size and its determination

To determine the sample size, the Yamane (1967) formula was used:

$$n = \frac{N}{1 + Ne^2}$$

Where:

n = required responses

N = Sample size

e² = error limit, e = 0.05

Placing the formula for the Kisii District (N = 1200) yielded a sample size of 300 for the local community members and 133 tourist. In the final analysis, only 221 questionnaires for the local community members and 71 from the tourists were found useful translating to response rates of 73.7% and 66.7% for the local community and tourists respectively.

Data collection tools

Structured pre-tested questionnaires and scheduled interviews were the quantitative data collection tools systematically used to collect primary data from the respondents. These questionnaires were administered by the two trained enumerators. To counteract the potential of reporting bias, the questionnaires were developed and validated from previous studies.

Validity and reliability of the instruments of research instrument

Validity is the degree to which results obtained from the analysis of the data actually represents the phenomenon under study (Kombo and Tromp, 2006). The instrument was rated in terms of how effectively it samples significant aspects of the purpose of the study. The researcher discussed the contents of items in the instrument with the experts and content adjusted accordingly to reflect true reflections of the situation to expect.

Reliability of a test refers to the ability of that test to consistently yield the same results when repeated measurements are taken of the same individual under the same conditions (Koul, 1993). To establish the reliability of the questionnaire, the brown prophecy test (described in Kothari, 2005) was used. A reliability coefficient of 0.87 was obtained and judged to be good.

Data collection procedure

The research assistants were supplied with the needed research materials that were needed to conduct the study. Deployment of the research assistants followed in readiness to start collecting samples. At the stone mining sites, each research assistant provided sample

questionnaires and translated the content in Ekegusii to the local who did not understand English. During the time, interviews were also conducted and responses recorded down.

Data analysis and presentation

After data collection, responses from all questions were crosschecked to facilitate coding and processing for analysis using Statistical Programme for Social Sciences (SPSS v.13.5) computer package. Statistical analyses of data were done by inferential and descriptive

statistics. Chi-square (χ^2) test $\chi^2 = \sum \frac{(O - E)^2}{E}$

Where: O is the observed and E the expected ranges used respectively in the sample for analysis. The findings were presented using tables, charts, percentages, tabulations, means, modes and central tendencies. Tables were used to summarize responses for further analysis and facilitate comparison. For all statistical analyses, significance was accepted at $P < 0.05$.

Results

Background information

Among the local community members, 13.3%, 20.0%, 15.0%, 15.0% and 5.0% were aged; 21-30, 31-40, 41-50, 51-60 and above 60 respectively. For tourists the age brackets were 10.0%, 13.0%, 23.3%, 21.7%, and 25.0% correspondingly. Age for both the tourists and local community members differed significantly ($P < 0.05$). For gender, 58.3% and 41.7% were male and female respectively. The tourists were 50.0% male and 50.0% female. The gender response differed significantly for local community members ($\chi^2 = 9.32$, $df = 2$, $P = 0.002$) but not among tourists ($\chi^2 = 0.19$, $df = 1$, $P = 0.067$). Educational levels of the local community members showed that 50% had college education, while 78.3% of tourists obtained college education levels. This differed significantly ($P < 0.001$).

Table 1: Background information of the local communities and tourists visiting the Tabaka area of Kisii

Variable	Local community members (n = 221)	Tourists (n = 71)
Age		
21-30	13.3	10
31-40	20	13
41-50	25	23.3
51-60	25	21.7
>60	8.3	25
Gender		
Male	58.3	53.3
Female	41.7	46.7
Level of education	100	100
Primary	8.3	1.7
Secondary	34.5	16.7
College	50	78.3
University	7.2	3.3

Potential tourist attractions in the Tabaka area of Kisii

There were several potential attractions for tourists in the Tabaka area of Kisii. Some of the photographs of potential tourists' attraction artefacts taken in the area are presented in Figure 2. Several artefacts were available that could potentially attract large spending tourists to the area.

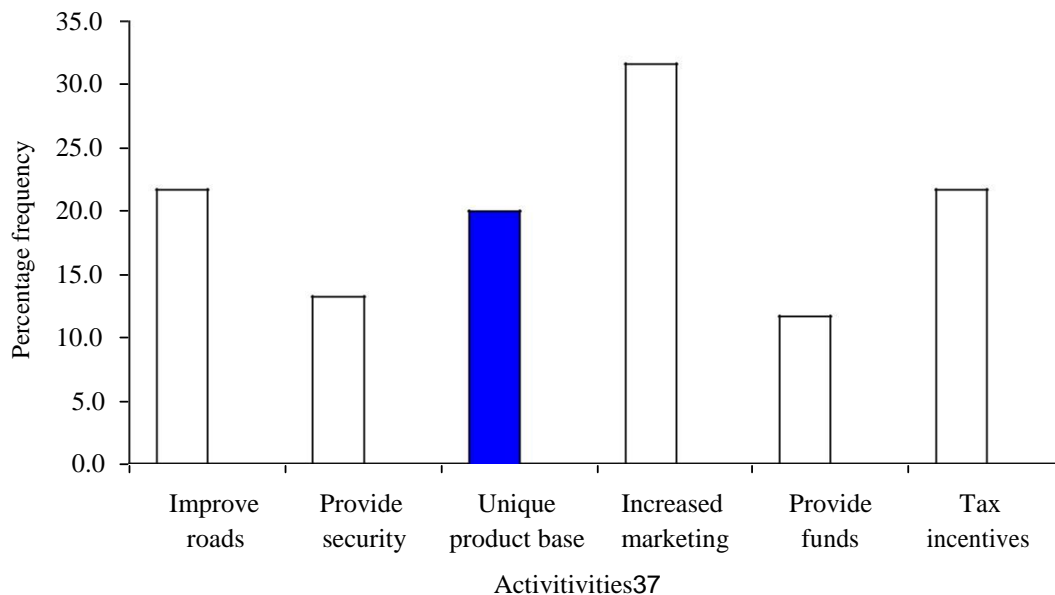
Figure 2: Potential artefacts attracting tourism in the Tabaka region of Kisii



Role of Tabaka soapstone mining areas in promoting tourism

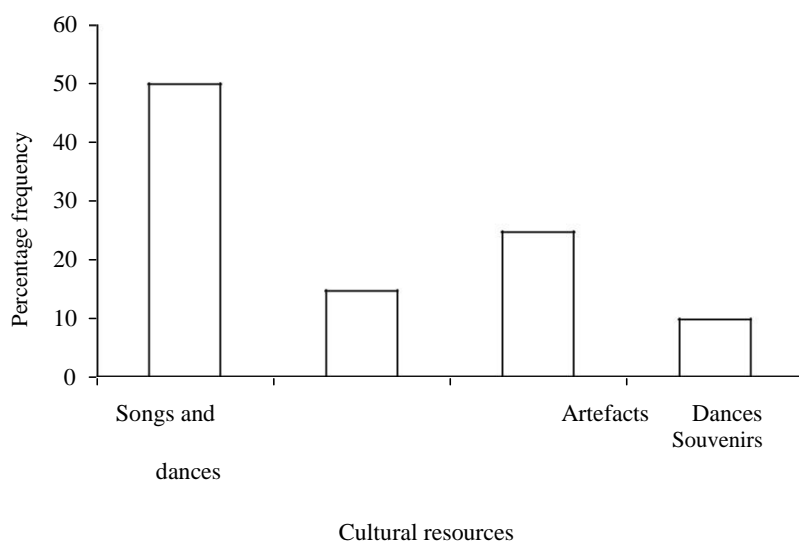
The role of Tabaka area of Kisii in promoting tourism is shown in Figure 3 below. Six roles of Tabaka region were identified in enhancing the visits by tourists. These methods included: increased local marketing (32.1%), tax incentive to the tourists (22.4%), improving of road network (22.1%) and offering unique product base (20.4%).

Figure 3: Activities undertaken by Tabaka area of Kisii to promote tourism



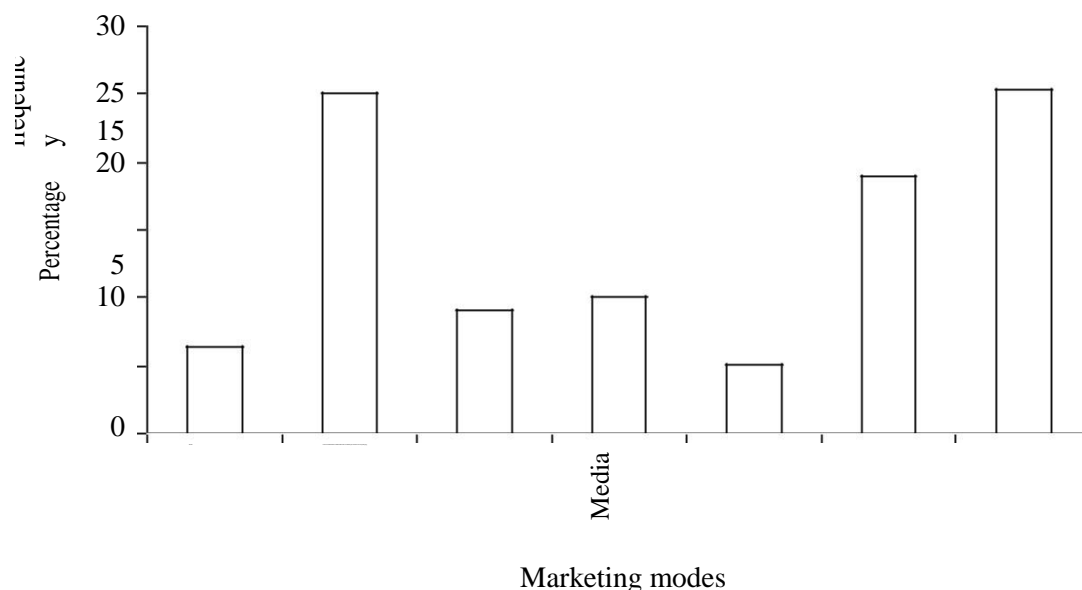
Apart from offering tangible economic modes of promoting tourists, they were also using cultural methods to enhance tourism visits (Figure 4). The major cultural attraction used by the establishment is songs and dances (50.1%). Many of these songs and dances are traditional based. Other traditional attractions used, but in lower proportion were dances alone (25.2%), artifacts (15.1%) and souvenirs (9.6%).

Figure 4: Cultural methods of attracting and promoting tourists in the Tabaka region of Kisii



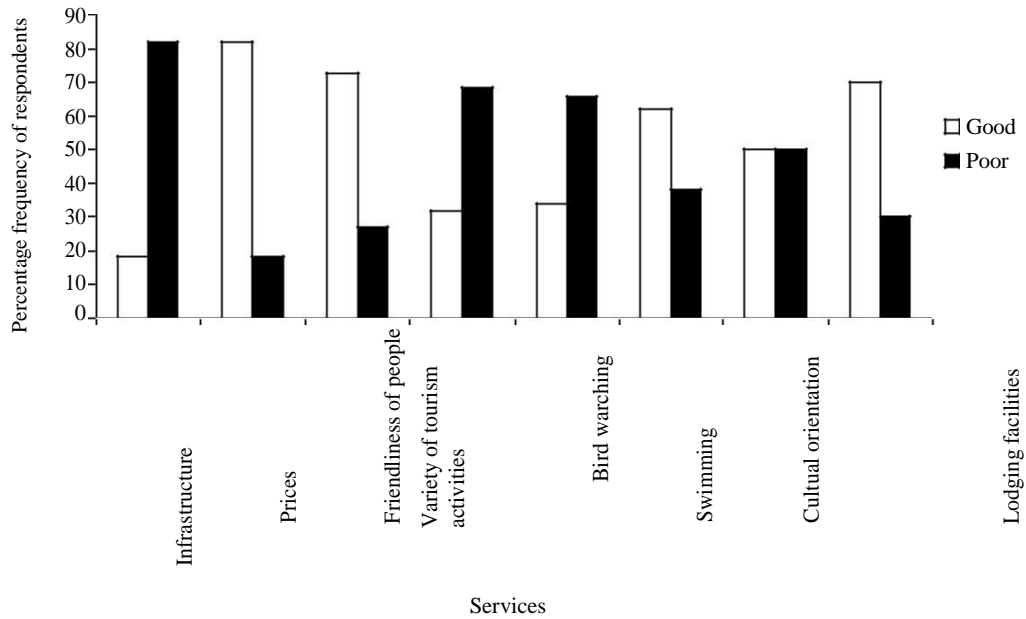
The tourists were asked how they knew of Tabaka area of Kisii (Figure 5). The most dominant methods included through normal conversation while visiting the country (25%), attractive packages by KTB (23%), promotion of the area (16%) and brochure (10%), media (7%).

Figure 5: Methods used by the tourists to know of Tabaka region, in Kisii

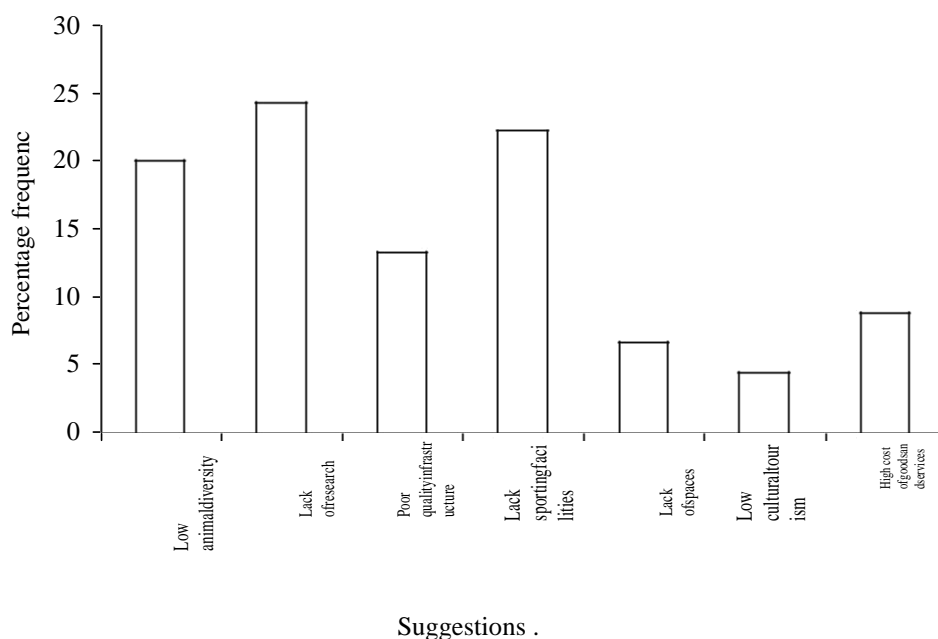


Ratings of the facilities/services to the tourists while in Kisii are shown below (Figure 6). Infrastructure, diversity of tourism activities, bird watching and cultural orientation were ranked low. Prices, friendliness of the locals, swimming and lodging facilities were rated as good by the majority of the tourists.

Figure 6: Ratings of services offered by Tabaka area of Kisii by tourists



Areas that required urgent improvements are depicted in Figure 7. The majority of the tourists would prefer improvements on animal diversity, research, poor infrastructure and transport facilities.

Figure 7: Areas that need to be improved in Tabaka area to attract more tourists.

Discussion

Promotion of the Tabaka area of Kisii as a tourist attraction was achieved by a variety of methods. The first method involved increased marketing of the artefacts for tourists. The photographs that were collected contained large collection of artefacts that can form a potential museum of artefact collection, which can form the basis of tourists viewing. As suggested by Sindiga (1996), these artefacts are only individualistic because they are not under one roof, but a common museum can be constructed for all the artefacts to be collected under one roof; then tourism can be a real business in the region. Marketing was also achieved through several means including increased marketing strategies, tax incentive and trying to improve the road networks by the government. These modes of marketing are traditional modes of promotion that have always proved to be very effective in attracting visitors from far and wide. Aggressive marketing could also be the best method of marketing because in as much as it targets the local visitors, international guests are also included. Aggressive marketing also gives a competitive edge over other rivals. Akama (1997) has reported that most business ventures that market aggressively tends to have very diverse visitor bases. That is why the Kenya Tourism Board (KTB) has been at the forefront of marketing Kenya tourism establishments in other non-traditional Kenya tourism markets adds Sindiga (1996). Promoting tourism within the area was not only limited to marketing artifacts. The roads were upgraded hence improving the dilapidated infrastructure. This was found to be particularly important in areas where roads become impassable during rainy seasons. Such unique roles encouraged visitors to make year round visits to the hotels regardless of the prevailing weather conditions or seasons. Abele (2003) has also reported that in Kenya the road network is in poor state and any endeavor to improve them will be rewarded by sustained tourist visits.

Unique product base and tax incentives to the visitors were the other role played by the Tabaka area of Kisii to attract more tourists. Diversity of product bases has been reported by

Achiron and Wilkinson (1999) as one major factor that attracts and retains tourists in most establishments. Barasa (2005) attest to this by comparing Kenya and Tanzania tourism; where he concludes that tourists are more likely to visit Kenya than Tanzania because Kenya offers a wide tourism base of products. This is particularly important because in an area with diversity, tourists are likely to enjoy the wide range of products without getting bored. These products apart from being diverse and unique are also important when charged low prices especially after tax incentives. In natural economic theory, prices advantages are usually a major driving factor of tourists' visits, especially low and middle spenders. High spenders on the other hand would prefer to get a quality products base but at a high price.

Apart from playing a direct role in direct influence to the tourists, cultural activities (resources) are major roles of Tabaka area of Kisii in attracting visitors. Several cultural activities were practiced; songs and dances, artifacts and souvenirs. In areas where culture is still of significance, more tourists are likely to visit in order to have first-hand experience of the local culture (Gekahu and Waithaka, 1992). This has been reported to be the case with the Maasai community who attract more tourists to Kenya due to their unique culture base (Sinclair, 2000). There were also the marketing of premises as well as landscape as tourists' attraction facilities. This provided the direct link between tourists and the hotel together with interaction with the locals to promote tourism.

Several services were offered by the hotel to encourage visits. These services included cultural orientation, landscape, wildlife and bird watching as well as lodging and swimming facilities. The importance of cultural values and norms to visitors cannot be gainsaid. Since African culture is perceived to be unique in the world by most tourists, they would be more interested to view the culture in premises offering them. Landscape, wildlife and bird watching have been exhaustively discussed by several workers (Sindiga, 1995; Sindiga, 1996; Jafari, 1997; Akama, 1997) as the main tourist attractions in Kenya. If such services are offered in Tabaka, then they stand proper chances of attracting more tourists. A case in point has been highlighted by Kwena (1997) in Kericho District within the tea estates. The beautiful scenery offered by the tea estates attracts several thousands of both domestic and international tourists, who spend a chunk of their money in the local hospitality establishments.

In as much as tourists are accepting to pay visits to Kenya, they were limited by the quality of services, which seems to limit the duration of their stay. If no urgent measures are taken to rectify some of the key points raised by the tourists, then repeat guests and more arrivals are likely to diminish considerably. Among the services that were highly rated by tourists as good were the prices, friendliness of the staff, swimming and lodging facilities. The hotel seems to offer a very competitive or low price as mentioned earlier due to the tax incentive. Matters touching on finance often lead to very high increases in visitors' base as long as quality is not adversely affected (Sindiga, 1997). The friendliness of the employees was the other bonus for the hotel establishment in attracting more tourists to the area. However, hostility by the locals will definitely encourage visitors to take a quick flight back home. Friendliness of the local environment is one factor that seemed to encourage more tourists to visit Kenya especially to the coast. In most of these sites "brotherhood" and "sisterhood" is encouraged and every visitor is welcomed home like a brother/sister. This is what has encouraged growth of beach tourism along the Kenyan Coast.

Facilities that seemed to hinder development of tourism locally in Tabaka area of Kisii included poor infrastructure, lack of product variety, bird watching and cultural orientations. Poor infrastructure such as roads has been reported by several researchers who argued that the quality of roads is often pathetic that an hour's journey can last for up to 5 hours. Such poor quality roads often lead to discomfort during the course of the journey, which does not seem 'to eager well for the tourists. The cost of ware and tare could also result to increased overhead costs for private companies which have to be used by the tourists. Development of tourism promotion by any enterprise can be bogged down by the presence of certain perturbations and challenges that may eventually impede the progression in the tourism promotion. Several challenges key among them, lack of finance, harsh government policies, poor marketing, lack of staff motivation and lack of technical expertise seemed to limit full achievement of their promotional status of tourism by the Tabaka area of Kisii. '

In conclusion, this study indicated that the Tabaka area of Kisii has large artefacts that can promote tourism but is still receiving low tourists numbers, currently at about 200 per year. However, there were aspects of enhancing tourists' visits including: aggressive marketing, improving infrastructure, provision of unique product base. Cultural practices through songs, dances and artifacts and souvenirs were also major activities that enhanced the status of the Tabaka area of Kisii. Other facilities provided to tourists that enhance the area as tourists' establishments were landscape, attractive packages and sales promotion. The nature of services offered to tourists by the Tabaka area of Kisii in its endeavor to self-promotion included; cultural orientation, landscape, wildlife and birds watching as well as lodging and swimming facilities. Such combination of services was ideal to attract a broader base of tourists. Major constraints facing the Tabaka area of Kisii in promoting its activities to tourists to encourage increased visits are; lack of capital, poor government policies and council by-laws, lack of motivation and expertise as well as poor marketing skills.

Since the area has high diversity of cultural groups and various communities each with unique cultures, there should be closer collaboration between the management of the Tabaka area of Kisii, locals and other groups of people in order to increase cultural diversities that is richly abound in the area. Since the world is growing rather rapidly into a global village, where traditional methods of marketing are becoming outdated, the management of the Tabaka area of Kisii should consider introducing and using Internet to market themselves. Such marketing strategy is likely to attract large customers' base and not few locals. Finally the hotels should liaise with local government representatives to encourage the change of the archaic laws such as high and double taxation. There is also an urgent need to look for expertise in managing the affairs of the hotels, especially handling marketing matters.

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