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Community-based camel ecotourism in Botswana: Current status and future perspectives

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Abstract

Ecotourism is a form of tourism that involves visiting fragile, pristine, and relatively undisturbed natural areas, intended as a low-impact and often small-scale alternative to standard commercial (mass) tourism. Ecotourism is a part of environmental conservation. Ecotourism requires understanding the needs of the native people so as to help them improve the quality of their life. Our objectives were to assess herd size, composition, camel types, revenue sources, the role of camels in ecotourism and benefits to communities. Purposive sampling technique was conducted at Tsabong Ecotourism Camel Park to interview key informants. A semi-structured questionnaire was developed and used for each interview. Field observations were also carried out to assess the conditions of camel herd and facilities.

The results showed that camels in the Park were used for riding by tourists. Our respondents mentioned that camel back safari was the main tourism activity provided by the Park. According to key informants, the Park income was derived both from camel and non-camel related activities. Camel riding, trekking, wedding ceremonies, photographs and entrance fees were camel-related income sources. Informants' experiences showed an increase in the trend of tourists visiting the Park between 2015 and 2017. Current results show that the Park hosted more local visitors than foreigners, with locals accounting for 91% of visits. Improved promotion is required to attract international tourists to the Park. Camel racing seems one of the potential business areas to attract tourists to Botswana. Overall, the Kgalagadi district is an important site for conducting annual camel racing events. Such efforts would improve incomes and livelihoods in the local communities and strengthen a sustainable tourism attraction to Botswana. We suggest that the challenges currently facing the Park need to be addressed to exploit camel ecotourism to its full potential.

Keywords: Botswana; camels; ecotourism; Kgalagadi; local communities; Tsabong

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Introduction

Ecotourism is a form of tourism that involves visiting fragile, pristine, and relatively

undisturbed natural areas, intended as a low-impact and often small-scale alternative to standard commercial (mass) tourism (Magsi, 2013). Ecotourism is defined in different ways

in the literature. Ceballos-Lascurain (1981) defined ecotourism as ‘Tourism that involves travelling to relatively undisturbed natural areas with the objective of admiring, studying, and enjoying the scenery and its wild plants and animals, as well as any cultural features found there’, whereas the International Ecotourism Society defines ecotourism as ‘responsible travel to natural areas that conserves the environment and sustains the well-being of the local people’ (Wood, 2002).

Ecotourism is one of the fastest growing segments of the sustainable tourism industry, which focuses on wildlife conservation, environmental protection, poverty alleviation and economic development (Anup, 2016). Ecotourism is differentiated from nature-based tourism in that it helps with sustainable rural development and enables biodiversity conservation in a way that is economically viable for the local communities (Anup, 2016). It is one of the preferred tools for conservation and community development in many rural areas.

Ecotourism is an alternative form of tourism, which embraces tourism in the biophysical environment in natural areas. It incorporates ecologically sustainable activities, conservation supporting measures and the involvement of local communities (Anup, 2016). It focuses on capital development, community development, poverty alleviation, wildlife conservation and environmental protection (Anup, 2016).

Ecotourism provides job opportunities for the local people and a market for local products. It encourages cultural sensitivity in guest–host relations and acts as a catalyst for ecologically sustainable development. It enhances wildlife conservation and the equitable sharing of benefits from ecotourism (Anup,

2016). It helps in the conservation of natural, cultural, and man-made resources and maintains the quality of life of the local area (Anup, 2016). With the objective of environmental conservation, it creates sustainable economic development and balances the conflicting goals of economic development and biodiversity conservation (Anup, 2016). Considering the sustainable principles and practices, it fulfills the goals of biodiversity conservation, poverty reduction and business viability (Anup, 2016).

Tourism is one of the main economic drivers of Botswana. The tourism industry is Botswana’s second largest foreign exchange earner, after diamond mining, contributing about 8.5% to the Gross Domestic Product and 10.1% of the total employment figures (Stone et al., 2017). Since the 1990s, the tourism sector has been identified as a new engine of growth in the country, with the potential to conserve natural resources, diversify the economy and improve local livelihoods.

The Botswana Government has adopted ecotourism as part of its sustainable tourism approach. Hence, ecotourism is promoted in the country as a model to protect the cultural and natural heritages, as well as to enhance the active involvement of all Botswana and the host communities in all facets of the industry’s development and management (Stone et al., 2017). To this end, the Government of Botswana had developed policies that support and promote ecotourism in the country, namely: The Community-Based Natural Resources Management Policy of 2007, the National Ecotourism Strategy of 2002, and the Botswana Tourism Master Plan of 2000.

The Botswana National Ecotourism Strategy was developed to ensure sustainable utilization of natural resources, to generate resources for the conservation and sustainable

management of natural areas, to create business and employment opportunities for individual citizens and communities, to facilitate and reward responsible tourism planning and management practices, to educate both visitors and the local people about the importance of conserving natural and cultural resources, and to deliver a quality experience for tourists (Stevens and Jansen, 2002).

Community-based ecotourism is the best option in a given area, which is conserved, owned and managed by a community to gain income through the operation of a tourism enterprise (Anup, 2016). The Community-Based Natural Resources Management (CBNRM) Policy (2007) developed by the Botswana Government is designed to ensure increased opportunities for the local communities to benefit from wildlife, other natural resources and tourism. The mandate of the CBNRM programme is to promote sustainable utilization of natural resources by the local communities. CBNRM projects have diversified, with some communities engaged in heritage tourism while others are engaged in the utilization of veld products.

The Government of Botswana, through its Botswana Tourism Organization (BTO), has invested in some projects in partnership with the local communities. One of these community-based projects is the Tsabong Ecotourism Camel Park, which is currently managed by the Tsamama Community Trust that represents three communities: Tsabong, Maubelo, and Meleshe.

The Department of Tourism had inherited the from the Botswana Police Service, and it donated them to communities in the northern Kgalagadi region with a view that they will be used for tourism purposes.

This was to be part of the implementation of the Community-Based Natural Resources Management programme, where communities are encouraged to engage in income generating projects for the efficient utilization of natural resources within their area. Camels were seen as precious animals that could be utilized by the communities to diversify their income sources, which at that time was solely based on hunting and livestock (cattle and goats) rearing. However, a lack of strategy and adequate planning on future utilization of camels has rendered them not useful to the communities. The camels are currently being kept at a ranch near Inalegolo village in Kgalagadi North.

Available evidence (Wilson, 2014) shows that camels were introduced to Botswana at the beginning of the twentieth century, initially from the Cape of Good Hope and later from Egypt and Karachi (Indian territory at the time). The Cape of Good Hope camels had been imported from the Canary Islands in the late 19th century, (Wilson, 2009; Wilson, 2013). The camels in Botswana were used for regular patrols by police officers in the sandy Kgalagadi Desert and for postal deliveries. The police force continued to use camels on patrols up to the early 1980s and retained them until 2001 (Wilson, 2014). In 2001, the camels were handed over to the local communities with the intention of developing an ecotourism industry based on camel safaris.

Accordingly, the Tsabong Ecotourism Camel Park was established in 2005. The camels are kept in an enclosed park known as Tsabong Ecotourism Camel

Park, which is located at Maleshe in Kgalagadi District. They are managed by the Tsamama Community Trust, which represents three communities, the Tsabong, Maubelo, and Maleshe villages, in partnership with Botswana Tourism Organization. The Tsabong Camel Park was developed through this partnership, with the vision that it be an ecotourism venture benefiting the local communities.

In recent years, camel safaris are becoming a major tourism attraction in the world. Camel tourism is popular in India (Shackey, 1996; Sindhu and Singh, 2014), the Middle East (Khalaf, 1999; Breulmann et al., 2007) and Tanzania (Mukuru Camel Safari, 2017). So far, little information is available about the trend in visitors and potential of camels for ecotourism business and income generation for the locals. Therefore, the objectives of this study were: (1) to assess herd size, composition and types of camels in the Tsabong Ecotourism Camel Park; (2) to assess sources of revenue generation and the use of camels for ecotourism in Botswana; and (3) to understand the benefits of camel ecotourism to the local community and the problems facing the industry.

Methods

Study area

The study was conducted in the Tsabong Ecotourism Camel Park (TECP), in the Kgalagadi District in southwestern Botswana. The study site is located at a

distance of 520 km from the capital city, Gaborone, and 10 km north of Tsabong, and it comprises a fenced area of 16 km². The area has a sparsely distributed vegetation dominated by *Grewia*, *Senegalia* and *Vachellia* species and some species of grasses (Kgaudi, 2014).

Tsabong is the capital of the Kgalagadi South District. The highest proportion (31.6%) of the human population of Kgalagadi South District is found in Tsabong, with a total of 9,471 inhabitants, 4,719 males and 4,752 females (Statistics Botswana, 2015). The annual population growth rate of Tsabong between 2001 and 2011 was 3.1%, and the overall literacy rate in Tsabong during this period was 85.6% (Statistics Botswana, 2015). The demographic structure of Tsabong shows that the population is characterized by a higher proportion of younger people. According to the 2011 population and housing census of Tsabong, children of school age (0-14 years), the youth (18-35 years) and active labour force (15-64 years) accounted for 32.4, 34.2 and 64.3%, respectively, of the total population (Statistics Botswana, 2015).

The climate of the region is hot and dry, with summer temperatures ranging from 28.5 to 35 °C and winter temperatures ranging from 1 to 12 °C. Rainfall occurs in summer (November – March) and averages 26 mm per annum, ranging from 0.6 to 61 mm monthly (Zweistra, 2012). The area is an inland plateau of relatively flat savanna woodland and grassland with an average altitude of 1,000 m above sea level. Agriculture, in the form of cattle and game

(wildlife) farming, and hunting have historically been the main economic activities of the area (Zweistra, 2012). The Kalahari Desert that covers nearly 70% of the country's land area is located in this region, and the soil is generally sandy and infertile (Batisani, 2010), limiting arable agriculture in the area.

Data collection methods

Key informant interviews

A survey was conducted in October 2017 by purposively choosing and interviewing key informants (Tsabong Ecotourism Camel Park (TECP) workers and Tsabong Tourism Organization staff) who were knowledgeable about the camels. A semi-structured questionnaire was developed and used for the interview. It was designed to generate information on herd size, herd composition, types of camels, sources of revenue generation in the park, trends in the number of tourists, total number of local and foreign tourists visiting the park, visitors by sex and age group, benefits of the Camel Park to the local community, and major problems in the camel tourism industry. In addition, field observation was carried out in the camel park in order to assess the overall conditions of the camel herd and park facilities. The respondents were briefed about the purpose of the study and informed consent was obtained prior to the interview.

In order to assess the distribution of camels in the Kgalagadi District, a trip was made to northern Kgalagadi to visit camels located at a ranch near Inalegolo which are

under the care of the KOINAPU Community Trust. A camel herd kept by the Tsabong Police Station was also visited by the team of researchers. Moreover, secondary data (Kgaudi, 2014; Statistics Botswana, 2015; Seifu et al., 2016) about camels and the TECP were used as input for the present study. Data generated through the survey were analysed using descriptive statistics.

Results and Discussion

Herd size and composition

Table 1 presents the herd size and composition of the camels kept in the Tsabong Ecotourism Camel Park. The results of the survey showed that there are about 416 camels in the Tsabong Ecotourism Camel Park (Table 1). We found that camel bulls comprise the largest number of the herd, followed by pregnant camels (Table 1). However, key informants explained that only a limited number of camels were bred and kept for camel safaris in the study Park. Similarly, Zeng and McGregor (2008) reported that, although camels contribute to tourism business, the number of animals required for tourism is small (150-200). This suggests that the numbers of camels managed at the Tsabong Camel Park may be more than the number of camels required for the purpose of ecotourism business. Therefore, concurrent to ecotourism, there is a need to explore the use of camels for other productive businesses like milk production.

With regard to the potential of camels for milk production, Wako et al. (2017) reported that camels are increasingly

used by pastoralists in East Africa for the purposes of milk production under changing climate and incidences of frequent droughts. The use of camels for milk production seems more feasible with an increasing trend in climate change and shifts in the ecology of rangeland vegetation dynamics towards woody encroachment. Studies from East Africa (Opiyo et al., 2015; Wako et al., 2017) have also shown that there is a growing interest in camel management for milk production by pastoralists.

The current study suggests that, besides ecotourism, the Tsabong Camel Park can also serve as a camel breed improvement and multiplication center with the objectives of supplying potential camels for milk production to smallholder farmers and potential investors. There is also a need for the establishment of a camel farm at academic institutions like the Botswana University of Agriculture and Natural Resources, for teaching and research purposes that could help to promote the use of camels in the country.

Table 1. Herd size and composition of camels kept in the Tsabong Ecotourism Camel Park.

Category	Total number	Proportion (%)
Lactating camels	41	9.9
Pregnant camels	88	21.2
Dry camels	40	9.6
Heifers	38	9.1
Bulls	127	30.5
Female calves	20	4.8
Male calves	21	5.0
Unclassified	41	9.9
Total herd size	416	100

Types of camels at the Tsabong Camel Park

Our informants mentioned that, based on their colour, camels were classified into five types at Tsabong Camel Park (Figure 1). Wilson (2014) indicated that, since their introduction to

Botswana, the camels have been geographically isolated from their counterparts in southern Africa. Over the years, no attempt has been made to select the camels and introduce new blood (genes) into the population. Genetic analysis using microsatellite markers (Nolte et al., 2005) indicated little genetic differentiation

between Botswana camels and camels in South Africa and Namibia. This confirms the common

origin of southern African camels and the absence of a new gene pool into the population.



Figure 1(a). Fawn (Source: Photo by Eyassu Seifu)



Figure 1 (d). Black (Source: Photo by Eyassu Seifu)



Figure 1(b). Grey (Source: Photo by Eyassu Seifu)



Figure 1(e). White (Source: Photo by Eyassu Seifu)



Figure 1(c). Dark brown (Source: Photo by Eyassu Seifu)

Figure 1. Types of camels in Tsabong Ecotourism Camel Park (a = fawn, b= grey, c = dark brown, d = black, e = white).

Coat colour is a common trait used for camel classification. Furthermore, coat colour is used as one of the selection criteria for breeding camels in the Gulf region (Kadim and Mahgoub, 2004). In Saudi Arabia, for instance, camels are classified into three main breeds based on their coat colour namely: Magaheem, Magateer and Al-Homr or Al-Sofr (Chniter et al., 2013). Generally, about 12 different colours among camel breeds in Saudi Arabia were reported by Abdallah and Faye (2012). Likewise, six different camel types were identified in Tunisia based on their coat colours, including Chagra (white), Chala (slightly white), Safra (yellow), Hajla (Fawn), Hamra (brown) and Zarga (grey). Similarly, Sudanese camels were classified into ten different breeds based on coat colour varying from grey, brown, dark grey, red, and yellowish to white (Ishag et al., 2011).

In the present study, we identified five types of camels in the study Camel Park according to their coat colours (Figure 1). We found that Tsabong camels had heterogeneous colours ranging from fawn (tan) (Figure 1a), grey (Figure 1b), dark brown (Figure 1c), black (Figure 1d) and white (Figure 1e). These visible variations in colour (phenotypic characteristics) between the camels might suggest possible genetic differences among them. This reflects the possibility for future selection and upgrading the potential of camels for different purposes (milk and meat production, transportation, racing, etc.), thereby developing new breeds.

However, there is a need for future camel research on phenotypic characterization (i.e., body measurement) and molecular genetic analysis in Tsabong. Such a study would provide clear information on the potential of camels for future breed improvement. Molecular genetic analysis of camels would help to understand if the observed phenotypic colour could correspond to genetically distinct groups.

Respondents' observations and available literature (FAO, 2013) indicate that there is a high degree of inbreeding in the Tsabong camel herd. Except for the donation of a camel bull by the Government of Libya in 2008, no attempt has been made to introduce new camel breeds into the Tsabong camel herd for breed improvement. Thus, there is a need to introduce new blood (gene pool) into the herd in order to prevent problems associated with inbreeding. Key informants pointed out that there is a general lack of proper management and breeding objectives for camels in the study area. Thus, we suggest future interventions for the proper management and improvement of camels' productivity in the Park, with clear breeding goals.

Sources of revenue generation

The various sources of revenue generation at the Tsabong Ecotourism Camel Park are presented in Table 2. According to informants' explanations, the sources of revenue in the Park were based on camel related and non-camel related activities. Our informant believed that the Ecotourism Camel Park in Tsabong is highly beneficial for the local communities in terms of employment and income generation to improve their livelihoods. Similarly, camel tourism is well established in other parts of the world such as India, Egypt, Israel (Havkin et al., 2003) and Australia (Zeng and McGregor, 2008). In Australia, for instance, the camel is an icon used by Tourism Australia to attract domestic and international tourists (Zeng and McGregor, 2008). There are about 50 camel farms around Australia, targeting international and local tourists. They offer camel races, camel rides, and desert trekking. In 2008, they launched an international camel race event that covered a distance of 160 km and involved participants from Australia, the Middle East,

America, Asia, and Europe (Zeng and McGregor, 2008).

According to Kadim and Mahgoub (2004), camel racing is well established and developed in the Gulf region, in particular in the Sultanate of Oman, the United Arab Emirates and Saudi Arabia. The same authors indicate that camel racing in the Arab Gulf countries is a traditional sport comparable to horse racing in the Western World. Selective breeding of racing camels has taken place by individual camel owners in the Gulf countries, and specialized racing camel breeds have been developed in these countries. In the same way, Khalaf (1999) also reported that camel racing is a major traditional heritage sport in the Arab region.

Hence, the future of camels for racing activities is an important area that needs to be exploited in Botswana. The Tsabong and Kgalagadi region would serve as an important site for conducting an annual camel racing event open to participants from the Middle East, North Africa and elsewhere. Camels could also be used for racing purposes at the Annual Khawa festival alongside quad bikes. This would provide an additional source of income to the Tsabong Camel Park and further strengthen the camel tourism in Botswana. Nonetheless, it should be noted that there is a need to train camels and staff working with camels before camel racing could begin.

The survey results showed that camels in Tsabong are currently used for riding by tourists (Table 2). Informants mentioned that camel back safaris are one of the main tourism services provided by the Tsabong Camel Park. This is in line with the report by Zeng and McGregor (2008), who indicated that camel riding and trekking are the most common forms of tourism in Australia. Our informants also stated that, in addition to riding, the Camel Park

in Tsabong had a plan to start camel trekking from the Camel Park to the Kalahari Transfrontier Park Mabuasehube Gate (Table 2), which covers a distance of 115 km. This would give an opportunity for adventurous tourists who want to explore the natural scene and the varied fauna and flora between Tsabong and the Kalahari Transfrontier Park.

The current results showed that camel back safari (camel riding) is the main camel related income generating activity at the Tsabong Camel Park (Table 2). Similarly, informants stated that wedding ceremonies were another form of income generating activity where the local visitors take photographs with camels. According to the informants, the Park also generates revenue through non-camel related activities such as renting of Meru tents (tourist accommodation), hiring of camping sites and quad bike rides (Table 2).

Evidence shows that the Tsabong Ecotourism Camel Park was initiated as a community-based project aimed at benefiting the local communities (Tsabong, Maubelo and Maleshe). Earlier reports (Field, 2008; Wilson, 2012) indicate there are similar community-based projects elsewhere in Africa. For example, a community based camel project was established by the Namibian Save the Rhino Trust to patrol areas where Black Rhinoceros (*Diceros bicornis bicornis*) still survived in the Kunene Region, a very rugged terrain only accessible by camels (Wilson, 2012). According to the same source, the main function of camels in Namibia is for tourist safari attraction. Field (2008) has also reported that community based camel ecotourism is gaining momentum in Kenya, where camels are increasingly used for trekking remote areas.

The Tsabong Ecotourism Camel Project is an enterprise in the right direction that should

be promoted and supported by all concerned bodies. In order to fully exploit the potential of camels for ecotourism, the challenges currently

encountered at the Camel Park need to be dealt with.

Table 2. Camel and non-camel related revenue generating activities at the Tsabong Ecotourism Camel Park

Sources	Variables	Service charge (BWP)	
		Local	Foreign
Camel related activities	Camel trekking ^a	RNF	RNF
	Camel riding (Camel back safari) ^b	30	35
	Wedding/group of 40 people	600	-
	Photography	20	20
	Entrance fee/person	10	20
Non-camel related activities	Meru tent (accommodation/per person/per night)	910	910
	Camp site hire (Full day use)	800	800
	Quad bike riding (6 km)	80	100
	Quad bike riding (11 km)	150	200
	Guided safari walks per person (1 hour)	50	70
	Restaurant per person/day	450	450

BWP = Botswana Pula (at the time of this study, 1US\$ = 10.50 BWP); ^aCamel trekking covers approximately 115 km between the Camel Park and the Kalahari Transfrontier Park Mabuasehube Gate; ^bCamel rides are usually done at the Kraals and within the perimeter of the Park (4 x 4km). RNF = Rate not fixed (yet to be fixed).

Trends in the number of tourists visiting the Camel Park

Figure 2 shows the number of tourists who visited the Tsabong Ecotourism Camel Park from March 2015 to November

2017. Over the last three years, analysis of secondary data showed an upward trend in the number of tourists visiting the Camel Park (Figure 2). The results showed that the majority of people who visit the Camel Park were locals (Table 3).

Table 3. Total number of local and foreign tourists who visited the Tsabong Ecotourism Camel Park in 2015

Month	Total number of tourists	
	Locals	Foreigners
March	199	16
April	248	25
May	308	48
June	187	19
July	168	28
August	271	21
September	267	33
October	331	18
November	128	10
December	144	11
Total	2251	229

Generally, the results showed that local visitors accounted for 91% and the rest were foreign visitors (Table 3). In terms of gender, the results showed that both male and female tourists, including children, were equally interested in camels (Table 4).

Likewise, camels are becoming a major tourist attraction business throughout the world. According to Shackey (1996), in the Thar Desert of India, camel safari is an important attraction of both local and international tourists. It generates a considerable amount of income and sustains the economy of Jaisalmer, a city in the Rajasthan state of northwest India, as more than 200,000 visitors are attracted to safaris in the Thar Desert annually (Shackey, 1996). Similarly, Sindhu and Singh (2014) have

reported that the Sam village of Jaisalmer is emerging as an ecotourism spot in Rajasthan, India. According to the same report, camel desert safari-based tourism is the main tourist attraction that supports the income of local residents, tour operators and camel owners in the Jaisalmer District.

The use of camels for ecotourism activities is also practiced in Tanzania, where a cultural tourism initiative run by the Maasai community of Mkuru at the foot of Mount Meru generates income for the local community and creates employment opportunities for its people (Mukuru Camel Safari, 2017). Camels are also used for tourism in the Arabian Peninsula (Breulmann et al., 2007).

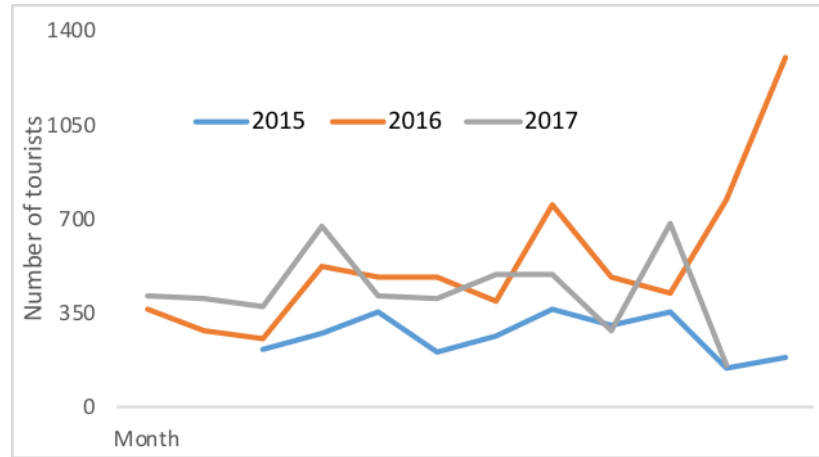


Figure 2. Number of tourists who visited the Tsabong Ecotourism Camel Park from March 2015-February 2017

Generally, this study found that the number of tourists visiting the Tsabong Camel Park is small, with the number of international visitors in particular being very low (Table 3). Although local visitors can make an important contribution to the Park, it is expected that significant income is to be obtained from foreign visitors. Thus, comprehensive promotion needs to be done in order to attract international tourists to the Tsabong Camel Park. A previous study (Shackey, 1996) has shown that the best economic opportunities for the local people from camel safari business in Jaisalmer/India are provided by international tourists who are charged at higher rates both for accommodation and safaris.

Benefits of the Camel Park to the local community

According to the respondents, the major contribution of the Tsabong Camel Park to the

community is employment. Currently, the Park employs 18 staff (7 females and 11 males) from the three communities (Tsabong, Maubelo, and Meleshe) that own the camels. Moreover, the Tsamama Trust that represents these communities receives 100,000 Pula per annum from the BTO, which is shared between the three community groups.

The question of unemployment demands a lasting solution and more job creation. In this regard, camel ecotourism seems an eco-friendly and climate-smart sustainable development option for the study area. Informants believed that the local community has benefited from the Tsabong camel eco-tourism in a number of ways. They indicated that they were beneficiaries in terms of employment, direct cash payment from the BTO and gaining new skills and awareness on the use of camels and concepts related to business and income generation. Informants' observations further suggest that the local communities consider camel riding as an opportunity for recreation.

Table 4. Total number of male and female tourists who visited the Tsabong

Ecotourism Camel Park in 2017

Month	Total number of tourists	
	Male	Female
March	209	132
April	270	216
May	190	187
June	218	162
July	197	195
August	239	211
September	197	151
October	266	238
November (until the 15th)	94	47
Total	1880	1539

Major problems at the Camel Park/tourism industry

The major problems encountered by the Camel Park and/or the tourism industry as reported by the respondents are indicated below:

- Limitation of space (small park size): the numbers of camels currently residing in the Park are well above the carrying capacity of the Park.
- Feed shortage
- Introduction of wild animals (zebras and jackals) into the Park in an attempt to diversify tourism attractions and thereby diversify income generation methods will cause the transmission of zoonotic diseases from these wild animals to the camels.
- Shortage of staff trained in camel husbandry and tourism activities
- Poor marketing and promotion of the Camel Park (lack of billboards)
- Lack of service providers (e.g. banks, shopping complexes, etc.)
- Poor access roads
- Lack of staff trained in camel husbandry and record keeping
- Lack of breed improvement
- Low milk production
- Tick borne diseases
- Camel deaths due to diarrhea

Informants' experiences indicate that the small area of land, inadequate feed supply, disease prevalence, low productivity, overstocking, poor body condition and lack of trained manpower are major problems to efficiently run camel ecotourism in the study area. They further indicated that lack of

resources and camel handling expertise are key problems affecting this business sector. Generally, adequate knowledge/expertise and proper handling of camels could improve the health and productivity of camels. Therefore, camel riding and associated activities need to be properly planned to minimize potential health problems and improve the welfare and safety of camels.

Conclusion

Community-based camel ecotourism in Botswana is a newly emerging area of business. Despite the existing challenges, informants confirmed that the business is growing in terms of revenue generation and number of tourists visiting the Park in recent years. This is partly due to the efforts taken to advertise the business through websites and other methods. Camels in Tsabong are currently used for tourism and recreation. Although the use of camels for ecotourism is a novel idea, at present the Camel Park is not generating enough revenue to cover its expenses. This is evident from the fact that financial resources for the annual operational costs of the Park are provided by the BTO, which is neither viable nor economical.

The Tsabong Ecotourism Camel Park has a herd of over 400 camels. However, a smaller number of camels is usually needed for tourism purposes. Thus, in addition to using the camels for tourism purpose, the camel herd can also be potentially used for other purposes such as milk and meat production. The use of camels for milk production and the development and sale of value-added camel dairy products will further enhance the profitability of camel tourism and generate additional income to the community owning the camels.

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References

- Abdallah H.R., Faye B., 2012. Phenotypic classification of Saudi Arabian camel (*Camelus dromedarius*) by their body measurements. *Emir J. Food Agric.*, 24, 272-280.
- Anup K.C., 2016. Ecotourism and its role in sustainable Development of Nepal. In: *Tourism - from empirical research towards practical application*, 31-59. <http://dx.doi.org/10.5772/62308>. Accessed 15 November 2017.
- Batisani N., 2010. Dynamics of cultivated land and its association with rainfall variability in Botswana: Implications for food security under climate change. In: *Climate change and natural resources conflicts in Africa*. D.A. Mwiturubani and J. van Wyk (Eds). ISS Monograph 170. ISS Head Office, Pretoria, South Africa, 205-219.
- Breulmann M., Böer B., Wernery U., Wernery R., El Shaer H., Alhadrami G., Gallacher D., Peacock J., Chaudhary S.A., Brown G., Norton J., 2007. The camel from tradition to modern times. A proposal towards combating desertification via the establishment of camel farms based on fodder production from indigenous plants and halophytes. UNESCO Doha Office, United Arab Emirates.
- Ceballos-Lascurian H., 1981. Tourism, ecotourism and protected areas. *Parks* 2(3), 31.
- Chniter M., Hammadi M., Khorchani T., Krit R., Benwahada A., Hamouda M.B., 2013.

- Classification of Maghrebi camels (*Camelus dromedarius*) according to their tribal affiliation and body traits in southern Tunisia. Emir. J. Food Agric., 25(8), 625-634.
- FAO, 2013. The state of the world's biodiversity for food and agriculture. Country report – Botswana. Food and Agriculture Organization of the United Nations, Rome, Italy.
- Field R.C., 2008. Assessment of alternative and complimentary livelihoods for pastoralists in northern and north eastern Kenya. CARE-KENYA/ELMT, Nairobi, Kenya.
- Havkin B.Z., van Straten M., Louzon B., 2003. The potential of date production, camel rearing and irrigated horticulture in Marsabit District, Kenya. Center for International Cooperation (MASHAV), State of Israel.
- Ishag I.A., Eissa M.O., Ahmed M.K.A., 2011. Phenotypic characteristics of Sudanese camels (*Camelus dromedarius*). Liv. Res. Rural Dev., 23(4)
<http://www.lrrd.org/lrrd23/4/isha23099.htm>. Accessed 10 December 2017.
- Kadim I.T., Mahgoub O., 2004. Camelid genetic resources. A report on three Arab Gulf countries. In: Proceedings FAO-ICAR Seminar on Camelids-Current Status of Genetic Resources, Recording and Production Systems in Africa, Asian and American Camelids. R. Cardellino, A. Rosati and C. Mosconi (Eds). ICAR Technical Series No. 11. ICAR, Rome, Italy, 81-92.
- Kgaudi K., 2014. Milk production potential and major browse species consumed by dromedary camels (*Camelus dromedarius*) in Tsabong area, Southern Kgalagadi District. BSc Dissertation, Botswana College of Agriculture, Gaborone, Botswana.
- Khalaf S., 1999. Camel racing in the Gulf: Notes on the evolution of a traditional cultural sport. Anthropos 94(1), 85-106.
- Magsi H., 2013. Tourism: Ecotourism is the path to economic development. Pak. Gulf Econ., 32(2), 40-41.
- Mkuru Camel Safari, 2017. September 8) Mkuru camel safari: Cultural tourism programme. <http://www.mkurucamelsafari.com/Images/CulturalTourismProgramme.pdf>. Accessed 15 January 2018.
- Nolte M., Kotzé A., van der Bank F.H., Grobler J.P., 2005. Microsatellite markers reveal low genetic differentiation among southern African *Camelus dromedarius* populations. South Afr. J. Anim. Sci., 35(3), 152-161.
- Opiyo F., Wasonga O., Nyangito M., Schilling J., Munang R., 2015. Drought adaptation and coping strategies among the Turkana pastoralists of northern Kenya. Int. J. Disast. Risk Sci., 6, 295-309.
- Statistics Botswana, 2015. Kgalagadi South sub-district population and housing census 2011: Selected indicators for villages and localities, vol. 11.0. Statistics Botswana, Gaborone, Botswana.
- Seifu E., Madibela O.R., Teketay D., 2016. Current status of the Tsabong camel herd and strategies for future improvements. A report submitted to the Botswana Tourism Organization. Botswana University of Agriculture and Natural Resources, Gaborone, Botswana.
- Shackley M., 1996. Community impact of the camel safari industry in Jaisalmar, Rajasthan. Tour. Manage., 17(3), 213-218.
- Sindhu D., Singh D., 2014. Ecotourism and local perception about its impacts a study of village Sam, Jaisalmer, Rajasthan. Int. J. Environ. Ecol. Family Urban Stud., 4(6), 1-6.
- Stevens P.W., Jansen R., 2002. Botswana national ecotourism strategy. Government of Botswana, Gaborone, Botswana.
- Stone L.S., Stone M.T., Mbaiwa J.E., (2017) Tourism in Botswana in the Last 50 Years: A Review. Bots. Notes Rec., 49, 57-72.
- Wako G., Tadesse M., Angassa A., 2017. Camel management as an adaptive strategy to climate change by pastoralists in southern Ethiopia. Ecol. Process., 6(26), 1-12.

Wilson R.T., 2009. The one-humped camel in Southern Africa: imports to and use in the Cape of Good Hope in the late nineteenth and early twentieth centuries. *J. Camel Pract. Res.*, 16, 1-17.

Wilson R.T., 2012. The one-humped camel in Southern Africa: imports to and use in South West Africa/Namibia. *J. Camel Pract. Res.*, 19, 1-6.

Wilson R.T., 2013. The one-humped camel in Southern Africa: Unusual and new records for seven countries in the Southern African Development Community. *Afr. J. Agric. Res.*, 8(28), 3716-3723.

Wilson T.R., 2014. The one-humped camel in southern Africa: use in police, postal service and tourism in Botswana, c.1900-2011. *Bots. Notes Rec.*, 45, 180-188.

Wood M.E., 2002. *Ecotourism: Principles, practices and policies for sustainability*. United

Nations Environment Programme and The International Ecotourism Society, Paris, France.

Zeng B., McGregor M., 2008. Managing the impacts of feral camels in Australia: a new way of doing business. In: Review of commercial options for management of feral camels. G.P Edwards, B. Zeng, W.K. Saalfeld, P. Vaarzon-Morel and M. McGregor (Eds). Report 47. Desert Knowledge Cooperative Research Centre, Alice Springs, Australia, 221–282.

Zweistra P., 2012. A technical report on the Tsabong north project, Botswana. VP3 Geoservices (Pty) Ltd., Cape Town, South Africa.