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Effects of the safari hunting tourism ban on rural livelihoods and wildlife conservation in Northern Botswana

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ABSTRACT

This paper examines the effects of the safari hunting ban of 2014 on rural livelihoods and wildlife conservation in Northern Botswana using the social exchange theory. The paper used both primary and secondary data sources. Data were analysed qualitatively. Results indicate that the ban led to a reduction of tourism benefits to local communities such as: income, employment opportunities, social services such as funeral insurance, scholarships and income required to make provision of housing for the needy and elderly. After the hunting ban, communities were forced to shifts from hunting to photographic tourism. Reduced tourism benefits have led to the development of negative attitudes by rural residents towards wildlife conservation and the increase in incidents of poaching in Northern Botswana. The implications of hunting ban suggest that policy shifts that affect wildlife conservation and rural livelihoods need to be informed by socio-economic and ecological research. This participatory and scientific approach to decision-making has the potential to contribute sustainability of livelihoods and wildlife conservation in Botswana.

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1. Introduction

Wildlife-based tourism in Southern Africa is largely carried out in national parks, game reserves and other protected areas containing world-renowned wildlife, biological diversity and natural attractions (Poonyth, Barnes, Suich, & Monamati, 2002). Botswana's tourism industry is also largely nature-based and relies on wildlife resources found in the Northern Botswana (Mbaiwa, 2005). Safari hunting has a long history in Botswana dating back to the late 1850s (Mbaiwa, 2007). As a tourism activity, it was made official by the 1990 Tourism Policy. It was run by safari hunting operators who market and sell hunts to clients in developed countries of North America and Europe (Lindsey, Alexander, Frank, Mathieson, & Romanach, 2006; Mbaiwa, 2007). Most African hunts are booked at United States hunting conventions (Lewis & Jackson, 2005). The United States form the bulk of hunters that visit Southern and East Africa, where most safari hunting in Africa is conducted (Lindsey et al., 2006).

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Since the adoption of the notion of sustainable development in 1987, safari hunting has generated debate amongst conservation practitioners and academics, with some supporting hunting while others opposed to it. The recent killing of Cecil the Lion in Zimbabwe by an American hunter in 2015 sparked the debate afresh. The debate on safari hunting is polarized, with animal rights groups and protectionists on one side, and hunters and pragmatic conservationists on the other (Hutton & Leader-Williams, 2003; Loveridge, Reynolds, & Milner-Gulland, 2006). Those opposed to safari hunting argue that the killing of animals is not only immoral and abhorrent and that hunting by tourists will result in the extinction of even more animal species (Baker, 1997). Animal rights and welfare groups also oppose hunting due to the fundamental rejection of the concept of 'killing animals for sport' (Finch, 2004). Conversely, proponents of safari hunting argue that hunting is controlled, has more financial benefits than photographic tourism, and that selective hunting of overpopulated herds is a form of culling that is imperative to biodiversity conservation (Baker, 1997). Proponents of safari hunting argue that safari hunting is a tool for wildlife conservation and should be sustained (Lindsey et al., 2006). This view is however strongly opposed by anti-hunting conservation groups who do not appreciate hunting as a legitimate tourism activity and conservation approach (Baker, 1997; MacKay & Campbell, 2004). The global opposition to safari hunting resulted in countries such as Kenya banning safari hunting in 1977. Official government reasons to the ban are that poor hunting controls and ethics on the part of the hunting industry led to the ban as this contributed to wildlife decline (Leader-Williams & Hutton, 2005; Lindsey et al., 2006; Outoma, 2004). Overhunting and corruption (Booth, 2005; Leader-Williams & Hutton, 2005) to overshooting and corruption (Booth, 2005; Leader-Williams & Hutton, 2005) were alleged in Kenya's hunting industry.

In Botswana safari hunting was banned in 2014. The Botswana Government cited wildlife decline as the main reason for introducing the ban (Scott, 2013). Safari hunting in Botswana was more pronounced in the northern parts of the country, particularly in the Okavango, Chobe and Makgadikgadi regions. These are areas widely known for local community-based tourism initiatives through the Community-based Natural Resource Management (CBNRM) programme. The CBNRM programme was officially adopted by the Botswana Government in the 1990s initially focused on safari hunting as the main tourism activity. The basic assumption of CBNRM programme is that when community livelihoods are improved through tourism, communities would be obliged to conservation natural resources such as wildlife around them (Leach, Mearns, & Scoone, 1999; Tsing, Brosius, & Zerner, 1999). This paper, therefore, uses the concept of Social Exchange Theory to analyse the effects of the ban on safari hunting on rural livelihoods and wildlife conservation in Northern Botswana. The paper should provide insights into whether the banning of safari hunting has any effects on rural livelihoods and efforts to achieve wildlife conservation in Northern Botswana.

2. The social exchange theory

This paper is informed by the Social Exchange Theory (SET). SET emerged in work in anthropology and utilitarian economics (Lévi-Strauss, 1969; Malinowski, 1922; Mauss, 1925). SET follows the premise that humans strive for a positive outcome, meaning to maximize benefits and minimize costs when engaging in an exchange. The SET explores the benefits that people derive from and contribute to social interaction (Collett, 2010). The

SET suggests that human beings take the benefits and minus the costs in order to determine how much a relationship is worth, that is, the relation is either positive or negative (Blau, 1964; Homans, 1961). Positive relationships are those in which the benefits outweigh the costs, while negative relationships occur when the costs are greater than the benefits. The theory postulates that individuals choose positive relationships which are those alternatives from which they expect the most profit (Homans, 1961).

In conservation and livelihoods, SET assumes that potential beneficial outcomes will create positive attitudes towards tourism (Andereck, Valentine, Knopf, & Vogt, 2005; Snyman, 2014; Teye et al., 2002). Snyman (2012, 2014) argues that SET postulates that individuals perceiving net benefits from an exchange are likely to view it positively and those perceiving net costs are likely to view it negatively. SET in this regard proposes that individuals attitudes towards wildlife conservation are influenced by their evaluations of the outcomes for themselves and their communities (Andereck et al., 2005). That is, people support conservation in exchange of benefits such as tourism benefits. The social exchange theory proposes that individuals attitudes towards tourism and their subsequent level of support for its development will be influenced by their evaluations of the outcomes of tourism for themselves and their communities (Andereck et al., 2005). Individuals who receive more direct benefits from the tourism industry have more positive attitudes towards tourists and tourism development (Haley, Snaith, & Miller, 2005; Haralambopoulos & Pizam, 1996). SET in this regard argues that initiatives should be developed to assist in improving the socio-economic lives of local people and this would in the long run create a more supportive environment for tourism and conservation and ensure their sustainability (Emptaz-Collomb, 2009; Synman, 2014).

Community-based approaches are based on the premise that if local people participate in wildlife management and economically benefit from this participation, then a 'win-win' scenario will arise whereby wildlife is conserved at the same time as community welfare improves (Kipkeu, Mmwangi, & Njogu, 2014). Kipkeu et al. (2014) argue that while most community conservation activities have the ultimate goal of maintaining wildlife populations, they simultaneously aim to improve the socio-economic status of human communities in wildlife areas. Community-based approaches are based on the principle that for wildlife to survive local people must be able to profit from and manage the animals living around them as a form of land use, taking the initiative in conserving the resource out of their own economic interest (Child, 1995; Kipkeu et al., 2014; Rihoy, 1995; Western & Wright, 1994). Therefore, conservationists now link wildlife conservation with sustainable development using participation as the new driving force to give beneficiaries (i.e. communities) a greater opportunity to voice their preferences, needs and concerns about initiatives. Most conservationists are now convinced that if wildlife resource is to survive outside the protected areas, local communities must be able to profit from wildlife and have a much greater input in wildlife management decisions (Getz et al., 1999; Hulme & Murphree, 1999). That is, socio-economic benefits can influence positive attitudes towards conservation (Stem, Lassoie, Lee, Deshler, & Schelhas, 2003; Walpole & Goodwin, 2001). CBNRM whose activities includes safari hunting provided economic benefits to local communities in Northern Botswana. These become incentives for wildlife conservation created positive attitudes of local communities towards wildlife conservation (Mbaiwa & Stronza, 2011). This paper, therefore, examines the effects of the ban on safari hunting on rural livelihoods and wildlife conservation in Northern Botswana. The paper is informed by the social exchange theory.

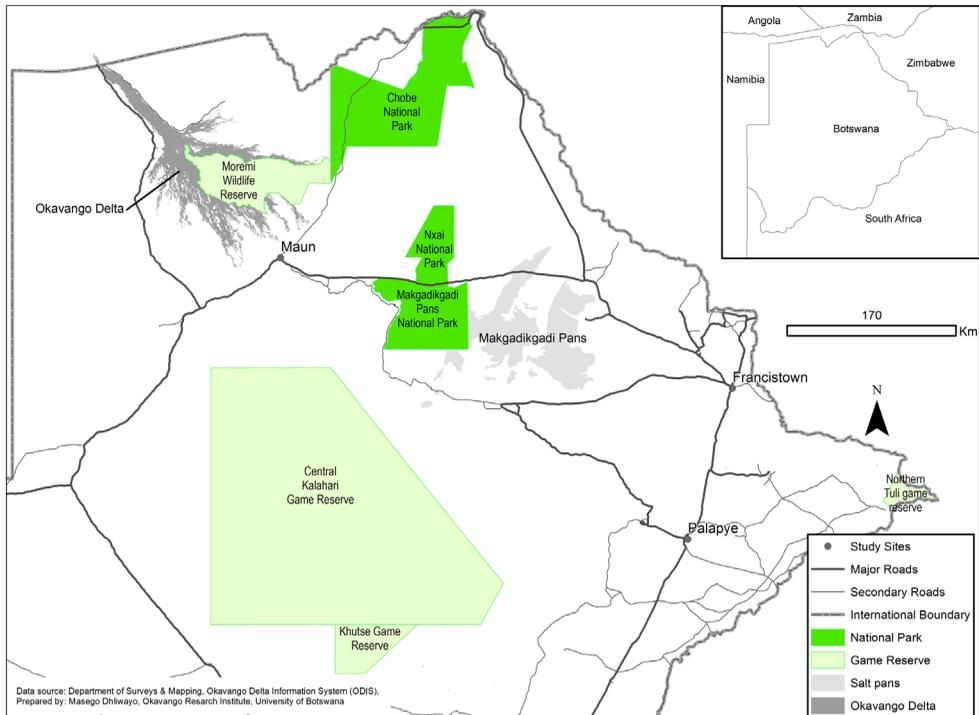


Figure 1. Map of Botswana showing Northern Botswana. (Source: Okavango Research Institute GIS Lab, University of Botswana.)

3. Study area

This paper discusses effects of the hunting ban in Northern Botswana. Northern Botswana is made up of three (3) districts namely, Ngamiland, Boteti and Chobe (Figure 1). Northern Botswana is characterized by diverse ecosystems which include the Makgadikgadi Pans National Park, Nxai Pan National Park, Makgadikgadi pans, Moremi Game Reserve, Chobe National Park and the Okavango Delta. A total of 152, 284 people live in Ngamiland, 23, 347 in Chobe and 57, 376 in Boteti (Central Statistics Office [CSO], 2011). Since the adoption of Botswana's Tourism Policy in 1990s, Northern Botswana became a key a wildlife-based tourism destination (Mbaiwa, 2005).

Ngamiland District is renowned for being the site of the Okavango Delta, a natural wetland that covers 16, 000 square kilometres (Tlou, 1985). Moremi Game Reserve is also located in Ngamiland District within the Okavango Delta. The Okavango Delta is characterized by large bodies of open water and grasslands that sustain plants, mammals, birds, insects and other organisms. The Delta is also home to over 152,000 people (CSO, 2012) of which over 95% depend directly or indirectly on natural resources in the Okavango to sustain their livelihoods (NWDC, 2003). The array of plant and animal life, rich grasslands, forests, and waters of the Okavango Delta draw thousands of tourists each year (Mbaiwa, 2005).

In Boteti District, the Makgadikgadi Pans located in north-eastern Botswana, south-east of the Okavango Delta and south of the Chobe River front is also a major tourism

centre in Northern Botswana (Department of Environmental Affairs [DEA] & Centre for Applied Research [CAR], 2010). The Makgadikgadi Pans area is of national and international importance, particularly for birdlife, as it is one of the rare breeding areas for the flamingos. The area is dry for most of the year and receives its water from rainfall and inflows from ephemeral rivers. The area is characterized by different land tenure regimes, sectoral policies and administrative districts and plans, and the use and management of its natural resources is largely sectoral and insufficiently coordinated. A holistic and integrated planning is imperative to conserve the integrity of the wetland system and to optimize the sustainable utilization of its resources. According to DEA and CAR (2010), a string of villages are located around the Pans, partly attracted by the Boteti River. Subsistence livestock and crop production and gathering occur around villages (Arntzen, Buzwani, Setlhogile, Kgathi, & Motsolapheko, 2007).

Finally, the Chobe District is also known for wildlife-based tourism. Chobe National Park and Chobe River are some of the key natural features found in the Chobe District. Kasane is the main town in the Chobe region and gateway to tourism in the area. Kasane is located in close proximity to the unique natural features supporting large wildlife populations and scenic beauty that attracts thousands of nature-based tourists each year. Kasane provides access to the Chobe National Park, Chobe's Forest Reserves and to the Victoria Falls. The wildlife-based tourism industry provides accommodation for clients in exclusive lodges and camps and in campsites (GISPlan, 2012).

4. Data collection methods

This paper is largely qualitative and has made use of data collected from both primary and secondary sources. Secondary data were obtained from both published and unpublished literature on wildlife-based tourism with particular reference to safari hunting, rural livelihoods and wildlife conservation. Specific literature used include: policy documents and journal articles on safari hunting and tourism development, and, annual reports of wildlife-based tourism in Northern Botswana. Longitudinal data about safari hunting, rural livelihoods and wildlife conservation in Botswana were also used. The use of longitudinal data made it easy to track rural livelihoods and conservation changes in Botswana in the past decades.

Primary data were derived from ongoing research in Northern Botswana dating back to 1998. Much of which have been reported in documents on land-use conflicts, tourism development, wildlife conservation and related CBNRM issues particularly livelihoods and wildlife conservation. While the study made use of several surveys carried out in Northern Botswana in different times, of particular are studies carried out in 1999 about prospects for sustainable wildlife utilization and management, the 2002 study on the socio-economic and environmental impacts of tourism development in the Okavango Delta, the 2005 study on natural resource utilization and land-use conflicts in the Okavango Delta, the 2007 study on tourism development, rural livelihoods and conservation in Botswana. Finally, unstructured interviews with key informants, including biologists, community leaders like village chiefs in CBNRM areas, village development committee, chairpersons, board of trustees' chairpersons, decision-makers in government were carried out in 2015. In-depth interviews with key informants were essential for gaining long-term knowledge on rural livelihood, CBNRM and tourism development in respective villages in Northern Botswana. These

informal interviews progressed in a conversational style. That is, even though an open-ended questionnaire was designed and used, its main purpose was to guide discussions during the interview and to keep it focused. This allowed respondents to talk at length on the subject of CBNRM, livelihoods and impacts of the hunting ban on conservation and livelihoods.

Finally, thematic analysis was used to analyse data collected. Thematic analysis involves data reduction into themes and patterns to be reported. In thematic analysis, themes that emerge from data sources are pieced together to form a compressive picture of their collective experience (Aronson, 1994). Finally, quantitative data collected from secondary sources are also presented in the form tables that describe the data.

5. Results

5.1. Factors which Led to the Hunting Ban

Wildlife decline is cited by the Botswana Government as being the main factor that led to the safari hunting ban in the country in January 2014. Elephant Without Borders (a wildlife conservation NGO in Northern Botswana) concluded a wildlife statistics aerial survey in 2011. The NGO argued that wildlife populations in Botswana have been decimated by hunting, poaching, human encroachment, habitat fragmentation, drought, and veldt fires (Chase, 2011). Chase argued that 11 species have declined by an average of 61% since a 1996 survey. This included Ostrich numbers which he reported to have declined by 95%, wildebeest by 90%, tsessebe by 84%, warthogs and kudus by 81%, and giraffes declined by 66%. Chase (2011, p. 20) noted: 'the numbers of wildebeest have fallen below the minimum of 500 breeding pairs to be sustainable. They are on the verge of local extinction.' The study by Elephant Without Borders was therefore used by the Botswana Government to inform the decision that led to the hunting ban in 2014.

Government made consultation with stakeholders such as local communities in wildlife areas, tourism operators and researchers prior to the ban. Specifically, the President of Botswana, the Minister of Environment, Wildlife and Tourism and government officials from the Department of Wildlife and National Parks conducted workshops and public meetings in wildlife areas about the coming hunting ban. For example, Boyes (2012) note that at a public meeting in Maun in 2013, the President of Botswana announced that there would be no hunting licences issued after 2013, and all hunting in Botswana would be end by 2014. According to Boyes (2012), the President noted that the ban extends to all 'citizen hunting' and covers all species, including elephant and lion that can only be shot when designated as problem animals. The President is also quoted for having remarked that wildlife control measures through issuance of hunting licences had reached its limit and that the issuance of hunting licences had fuelled poaching and the resultant 'catastrophic' declines in wildlife, while preventing sustained growth in the tourism industry (Boyes, 2012). The decline of some wildlife species is thus the main factor that led to the hunting ban in Botswana in 2014.

Public meetings and workshops were conducted in Northern Botswana informing the public about the ban were carried out in key centres such as Maun, Kasane, Gumare and Shakawe and in affected CBNRM small villages. Participants in these workshops included communities that live in wildlife areas, academics, conservationists, scientist, the hunters association in Botswana known as Botswana Wildlife Management Association (BWMA),

Non-Governmental Organizations like the Kalahari Conservation Society and Ngamiland Council of Non-Governmental Organizations. Ironically, participants in public meetings and workshops opposed the hunting ban. For example, academics criticized findings by Elephant Without Borders which informed the ban having methodological flaws. Academics also argued that the study was a snapshot and should not be relied on to inform decisions on the hunting ban. Instead, knowledge on long-term wildlife trends or time series data on wildlife populations in Botswana were required before a decision on the ban is made.

5.2. The Loss of income, jobs and provision of social services

The ban on safari hunting resulted in the loss of income generated by local communities and jobs previously created from safari hunting. The loss of safari hunting income and jobs affected rural livelihoods. Prior to the hunting ban, communities involved in safari hunting generated huge sums of money annually through the sale of hunting quotas to professional hunting outfitters. Results in Figure 2 indicate that in 2008, safari hunting generated P7,382,097 while photographic tourism generated only P2,374,077 (Johnson, 2009). Between 2006–2009 safari hunting by communities generated P33,041,127 while photographic tourism generated only P4,399,900 (Johnson, 2009). Data obtained from DWNP indicate that in 2011/12, about P35,517,534 was generated by CBNRM projects in Botswana. Safari hunting by communities generates almost two-thirds of the tourism revenue compared with photographic tourism which generates only a third of community revenue (Johnson 2009; Mbaiwa 2015). Income generated by communities from safari hunting is used to support livelihoods in respective communities (Arntzen et al., 2003; Mbaiwa & Stronza, 2010). In addition, the BWMA (2001) argues that 49.5% of revenue from the safari hunting industry is used in the local district, 25.7% at the national level and only 24.8% was being paid

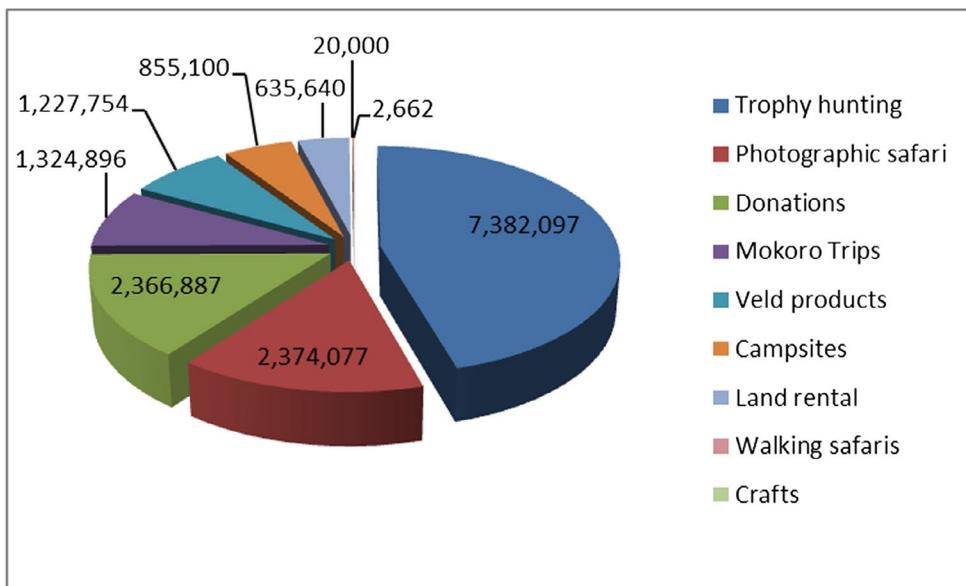


Figure 2. Aggregated CBNRM Revenue from CBNRM Activities, 2008. Source: Johnson (2009).

overseas mainly in the form of agents' commissions and profits. Conversely, only 27% of photographic tourism revenue is being retained within Botswana while the rest is leaked outside the country (Barnes, 1998). In this regard, BWMA argues that safari hunting benefits local communities than photographic tourism.

The hunting ban in Botswana is felt by communities involved in CBNRM in less than 12 months. For example, the Ngamiland District CBNRM Forum at its annual meeting held on the 11th December 2014 observed that the ban on safari hunting was felt by several communities in the Okavango region. The CBNRM Forum reported that in the Okavango Delta, a total of P7 million and 200 jobs were lost due to the hunting ban. The CBNRM Forum also reported that Mababe Village had its tourism income drop from P3.5 million to P500 000, in addition 30 jobs were lost; Sankoyo Village has its income dropped from P3.5 million to P1.8 million, experiencing 35 job losses; Okavango Kopano Mokoro Community Trust's income fell from P4.8 million to P2.5 million and about 40 people lost their jobs. Other projects in the Okavango Delta and Mgakgadikgadi Pans such as Seronga, Gudigwa, Phuduhudu and Xaixai projects experienced job losses totalling about 80 jobs. The Ngamiland CBNRM Forum also noted that other impacts (general to all) include: the looming retrenchments; social responsibility and development funds stopped such as: funeral assistance, scholarships, old age/desitute funding, small business funds, sport funds and the loss of meat (mostly from elephants). Table 1 shows that except for Khwai, all the other CBNRM projects experienced a decline in revenue generation and employment of staff in 2014 and 2015. That is, two years after the hunting ban.

In the Chobe District, informal interviews with the Chobe Enclave Community Trust (CECT) indicate that the Trust has its annual income dropping from P6.5 million to P3.5 million in 2014 and 15 jobs were lost and this included game trekkers, escort guides and skimmers. The other community Trust in the Chobe District known as KALEPA closed down as it wholly relied on safari hunting as compared to other Trusts which had an aspect of photographic tourism. In Boteti District, Ecosurv (2014) argued that wildlife hunting areas in the district are: '... Intrinsically unsuited to "high cost" photographic tourism and the only conservation option which will provide protection and an economic return is safari hunting.' Ecosurv further noted that the effects of the hunting ban include the following: (a) social: 4800 livelihoods affected; loss of meat supply from hunting and photographic in marginal areas has not replaced lost jobs; (b) economic: in excess of P40 million lost annually (over 6 months) by communities; in excess of 600 jobs lost; increased conservation costs to government of Botswana and that only seven (7) new sites tendered and only three (3) allocated since the areas are not attractive for photographic tourism, and, (c) ecological, the area experienced a loss of wide tourism spatial coverage in concessions.

In addition to the loss of jobs and income by communities after the ban on hunting, communities also had to stop some of the community projects and benefits due to the lack of funds. Revenue generated from safari hunting in Northern Botswana funded several community projects, these include: the construction of houses for the needy, funeral insurance and expenses for all members, scholarship and household dividends (Mbaiwa & Stronza, 2010). Some of the benefits from CBNRM to communities include: better housing, water reticulation, income to households, better diets, infrastructure development such as lodge and vehicles for transportation. Before CBNRM, none of the communities were able to generate income and fund these activities. CBNRM, therefore, particularly safari hunting had a significant contribution to the economic development of most rural communities in

Table 1. Revenue and employment for selected CBNRM villages in Ngamiland 2013–2015.

Name of CBO	Villages involved	Revenue generated				People employed				
		2013	2014	2015	2013	2014	2015	2013	2014	2015
Sankuyo Tshwaragano management trust	Sankuyo	2,046,629.00	669,639.00	128,422.00	55	64	47			
Khwai development trust	Khwai	5,967,824.00	6,083,734.00	2,619,287.50	102	81	104			
Mababe Zokotsama Comm. development trust	Mababe	3,546,939.00	658,713.34	790,995.00	54	23				
Okavango Kopano Mokoro community trust	Ditshiping, Xaxaba, Xuoxao, Daunara, Boro, Xharaxao	4,685,712.85	2,621,603.00	1,924,668.00	135	41	34			
Okavango Community Trust	Seronga, Gunutsoga, Eretsha, Beetsha, Gudigwa	4,127,508.00	4,396,381.00	4,866,855.00	207	178	178			

Source: DWNP Records.

Northern Botswana. The Ngamiland CBNRM Forum in December 2014 noted that some of these benefits to communities have been stopped as a result of lack of funds to finance them. The Chairperson of CECT in the Chobe District also noted that these community projects have been stopped due to lack of funds.

5.3. The loss of game meat

The ban on safari hunting has deprived households and communities living in wildlife areas of meat and protein which they previously enjoyed as part their diet before the hunting ban. The CBNRM villages always entered into agreements with safari operators hunting in their concession areas to receive the meat from all animals shot as trophies. The meat of the most preferred animal species (e.g. buffalo, impala, and Kudu) by rural communities. The poor members within the community were always given free meat while some of it was auctioned. Meat of less preferred animal species (elephant, baboon, hyena and lion) was usually given to people free of charge. Onishi (2015) notes that in 2010, Sankoyo earned \$600,000 from the 120 animals – including 22 elephants, 55 impalas and nine buffaloes – that it was allowed to offer to trophy hunters that year.

All the meat from these animals were taken and provided relish to the people of Sankoyo Village. This amount of meat from these animals is no longer available for the people of Sankoyo Village. In the last five (5) years prior to the hunting ban, each community was allocated a total of 22 elephants or 154 tonnes of meat and protein from these elephants (the African elephant on average weighs 2.5–7 tonnes). For Sankoyo which had an annual quota of 22 elephants lost 154 tonnes of meat from elephants, buffalo (9) or 11.7 tonnes of buffalo meat lost, zebra (2), kudu (3), wildebeest (3) tsessebe (7), lechwe (12) impala (42), warthog (5), steenbok (6) and ostrich (3) and all these constitutes tonnes of meat lost. The loss of meat at Sankoyo Village provides insights on the amount of meat or protein which similar community Trusts such as Mababe, Khwai, OKMCT, CECT and OCT which received almost a similar amount of wildlife quota lost due to the ban on safari hunting in Botswana. The amount of meat or protein lost by communities in Ngamiland District per wildlife species can however be calculated using the total wildlife quota provided.

5.4. Increasing poaching incidents

The hunting ban is reportedly contributing to increasing incidents of poaching in Northern Botswana. Onishi (2015) of the New York Times quoted a DWNP official who reported that ‘poaching incidents increased to 323 in 2014 from 309 in 2012’. This is a reversal of achievements made by CBNRM which in its existence was credited for having contributed to the increase in wildlife populations of some species in the last three decades in Northern Botswana (Arntzen et al., 2003; Mbaiwa 2011). Arntzen et al. (2003) argue that communities derive benefits from safari hunting reported that the illegal wildlife exploitation in their areas had gone down in the 1990s and 2000s. However, the decrease in economic benefits from safari hunting by communities due to the hunting ban has begun a reversal of these conservation gains in rural communities. Data from the DWNP indicated that illegal hunting rates in community-based tourism areas were lower than those with no tourism projects (Mbaiwa, Ngwenya, & Kgathi, 2008). Informal interviews with DWNP officials confirmed that illegal hunting in CBNRM areas decreased when compared to the

Table 2. Recorded incidences of illegally killed in NG26 2009–2012.

Animal	Recorded incidents
Lechwe	33
Buffalo	27
Impala	20
Giraffe	23
Kudu	11
Wildebeest	5
Hippo	2
Zebra	1
Totals	122

Source: McNutt (2012)

time before communities became involved in CBNRM and safari hunting (i.e. prior to the 1990s). The low levels of illegal hunting in CBNRM areas are critical for effective wildlife conservation. Mbaiwa and Stronza (2010) indicate that through interviews, households at Khwai, Mababe and Sankoyo indicated that illegal hunting reports in their villages have gone down when compared to the period before CBNRM and safari hunting started in their area. The reduction in illegal wildlife take-off in CBNRM areas suggests a positive relationship between safari hunting tourism development and collective action in conservation.

Illegal hunting incidents are reported to be on the increase in most parts of Northern Botswana. In Ngamiland District, the Southern African Institute for Environmental Assessment (SAIEA) (2012) argues that one of the possible explanations for the recent estimated declines in the populations of some medium and large herbivore species (such as impala, tsessebe, zebra, kudu, giraffe, and lechwe) is increased pressure from illegal hunting by inhabitants of villages and settlements in and surrounding the Okavango Delta. The SAIEA (2012) notes that cases of poaching in the Okavango Delta include a total of nine kudu, seven impala and four elephants for the entire Ngamiland District between 2009 and 2011 (DWNP PAC records, Maun Office). Conversely, reports from tourism operators from a concession area within the Okavango Delta known as NG26 showed that there were 122 wild animals killed between 2009 and 2012 (Table 2) and these are mostly buffaloes, giraffes and impalas. SAIEA argues that it is conceivable that 4000 wild animals are being harvested illegally each year in the Okavango Delta. Using a population model of Impala in the NG/26 concession area, MucNutt (2012) estimated that any additional off-take of the population, which has suffered a decline of 65% in the concession area (i.e. NG/26) from its 1996 estimate, would cause a crash in the populations of certain target ungulate. McNutt (2012) concludes that illegal hunting for meat may be the most significant factor to account for the recent declines in herbivore species in the Okavango Delta. Therefore, there is need for poaching to be prevented to maintain viable populations of targeted ungulates in Northern Botswana.

5.5. Re-introduction of negative attitudes towards wildlife conservation

The ban on safari hunting is reportedly reversing positive attitudes of local communities towards wildlife conservation previously achieved during the safari hunting period to negative attitudes in Northern Botswana. Onishi (2015) in the New York Times reports of the negative attitudes towards conservation emerging at Sankoyo Village. He points out that the 60-year-old Jimmy Baitsholedi Ntema remarked:

before, when there was hunting, we wanted to protect those animals because we knew we earned something out of them. Now we don't benefit at all from the animals. The elephants and buffaloes leave after destroying our ploughing fields during the day. Then, at night, the lions come into our kraals.

Onishi (2015) also reports that Mr. Israel Khura Nato, the Head of the Botswana DWNP's Problem Animal Control Unit in Maun reported, 'We're experiencing an exponential increase in conflicts between animals and human beings.' Mr. Nato noted that such conflicts recorded nationwide rose to 6,770 in 2014 from 4,361 in 2012.

Safari hunting through the CBNRM programme in Northern Botswana led to the development of positive attitudes of local communities towards wildlife conservation (Mbaiwa, 2011). Mbaiwa and Stronza (2010) note that with introduction of CBNRM in the Okavango Delta, local community attitudes towards wildlife conservation were became positive. The positive attitudes towards tourism and wildlife conservation in CBNRM were triggered by a number of factors, these include: the decentralization of resources to communities which gave them a role to play in the management of natural resources such as wildlife in their area, the socio-economic benefits such as income and employment opportunities communities obtained from the CBNRM tourism projects they operated in their local areas. Positive attitudes are the stepping stone towards achieving conservation in Northern Botswana. The ban on safari hunting which in essence means a reduction in economic benefits from CBNRM is therefore promoting negative attitudes towards wildlife conservation in the Okavango Delta.

5.6. Land-use tenure in Northern Botswana

Government opted to replace safari hunting with non-consumptive tourism especially photographic tourism. At the Maun meeting, the President argued that non-consumptive tourism has become increasingly important for Botswana and contributes more than 12% of their overall GDP (Boyes, 2012). In this regard, all the safari hunting concession areas in Botswana were converted to wildlife photographic tourism areas. Wildlife resources in Botswana are concentrated in National Parks and Game Reserves. These occupy 17% of the country's surface area. Wildlife species are also found in areas designated as Wildlife Management Areas (WMAs) and Controlled Hunting Areas (CHAs). These buffer zone areas located between local community areas and national parks and game reserves. The main form of land use in these areas is wildlife utilization. WMAs and CHAs occupy an additional 22% of Botswana's surface area. This means a quarter or 138 090 square kilometres of Botswana is designated wildlife utilization in the form of concession areas where agriculture is subordinate to wildlife utilization (Barnett & Patterson, 2005). The hunting ban therefore means that all these wildlife areas have become designated for non-consumptive tourism in Botswana. Since tourism outside national parks and game reserves is carried out in concession areas known as CHAs, data from Tawana Landboard indicate that a total of 68 concession areas are designated for wildlife-based tourism, of which 21 of the concession areas are reserved for citizen hunting, 32 for community-managed areas and 15 for private sport hunting concessions in which sport hunting by foreigners is permitted. These 15 concession areas are located in State land and allocated by government through lease agreements to private safari operators (Barnett & Patterson, 2005). Chase (2007) argues that hunting was permitted in 27 concession areas (15 state and 12 community-based areas). All

the hunting concession areas have been made to shift from hunting to photographic tourism areas after the hunting ban in 2014. The Okavango Delta, has a total of 22 concession areas with a total of 20,895 square kilometres converted to photographic tourism, Chobe District has all its 13 concession areas converted to photo tourism while Boteti Sub-Districts has all its 21 concession areas converted to photographic tourism. The hunting ban and the shift from safari hunting to photographic tourism affected many communities living in wildlife areas. Data from DWNP indicate that there are 23 villages with a total population of 11,850 people in the Okavango Delta and Chobe Districts had nine (9) concession areas covering 13, 830 square kilometres shifted from safari hunting to photographic tourism.

The challenge in shifting all former safari hunting concession areas to photographic tourism is that hunting was undertaken in peripheral areas which are not viable for photographic tourism. As such, converting all safari hunting areas into photographic tourism development is not a good decision. Ecosurv (2012) argues that the photographic tourism potential in the eastern marginal areas of the Makgadikgadi Pans area in Boteti Sub-District is very low. As a result, 'it is intrinsically unsuited to "high cost" photographic tourism and the only conservation option which will provide protection and an economic return is safari hunting.' Ecosurv (2012) notes: 'the natural limitations of this ecosystem make non-consumptive tourism activities difficult and financially challenging.' Ecosurv (2012) in their recommendations argues that appropriate land use should be recognized to avoid over burdening the photo tourism industry with unviable expectations. For example, Cgae Cgae Tlhabololo Trust photographic tourism project failed because appropriate land use was not considered during the formation of the project hence rendering it not economically viable. Lindsey (2010) argues that safari hunting generates revenues in areas where alternatives such as photographic tourism may not be viable.

5.7. International views on wildlife hunting

There are mixed views about wildlife hunting in developed countries. That is, some individuals and groups support safari hunting under the assumption that it is an economic incentives and conservation tool while others are opposed to it. For those opposed to safari hunting, the killing of Cecil the Lion in Zimbabwe in July 2015 by an American hunter and dentist provided them the opportunity to demonstrate their opposition of safari hunting in Africa. The killing of Cecil the Lion increased sentiments against rich hunters from developed countries, hunting game in Africa and other developing countries. Anti-hunting groups are opposed to the theory that hunting can be legitimate tourism activity and conservation approach (Baker, 1997; MacKay & Campbell, 2004). Anti-hunting groups argue that the killing of animals is not only immoral and abhorrent and that hunting by tourists will result in the extinction of even more animal species (Baker, 1997). These sentiments are also held by animal rights and welfare groups which reject the concept of 'killing animals for sport' (Finch, 2004; Lindsey et al., 2006).

Proponents of safari hunting argue that controlled hunting has more financial benefits than photographic tourism, and that selective hunting of overpopulated herds is a form of culling that is imperative to biodiversity conservation (Baker, 1997). Lindsey, Roulet, and Románach (2007) argue that the low off-take rates of safari hunting mean that it can play a key role in endangered species conservation even when excessive hunting was the original cause of the conservation problem. Lindsey et al., further argue that revenues from tightly

regulated safari hunting can provide important incentives for careful management, protection and reintroductions of wildlife species. Safari hunting can also play an important role in the rehabilitation of wildlife areas by permitting income generation from wildlife without jeopardizing population growth of trophy species (Bond, Jones, & Ledger, 2004; Lindsey et al., 2007). The re-introduction of white rhinoceros populations (Leader-Williams et al., 2005) and bontebok (*Damaliscus dorcias*), black wildebeest (*Connochaetes gnu*) and cape mountain zebra (*Equus zebra*) in South African game reserves is credited on safari hunting since it provided financial incentives for re-introductions (Flack, 2003; Lindsey et al., 2007).

6. Discussion

There is no scientific study that has so far proved that safari hunting in Botswana was carried out in unsustainable basis to warrant a ban in 2014. Conversely, there is evidence that safari hunting in Botswana was regulated particularly through the quota system to promote sustainability. The wildlife quota system provides for selective hunting hence it is regulated such that only old male animals were killed, leaving female animals with the young reproductive bulls to continue with the reproductive cycle. It was only done six (6) months in a year during the non-breeding season. Selective hunting was sustainable in that it maintained a balance of wildlife population in their surroundings. The wildlife quota system therefore provided the safari hunting industry in Botswana with a number of characteristics which enabled the industry to play a potentially key role in conservation outside of national parks and where alternative wildlife-based land uses such as photographic tourism may not be viable. That is hunting in Botswana was done in marginal areas which are not profitable for photographic tourism due to low wildlife populations in these areas.

Safari hunting industry in Botswana was also well monitored through its association known as Wildlife Management Association Botswana and communities monitored their through the Management Oriented Monitoring System programme. These approaches are inherently self-regulating rendering the modest wildlife off-take in these marginal wildlife areas marketable for high trophy quality and sustainable hunting tourism zones. Studies (e.g. Baldus & Cauldwell, 2004; Child, 2000; Child, 2005; Lewis & Alpert, 1997; Weaver & Skyer, 2003) have shown that where sustainable safari hunting is carried out as the main land-use activity in areas occupied by rural communities, revenues that accrue from safari hunting have resulted in improved attitudes towards wildlife among local communities, increased involvement of communities in CBNRM programmes, requests to have land included in wildlife management projects, and in some cases increasing wildlife populations.

The hunting ban in Botswana has resulted in revenue loose to the country and to local communities. Lindsey (2010) argues that safari hunting generates 15% of tourism revenues from only 1% of tourist arrivals, making it one of the lowest impact forms of tourism in Botswana. In addition, safari hunting contributed 0.13% to Botswana's Gross Domestic Product (Lindsey et al., 2007). The recent ban on lion hunting costs the safari hunting industry 10% of total revenues (US\$1.26 million), and adversely affected community conservation efforts (Peake, 2004a). Scott (2013) argues that when hunting stops, so does the resulting revenue for conservation. Scott argues that at its peak, hunting in Botswana generated more than \$20 million annually, more than \$6 million of which was hunting licence revenue that went directly to the Department of Wildlife and National Parks. The ban on safari hunting will among other effects increase animal/human conflicts, with massively

reduced budgets left to deal with the consequences. In this regard, hunting in Botswana was more of a conservation tool than an ecological threat which warranted a hunting ban.

In addition to the reduction of income to the national government, the ban on safari hunting tourism has resulted in the reduction of income generated by communities, the loss of jobs and the suspension of community projects and the provision of social services like: funeral benefits, scholarships and housing for the needy. Social Exchange theory argues that for communities to maintain a positive relationship and attitudes towards conservation, the benefits from wildlife must exceed the costs. In this regard, the ban on safari hunting tourism has resulted in the reduction of income and the loss of jobs and community projects, as such, communities might not be obliged to support wildlife conservation in their areas.

In Northern Botswana, CBNRM has proved to be an approach that improved livelihoods and food security in areas where it was implemented. Mbaiwa & Stronza (2009) note that because of CBNRM revenue generated by CBOs in the Okavango, employment opportunities have been created in CBNRM villages. In addition, this revenue is used to support a number of community projects such as: assistance for funerals, support for local sport activities, scholarships, transport services, building of water stand pipes, construction of houses for the elderly and needy, assistance to orphans and disabled, and provision of communication tools such as television and radios. Some of the gains from CBNRM include the reinvestment of safari hunting money into lodges, campsites, sub-leasing and land rentals of their concession areas and other sources include sale of crafts, vehicle hire, and donations. The reduction of income generated by CBNRM over the years will affect the success of the programme in Northern Botswana. When income generated by CBOs goes down, rural livelihoods (i.e. employment opportunities, income generation, community projects financed by CBNRM revenue etc.) will be affected and will go down. Therefore, the gains made in CBNRM over the 30 years are therefore likely to be affected and a reversal of the gains will be achieved.

The loss of jobs and income by communities due to the ban on safari hunting suggest that the already high poverty rates in Northern Botswana particularly in Ngamiland District will continue to rise. That is, the high poverty rates in Northern Botswana have occurred despite the lucrative tourism industry in the area. Botswana's exclusive and luxury multi-billion dollar wildlife-based tourism industry is situated in Northern Botswana. Ironically, poverty in Northern Botswana is reported to be widespread (Central Statistics Office [CSO], 2008). CSO indicates that poverty headcount in western Okavango stands at 50–60%. Although photographic tourism, as carried out in core areas of Northern Botswana is a multi-billion industry, it fails to make a significant contribution to poverty alleviation in peripheral areas where local communities live. The San or Basarwa who lived hunting and gathering lifestyles for centuries are landless and living in settlements in the periphery of the Okavango Delta (Mbaiwa, 2012). The ban on safari hunting in Northern Botswana will thus increase poverty levels particularly that of the San as jobs are lost and people having no income to sustain their livelihoods.

According to Mbaiwa (2015), the gains of CBNRM in the last 30 years include: positive attitudes towards wildlife conservation; decline in illegal hunting; increase in populations of some wildlife species; and, improved livelihoods in CBNRM areas. If communities in Northern Botswana are no longer able to derive meaningful benefits from wildlife conservation, they will not be obliged to conserve wildlife species, in this regard, wildlife decline is thus bound to continue. CBNRM was adopted in the 1990s to halt wildlife decline and

improve food security and livelihoods and the programme had proved effective where it was implemented in Northern Botswana. Botswana faced a constant decline in wildlife populations with the exception of only the elephant and red lechwe for decades (Barnes, 1998; Perkins & Ringrose 1996). Unregulated hunting and poaching are some of the compelling factors in wildlife decimation (Mordi, 1991; Perkins & Ringrose, 1996). The CBNRM programme was introduced as a means to combat wildlife decline and achieve wildlife conservation in Botswana (Mbaiwa, 2004; Thakadu, 2005). Results indicate that CBNRM contributed to the rise of some of the wildlife species in some of the areas of the Okavango Delta. For example, Arntzen et al. (2003) noted that in CBNRM areas, wildlife populations such as giraffes and buffaloes increased.

Although CAMPFIRE in Zimbabwe is currently having challenges due to the economic recession, it has proved that CBNRM can contribute to an increase in wildlife populations and improved rural livelihoods (Child, Jones, Mazambani, Mlalazi, & Moinuddin, 2003). Child et al. (2003) argue that environmental benefits of community participation in resource management in Zimbabwe include an increase of wildlife population in areas reserved for safari hunting and community-based tourism. Child et al., 2003 argue that wildlife populations increased by about 50%, with elephant doubling for 4,000 to 8,000 in community-based conservation areas. Child (2009) also argues that the Namibian programme is evolving rapidly suggesting that CBNRM is a moving target. Child argues that the programme has shifted from donor funding to self-funding and has led to increased wildlife populations in conservancies and improved livelihoods. When local communities derive economic benefits from tourism development in their area, they begin putting a higher economic value on natural resources around them and become obliged to conserve them.

One determining factor to the success of community projects may be the extent to which communities are engaged as owners and managers. Stronza and Gordillo (2008) argue that in the cases of Posada Amazonas, Chalala'n, and Kapawi, substantial community involvement has seemed to foster greater levels of trust, leadership and organization thus expanding social capital in each site. This therefore shows that there are other factors not only tourism economic benefits that account for the success of community projects. It is from this background that Mwenya, Lewis, and Kaweche (1991) argue that successful wildlife conservation is an issue of 'who owns wildlife' and 'who should manage it'. If people view wildlife resources as 'theirs' because they realize the benefits of 'owning' wildlife resources, and understand that wildlife management needs to be a partnership between them and the government, there is a higher potential for them to conserve wildlife species in their areas. However, these achievements in conservation in community tourism areas are likely to be reversed by current policy changes in safari hunting tourism in Northern Botswana. As such, with reduced benefits from CBNRM and no role in the decision-making process regarding wildlife conservation, there is likely to be a return to poaching in CBNRM areas in Northern Botswana hence a reverse of conservation gains.

7. Conclusion

The safari hunting ban contradicts the goals of conservation and rural development which the CBNRM programme was established to achieve. The ban is reducing huge benefits generated by communities from safari hunting (such as income, employment opportunities etc.). Social exchange theory proposes that individuals and communities who receive more

direct benefits from the tourism industry are likely to have more positive attitudes towards tourism development (Haley et al., 2005; Haralambopoulos & Pizam, 1996). The ban on safari hunting and reduction of economic benefits derived from CBNRM has resulted in the negative attitudes towards conservation and tourism development by communities.

Restricting safari hunting represents a retrogressive step and a top-down imposition that would reduce the probability of wildlife-based land uses in many rural areas, and reduce community earnings and buy-in to wildlife conservation. Kenya banned hunting in 1977. Between 1977 and 1996, Kenya experienced a 40% decline in wildlife populations, both within and outside of its national parks (Scott, 2013). Scott argues that due primarily to poaching; Kenya's wildlife numbers have continued to fall with wildlife numbers today being less than half of that which existed before the ban. Species such as lion and elephant are largely affected. In this regard, the benefits from tourist hunting can reverse the trend (Steve, 2013). It is from this background that a ban on safari hunting does not necessarily halt decline in wildlife populations, instead it can escalate it. Likewise, the 2001–2003 ban on safari hunting in Zambia resulted in an upsurge in poaching due to the removal of incentives for conservation (Lewis & Jackson, 2005). Hunting bans also reduce consumer confidence in affected countries as hunting destinations (Lewis & Jackson, 2005; Peake, 2004b). It is from this background that Botswana should learn the experience of other countries with hunting bans and adapt that which can work for the country and similarly avoid pitfalls such countries fell into. As a result, the lesson for Botswana is that detailed socio-economic and ecological studies are needed to inform decision on the ban of hunting in the country. There is lack of scientific evidence to support claims that hunting as carried out in Botswana is detrimental to wildlife populations. This means increased centralization of control over wildlife management and restrictions on the freedom of communities to derive benefits from wildlife via safari hunting are contrary to sustainable development ideals and will not promote wildlife conservation and rural developed as espoused by the social exchange theory.

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