

CHAPTER 7

Wildlife utilization in East and Southern Africa

Introduction

For the purpose of students of wildlife conservation and protected area management, the following definitions are fundamental to the understanding of the concept of tourism and the contributions of wildlife-based tourism to national economies:

Tourism may be defined as the activities of persons traveling to and staying in places outside their usual environment, for not more than 1 consecutive year for leisure, business, and other purposes, not related to the exercise of an activity remunerated from within the place visited (CEC, OECD, VN and WTO, 2001). Tourism industries are hereby defined as groups of establishments producing the goods and services purchased by tourists (CEC, OECD, VN and WTO, 2001). Tourism industries in turn produce tourism products that can be characteristic (would not be produced without tourism), connected (partially characteristic), or nonspecific (general consumer products) (CEC, OECD, VN and WTO, 2001, p. 39).

Tourism consumption is the expenditure made by or on behalf of a visitor before, during, and after the trip and which expenditure is related to that trip and which trip is undertaken outside the usual environment of the visitor (CEC, OECD, VN and WTO, 2001, p. 39). Impact of tourism can be measured in terms of gross output, value added, and employment opportunities. In this context, the direct impacts (consumption) and the indirect impacts (linkages) and induced impacts (multipliers) are always considered in the assessment of economic significance of tourism. Economic activities involving the use of wildlife can be placed under two categories: consumptive and nonconsumptive uses. Consumptive uses include hunting, live animal sales, skins, hides, and other products. Nonconsumptive use includes all aspects of ecotourism, game viewing, photographic safaris, and other activities such as sportfishing.

In East and Southern Africa, nature-based tourism has grown tremendously over the last two decades. In countries such as Kenya, Botswana, Namibia, Tanzania, and South Africa, nature tourism is among the top

earners of foreign exchange. In many sub-Saharan countries, the tourism industry is largely based on wildlife, where tourism is known to be one of the fastest-growing industries.

According to [Mariki et al. \(2011\)](#), tourism constitutes one of the fastest-growing sectors of the economy. Indeed, tourism is one of the top five categories of 83% of all developing countries ([WTO, 1999](#)). Consequently, it is an important industry in providing foreign exchange, employment, income, and promotion of rural and national development.

It is important to note that domestic tourism in Africa south of the Sahara is relatively low. [Mariki et al. \(2011\)](#) stated that in Tanzania, where wildlife- and nature-based tourism is well developed, domestic tourism in a well-developed Udzungwa valley in northern Tanzania was only 23% of the total tourist number. The low figure is typical of the pattern of tourist flow in most East and Southern African countries. Hence, African tourist trade relies mainly on foreign visitors.

However, in order to attract foreign tourists to a significant level, there are certain potentials, tourism standards in infrastructures, goods and services, etc. that African countries must be able to advertise to the outside world. Therefore, part of the potential of tourism development of African countries depends on their ability to attract foreign tourists. Furthermore, attraction of foreign tourists also depends on provision of the following well-developed basic infrastructures and ingredients for tourism ([Table 13](#)).

A comparative flow of international tourists to African countries

[Table 14](#) presents a comparative international tourist arrivals and receipts in 49 African countries from 2010 to 2013. However, [Table 14](#) does not show the national contribution of tourism to the gross domestic products of these countries.

The value of Namibia's wildlife assets

Namibia has one of the highest numbers of foreign tourist arrivals among the emerging economies in Africa ([Table 14](#)). In 2011, Namibia's tourist arrivals and receipts were estimated at 1,027,000 and 518 million USD, respectively. One of the factors responsible for a significant turnout of tourists was their spectacular tourism characteristic product, which is wildlife.

The physical wildlife asset ([Table 15](#)) is composed of an estimated 2.04 million larger wild animals, which produced a gross output of some USD 200 million and directly contributed USD 100 million to the gross national

Table 13 A checklist of some infrastructures that are basic to the development of international tourism.

(A) Specific products	(B) Nonspecific products
Tourism characteristic products <i>Accommodation</i> Hotel and other lodging services <i>Food and beverage services</i> Restaurants Beverage-serving establishments <i>Well-developed transport services</i> Passenger transport Rail transport services Road transport services Air transport services Water transport services Support services <i>Transport equipment</i> Rail transport equipment Road transport equipment Rental Own vehicle Fuels Air transport equipment <i>Travel agency, tour operator, and guide services</i> Travel agency services Tour operator services Tourist information and tour guide services <i>Cultural services</i> Recreational and other entertainment services Tourism-connected products Goods Services	Goods and services

product (GNP) (Barnes et al., 2009). Of interest is that the most significant component of wildlife use was nonconsumptive wildlife viewing tourism that generated some 62% of the total wildlife sector GNP contribution. Hunting tourism contributed some 19%, and live game production contributed some 10%. Other wildlife use activities contributing between 2% and 3% of the total sector GNP were meat production, intensive ostrich farming, and taxidermy. The wildlife use sector represented approximately 2.1% of national GNP in 2004 as compared with 4.6% for agriculture, 5% for fishing, 6.8% for mining, and 3.4% for tourism. In a further analysis growth in wildlife, use values over the next 30 years show the contributions from the sector could actually triple its economic contribution to the

Table 14 Relative flow of foreign tourists (international tourist arrival and receipts in African countries): available data on international tourism arrivals and receipts for African countries.

		International tourist arrivals (1000)			International tourist receipts (US\$ million)					
		2010–2011	2012	2013	2010	2011	2012–2013			
1	Algeria		2070	2395	2634	2733	219	209	217	350
2	Angola		425	481	528	650	719	646	706	1234
3	Benin		199	209	220	231	149	188	170	
4	Botswana		2145				78	33	34	45
5	Burkina Faso		274	238		218	72	133	84	
6	Burundi		142				2	2	1	2
7	Cameroon		573	604	817	912	159	409	349	576
8	Cabo Verde		336	428	482	503	278	368	414	462
9	Central African Republic		54				11		11	
10	Chad		71	77	86	100				
11	Congo		194	218	256	297				
12	Côte d'Ivoire		252	270	289		201	141		
13	Democratic Republic of the Congo		81	186		191	11	11	7	1
14	Djibouti					63	18	19	21	22
15	Equatorial Guinea									
16	Eritrea		84	107						
17	Ethiopia		468	523	596	681	522	770	607	621
18	Gabon									
19	Gambia		91	106	157	171	74	83	88	

		International tourist arrivals (1000)				International tourist receipts (US\$ million)			
2010		2011	2012	2013	2010	2011	2012	2013	
20	Ghana	931			620	694	914	853	
21	Guinea			56	2	2	1		
22	Guinea-Bissau				13	9	7		
23	Kenya	1470	1785	1781	1433	800	926	935	
24	Lesotho	414	397	422	320	25	29	46	
25	Liberia				12	232			
26	Madagascar	196	225	256	196	321			
27	Malawi	746	767			33	34	34	
28	Mali	169	160	134	142	205	267	142	
29	Mauritania						48	41	
30	Mauritius	935	965	965	993	1282	1484	1477	
31	Morocco	9288	9342	9375	10,046	6703	7281	6703	
32	Mozambique	1718	1902	2113	1886	197	231	250	
33	Namibia	984	1027		1176	438	518	485	
34	Niger	74	82		123	105	96	50	
35	Nigeria	1555	715		600	576	628	559	
36	Rwanda	504	688	815	864	202	252	282	
37	Sao Tome and Principe	8	12			11	16	13	
38	Senegal	900	1001		1063	453	484	407	
39	Seychelles	175	194	208	230	274	291	310	
40	Sierra Leone	39	52	60	81	26	44	42	
41	South Africa	8074	8339	9188	9537	9070	9515	9994	
42	Sudan	495	536		591	94	185	772	

Continued

Table 14 Relative flow of foreign tourists (international tourist arrival and receipts in African countries): available data on international tourism arrivals and receipts for African countries.—cont'd

		International tourist arrivals (1000)				International tourist receipts (US\$ million)			
2010		2011	2012	2013	2010	2011	2012	2013	
43	Swaziland	1078	879	1093	968	50	21	30	13
44	Togo	202	300	235	327	66	79	95	
45	Tunisia	6903	4785	5950	6269	2645	1914	2227	2190
46	Uganda	946	1151	1197	1206	784	959	1135	1184
47	United Republic of Tanzania	754	843	1043	1063	1255	1353	1713	1880
48	Zambia	815	920	859	915	125	146	155	224
49	Zimbabwe	2239	2423	1794	1833	634	664	749	851

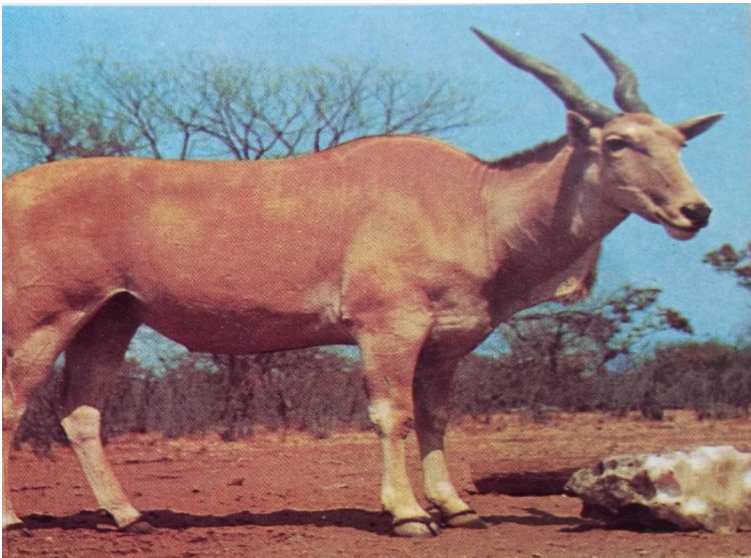
Table 15 Physical wildlife asset count, 2004—estimated wildlife stock numbers in Namibia.

Species	Wildlife utilization zone					Total
	1	2	3	4	5	
Buffalo	1025	250	90	0	0	1365
Cheetah	706	149	405	270	2970	4500
Eland	1704	524	245	0	34,743	37,216
Elephant	9043	24	735	155	0	9957
Gemsbok	11,450	3115	18,670	5084	350,092	388,411
Giraffe	3683	229	666	68	5769	10,415
Hartebeest, red	1468	115	700	0	122,805	125,088
Hippopotamus	1262	0	300	0	0	1562
Impala, black-faced	1500	0	0	0	1870	3370
Impala, common	77	0	385	0	14,980	15,442
Kudu	2063	1484	1545	1000	345,801	351,893
Lechwe	0	0	250	0	284	534
Leopard	1970	430	960	640	4000	8000
Lion	574	23	109	22	0	728
Ostrich	3947	530	2840	2020	36,336	45,673
Rhino, black	816	43	45	75	134	1113
Rhino, white	54	62	0	0	75	191
Roan	440	120	95	0	435	1090
Sable	256	60	15	0	902	1233
Springbok	33,811	1771	37,150	37,270	621,561	731,563
Tsessebe	0	15	0	0	162	177
Warthog	148	61	40	0	173,866	174,115
Waterbuck	0	0	0	0	4475	4475
Wildebeest, blue	4985	224	470	0	16,623	22,292
Zebra, plains	18,098	0	20	0	7303	25,421
Zebra, mountain	8564	4347	2130	2175	55,520	72,736
Total	107,634	13,576	67,865	48,779	1,800,706	2,038,560

national economy and bring it close to its full spatial potential. Further increases in direct use value from wildlife will likely occur through intensive farming. Namibia's standing wildlife assets were estimated to have a value of NAD 10.5 billion (US 1.5 billion) in 2004, which is quite close to values estimated for fish and minerals (Table 15).



This is an Oryx a semidesert dweller common to the Kalahari desert of Namibia.



This is eland (*Taurotragus oryx*) the largest of all African antelopes. A mature male may stand at 6.5 ft shoulder with horns 3 ft long.

Wildlife species that are major tourist attractions in Africa

Figs. 6–13 show some wildlife species that are major attractions in Africa.

Specific economic value of wildlife-based tourism in Southern Africa

Hunting tourism, recreational and subsistence hunting that belong to the consumptive category, is widely practiced across Southern and East Africa, with hunting tourism or “sport hunting” regarded as being highly profitable. Yet, it is often said to be contributing little to national economies.

Table 16 shows that approximately US\$3.2 billion was generated from nature-based tourism by 10 of the 14 Southern African Development Community countries (SADC) in 2000/01. This figure comprehensively includes all aspects of consumptive and nonconsumptive categories of wildlife-based tourism. In comparison, revenue generated by hunting tourism in seven SADC countries in 2008 was approximately US\$190 million.

Although hunting tourism does not support large volumes of tourists, it can be regarded as the highest valued land use for arid and semiarid savannas in Southern Africa, especially in areas of low wildlife densities and diversity. Lindsey et al. (2007) estimated that a minimum of 1,394,000 km²



Fig. 6 African buffalo or cape buffalo (*Syncerus caffer*). (Photo by Olufemi Owolabi.)



Fig. 7 See the legend in facing page



Fig. 7 Crocodiles (*Crocodylus niloticus*). Crocodile is the most dangerous and ferocious water dweller of African wildlife. Crocodiles are rarely found in the deep sea like the Atlantic Ocean. Some scientific research had been carried out on its reproductive ecology in order to achieve success in the attempts to reproduce them in captivity at the University of Ibadan as early as 1983 in the Department of Wildlife and Fisheries Management. Success had been achieved on the Nile crocodile *Crocodylus niloticus* under the supervision of Prof. S. S. Ajayi. The research include mating of Nile crocodile, collection of eggs, artificial incubation of the eggs, hatching of the eggs and raising the hatchlings to weaning age all in captivity. (Photo by Olufemi Owolabi.)

is used for hunting tourism in sub-Saharan Africa, which exceeds the area encompassed by national parks.

Table 17 summarizes the approximate gross value of hunting tourism for seven SADC countries between 2000 and 2008, with South Africa and Tanzania dominating the industry over this period. These data suggest that hunting tourism generates gross revenues of at least US\$190



Fig. 8 Lion (*Panthera leo*). Lion is commonly referred to as the King of African jungle. Top: Is the group of lions lying, resting under the trees after they finish eating their kill. Bottom: The same group at the water-hole drinking after feeding. (Photo by Olufemi Owolabi.)

million per year (Lindsey et al., 2007) provided an estimate of US\$201 million from a minimum of 18,500 clients).

Hunting tourism, recreational, traditional and subsistence hunting

Hunting across the Southern and East African region can be broadly categorized into three main sectors: (1) hunting tourism (also known as trophy or sport hunting), (2) recreational or biltong/meat hunting, and (3) traditional and subsistence hunting.

“Hunting tourism” or “sport hunting,” also known as “consumptive wildlife tourism,” involves the killing of wild animals in natural areas as opposed to “nonconsumptive wildlife tourism” where wildlife is not



Fig. 9 Leopard (*Panthera pardus*). Leopards are very powerful killers and don't eat their prey on the ground but on tree branches more than two (2) m above the ground. The arrangement of the black dots on Leopard is called rosette, like if one put together the five humans fingers into black paint and use it to the body on a regular space on the body.

physically killed. Here, the term hunting tourism is used in place of the terms “foreign hunting,” “sport hunting,” and “trophy hunting” and is defined as “undertaking hunting activities for one or more specimens of a certain species by a foreign or local hunter, who is willing to pay a fee for the special experience of hunting and/or attaining the trophy in a sustainable and ethical way.”

Hunting tourism tends to be undertaken by foreign hunters that hunt for reasons of sport for a predetermined number of specific wildlife species, generally with the objective of keeping some part of the animal as a trophy (usually the horns or tusks of mature male herbivores or skins and skulls of carnivores). This form of hunting takes place on all types of land regardless as to whether it is owned privately, communally, or by the state. The foreign hunter will generally seek the services of a commercial safari operator and negotiate the cost of hunting a package of trophies in a given time. All species are hunted, with hunting packages for “charismatic trophies” such as elephant, lion, leopard, and buffalo fetching high prices. Hunting



Fig. 10 Cheetah (*Acinonyx jubatus*). Cheetah is the fastest African wild animal on four legs and is a Savannah grassland dweller. It has resemblance to the Leopard skin's external appearance but its own black and cream color configuration is single black dots. Cheetah is not a climber but Leopard is a perfect tree climber. (Photo by *Olufemi Owolabi*.)

of this nature is conducted under the supervision of a professional hunter regardless of the type of land involved and is strictly regulated by wildlife authorities ([Booth, 2002/2009](#)).

Socio-economic significance of hunting and angling tourism in United States of America and Europe

Comparison with the situation in the United States of America

[Table 18](#) shows that in total, sportsmen in the United States spend approximately US\$76 billion/year on hunting and fishing activities that generate approximately 1.6 million jobs and US\$60 billion in federal and state taxes.



Fig. 11 Giraffe (*Giraffa camelopardalis*). Giraffe is the tallest of all African ungulates and Savannah dweller. (Photo by Olufemi Owolabi.)

Similarly, hunting is an important socioeconomic activity in Europe, particularly in rural areas. [Kenward and Sharp \(2008\)](#) estimated that within the European Union alone, hunting may be worth €16 billion (~US\$22 billion) annually. This does not capture the complexity of values that can be added, derived, or offset from hunting activities such as the following:

Direct economic benefits—payments by hunters toward hunting fees, equipment accommodation, etc.

Environmental benefits—these include aspects related to conservation activities, ecosystem retention, and management.

Social benefits—hunting is often a very important social and cultural activity in many rural areas that has value in binding communities and offering useful social integration tools.



Fig. 12 African elephant (*Loxodonta africana*). Elephants are native to Asia and Africa. They are second to humans in habitat destruction and environmental modification. In view of the fact that they need about 6.4% of their body weight of food per day. They are also the easiest to be sighted in game viewing in wildlife base ecotourism destinations. Because of their size, they hardly get scared by the presence of human tourists. They were commonly sighted by game viewers in the 1970s to mid-1980s in the Kainji Lake National Park, New-Bussa, Nigeria and at Yankari, but now they are no longer easily sighted by tourists especially at the Kainji Lake National Park. (Photo by Olufemi Owolabi.)

Future bequest benefits—hunting helps retain a link to rural areas and an understanding of ecosystem functioning that serves to retain cultural knowledge and understanding for future generations.

Opportunity costs—these are related mainly to the costs that would be incurred by governments in managing wildlife populations and paying for damages incurred by these populations.

In summary, the experience of Southern Africa in consumptive and non-consumptive utilization has overwhelmingly shown that wildlife has contributed significantly to their national economies. However, illegal hunting and illegal trade in wildlife and other socioeconomic factors remain a threat to this vital continental asset.

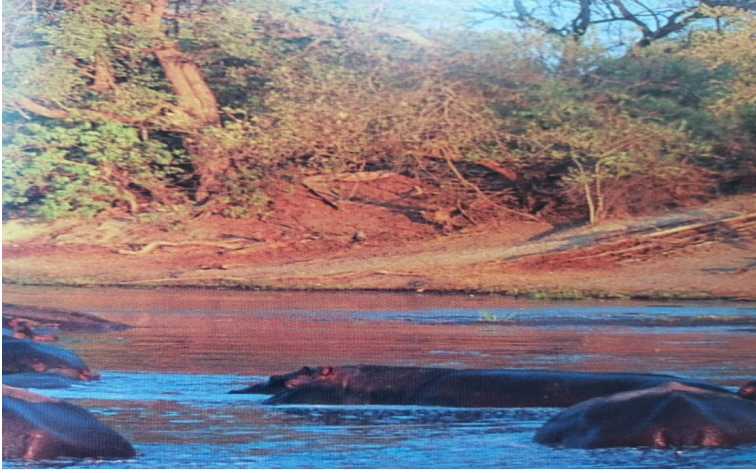


Fig. 13 Hippopotamus (*Hippopotamus amphibius*). Hippopotamus lives in water with fish all around it but it is an herbivorous animal coming out of water at night to feed on vegetation. It is one of the location specific source of wildlife base ecotourism in many parts of Africa. (Photo by Olufemi Owolabi.)

Table 16 Nature tourism arrivals and income of SADC countries 2000–2001.

Country	Nature tourism arrivals (OOOs) (domestic and international)	Income from nature tourism (million US\$)
Angola	0.9	0.3
Botswana	472.9	131.3
Malawi	109.4	13
Mozambique	42	8.4
Namibia	360	247.6
South Africa	4634.5	2298.8
Swaziland	243.9	27
Tanzania	203.7	299.9
Zambia	459.2	72.8
Zimbabwe	1494.4	143.5
Total	8020.9	3242.6

No data available for Democratic Republic of Congo, Lesotho, Madagascar, or Mauritius.

Table 17 Approximate gross value of hunting tourism in Botswana, South Africa, Namibia, Zambia, Zimbabwe, and Tanzania (US\$ millions).

Country	Date	Gross income	Source
Botswana	2000	\$12.6 million	ULG (2001)
	2008	\$40.0 million	Martin (2008)
South Africa	2003/2004	\$68.3 million	Damm (2005)
Namibia	2004	\$9.6 million	Erb (2001)
Zambia	2002	\$3.6 million	Child (2002)
Mozambique	2008	\$5.0 million	Booth, unpublished
Zimbabwe	2000	\$18.5 million	Booth (2002/2009)
Tanzania	2001	\$39.2 million	Baldus and Cauldwell (2004)
	2008	\$56.3 million	Booth, this study

Table 18 Approximate gross value of hunting and angling by sportsmen in Texas, Montana, and Wyoming in the United States (US\$ millions).

State	Spendings	Jobs created	Salaries and wages	Federal and state taxes	Multiplier effect
Texas	\$6.6 billion	106,000	\$236 million	\$1.4 billion	\$11.6 billion
Montana	\$721 million	11,500	\$270 million	\$520 million	\$1 billion
Wyoming	\$676 million	9500	\$236 million	\$137 million	\$916 million

Source: Congressional Sportsmen's Foundation (CSF) www.sportsmenslink.org.