The Economic Contributions of Hunting-Related Tourism in Eastern and Southern Africa

For:

Safari Club International Foundation

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EXECUTIVE SUMMARY

The continent of Africa offers a diverse range of landscapes, cultures, and natural resources, all of which combine to attract international tourists. Considering Africa's rich wildlife resources, many international tourists travel to Africa to hunt. Considering the high costs associated with hunting relative to other forms of tourism, hunting provides Africa with significant economic benefits to the countries and communities who host these travelers.. This report investigates the extent of hunters' annual spending and the resulting economic contributions within an eight-country study area from 2012 through 2014.[1]

This effort was conducted in four major phases: 1) determining the number of hunters in each of the eight countries and in total based on license and visitor data provided by each country, 2) measuring the amounts spent by hunters per trip within and outside of their destination country, 3) estimating the economic impacts per country and in total generated by visiting hunters using generally accepted economic multipliers, and 4) comparing the results to previous similar research to ground truth the results and provide a greater understanding of the benefits hunting provides to African economies. Additional steps were undertaken, too, as explained within the methodology sections presented in this report.

Sample sizes for South Africa, Namibia, and Zimbabwe were large enough to produce direct spending profiles for each of these countries independently. The sample sizes for the other five countries (Botswana, Ethiopia, Mozambique, Tanzania, and Zambia) were inadequate to develop similar country-specific profiles. For these five countries, an average spending profile for all eight countries was used to estimate the average spending per visiting hunter.

Visiting hunters and their travel party on average spent 14 days in their destination countries with 11 of those days hunting. The travel party most commonly consisted of approximately three people, with two of these actually hunting. According to professional hunters, the United States provides the largest proportion of visiting hunters (74%), followed by Europe (16%). Hunters report high satisfaction rates with their African hunting experiences, with nearly three-quarters having taken more than one hunting trip to Africa.

The number of international tourists who visit to hunt varies widely across the eight-nation study region. South Africa received the greatest number of visiting hunters (8,387) followed by Namibia (7,076) and Zimbabwe (1,361). For the entire area of study, an average of 18,815 tourists hunted annually between 2012 and 2014.

Average total spending per hunter is estimated at $26,000. Average in-country spending for the professional hunters' package and fees, transportation, food, souvenirs and more is approximately $20,600. The greatest average expenditure in-country was for Zimbabwe's hunters ($28,859), which may be driven in part by their hunters more often targeting one or more of the 'dangerous game'

[1] The eight countries defining the study area are Botswana, Ethiopia, Mozambique, Namibia, Tanzania, South Africa, Zambia, and Zimbabwe. These nations were included based on their ability to provide necessary data.

species compared to hunters visiting other countries.[2] By multiplying the average amount spent per hunter by the total number of hunters in each country, estimates of total spending were generated. For the eight nations examined, $326.5 million was spent by hunters annually between 2012 and 2014. The amounts varied based on the number of hunters, ranging from $141.2 million in South Africa to $432,000 in Ethiopia. All spending is reported in 2014 U.S. dollars.

Annual Spending and Economic Impacts within the Eight Nation Study Area; 2012-2014 Average

Country	Spending In-Country Per Hunter[2]	Spending In-Country, All Hunters	Contribution to GDP (Value Added)	Full- and Part-time Jobs
Botswana[1]	$20,602	$7,210,737	$8,076,025	316
Ethiopia	$20,602	$432,644	$644,640	503
Mozambique	$20,602	$8,817,701	$12,080,250	10,690
Namibia	$14,840	$105,007,764	$115,508,540	8,367
South Africa	$16,835	$141,197,113	$206,147,785	12,742
Tanzania	$20,602	$16,358,071	$28,790,206	14,161
Zambia	$20,602	$8,199,638	$10,413,540	782
Zimbabwe	$28,859	$39,276,470	$44,775,176	5,861
Total	**$20,602**	**$326,500,138**	**$426,436,162**	**53,423**

[1] Botswana effectively eliminated hunting beginning in 2014.

The revenues introduced into each country stimulate economic growth, which is primarily measured by contributions to gross domestic product (GDP). GDP measures the additional value, or growth, in the economy as hunters' dollars exchange hands within the economy. Estimated contributions to GDP range from $206.1 million in South Africa to $645,000 in Ethiopia. In aggregate for all countries studied, the contribution of hunters' spending to GDP is estimated to be $426.4 million. In other words, if hunters did not visit Africa, annual GDP in the study area's economy would shrink by $426.4 million.

The rounds of spending initiated by visiting hunters annually support over 53,400 jobs within the study area's eight-nation economy. These jobs represent not only people directly serving hunters but also people supporting the businesses who serve hunters. Estimated total employment supported by

[2] Elephant, rhinoceros, Cape buffalo, lion, and leopard are commonly referred to as the Big Five of hunting species in Africa and command a higher price compared to other species. Often, hippopotamus and crocodile are included with all seven species then collectively referred to as the 'dangerous game' species.

hunting-related tourism is the greatest in Tanzania (14,161 full- and part-time jobs), followed by South Africa (12,742) and Mozambique (10,690).

There are additional generally-qualitative observations resulting from this work. Over eighty percent of hunters say they would not have gone if the opportunity to hunt was not available, indicating that for most tourists currently visiting Africa to hunt, substituting hunting with other activities would fail to attract them. The spending by most hunters would then be forgone revenue for the destination countries and the local communities hosting hunters. In addition, hunting occurs in regions away from urbanized areas where most of the GDP activities occur such as manufacturing, services and more, therefore providing income for areas otherwise limited in economic opportunities. Many areas where hunting now provides critical income are not physically attractive enough or do not offer the distant views required for photo safari operations. Neither does agriculture offer reasonable economic opportunities in many areas where hunting now occurs, considering these areas are not already farmed. Altogether, these considerations show that hunting provides important economic opportunities for many areas where other common forms of income are limited.

According to the International Union for Conservation of Nature's (IUCN) Species Survival Commission, "Trophy hunting is a form of wildlife use that, when well-managed, may assist in furthering conservation objectives by creating the revenue and economic incentive for the management and conservation of the target species and its habitat, as well as supporting local livelihoods."[3] (IUCN p. 4) Funds are required to keep habitat in its natural state and to financially support wildlife research and law enforcement activities. In addition, by providing jobs and income to local communities, hunting conveys a positive value to wildlife which incentivizes communities to protect game species and the land they – and all wildlife species – depend upon. Evidence from this research indicates that the estimated contribution to conservation through fees paid to landowners (private, community, and government) alone is estimated to be within the range of $26.7 million to $40.2 million each year. This is an imprecise and even a conservative estimate at best. Regardless, the evidence suggests a need for in-depth research to quantify a more precise measure of hunting's conservation contributions.

[3] The International Union for Conservation of Nature is an international organization which focuses on conservation and sustainable uses of natural resources.

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INTRODUCTION

The continent of Africa offers a diverse range of landscapes, cultures, and natural resources, all of which create outdoor recreational opportunities drawing international tourists. Collectively, Africa attracts millions of arrivals by international tourists each year for leisure travel. The sub-Saharan Africa region alone received more than 30 million international tourist arrivals in 2014 (WTTC Sub-Saharan Region).

Spending by these tourists on all types of recreational and tourism-related activities contributes to the study area's economy. These activities are just as diverse as the countries themselves, and include non-consumptive and consumptive wildlife activities, such as photo-safaris and hunting. Spending by international tourists who travel to hunt is a part of the economic engine within the countries they visit. This spending then cycles through the economy, expanding its initial contribution, supporting jobs, and contributing to conservation efforts. Measuring these benefits is the goal of this effort.

The current magnitude of hunting-related tourism's contribution continent wide is uncertain. Through this analysis, we endeavor to add strength to previous estimates of spending directly associated with hunting-related tourism. We also expand the knowledge base by providing estimates of the total contribution of hunter spending by including the multiplier effect of the initial spending as well as the additional rounds of spending that occur within each examined country's economy. In short, this analysis quantifies the direct and total economic contributions made by visiting hunters in eight countries located in eastern and southern Africa on an annualized basis for 2012 to 2014. These results will help inform discussions among stakeholders regarding strategic decisions associated with Africa's wildlife resources.

REPORT ORGANIZATION

This report is organized by presenting the findings immediately after the introductory text. Methods, along with survey instruments and detailed spending tables are provided in the appendices.

METHODOLOGY SUMMARY

This effort was based on existing data provided by the eight countries represented in this report, economic multipliers from independent sources and original data generated through a series of surveys of hunters visiting each country plus professional hunters within each country. The major phases

engaged include: 1) quantifying the number of hunters in each of the eight countries and in total based on license and visitor data provided by each country, 2) determining the amounts spent by hunters per trip within and outside of their destination country, 3) estimating the economic impacts per country and in total generated by visiting hunters using generally accepted economic multipliers, and then 4) comparing the results to previous similar research to ground truth the results and to provide a greater understanding of the benefits hunting provides to African economies. Details regarding the methods used are presented in Appendix A.

FINDINGS

The Findings section is separated into four distinct sections: 1) the visiting hunter, 2) the hunting experience, 3) hunter spending, and 4) the economic contributions driven by hunting-related tourism in each country. As previously mentioned, the respondent sample size is large enough in Namibia, South Africa, and Zimbabwe to allow for country-level analysis. We also report results for the study area which reflects the average across all countries covered in this study.

I. The Visiting Hunter

Visiting hunters and their travel party members spent between 8 and 14 days in their destination countries (Figure 1). While the majority of hunters (54%) visiting Zimbabwe stay in-country for roughly two weeks, 40% stay for roughly three weeks, twice as large a proportion reported by hunters visiting South Africa and Namibia (Table 1). An average of 11 of the 14 total days (78%) spent in-country was spent on hunting-related activities (Figure 1 and Table 1).

Figure 1. Total number of days spent in country and total days spent hunting on this trip

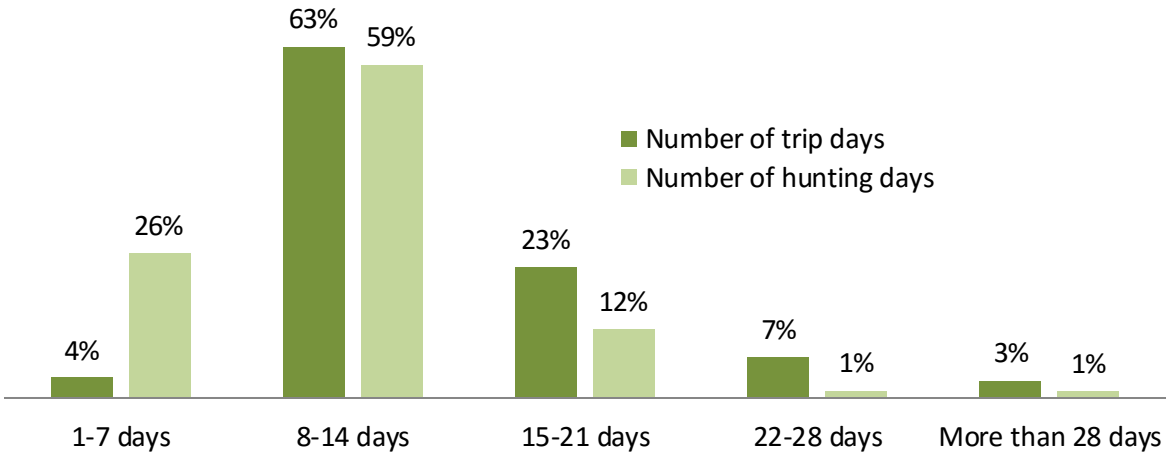


Table 1. Number of days spent on the trip per hunter

	South Africa		Namibia		Zimbabwe		Study Area*	
Days per hunter	Trip	Hunt	Trip	Hunt	Trip	Hunt	Trip	Hunt
1-7 days	2%	29%	7%	34%	1%	12%	4%	26%
8-14 days	69%	59%	66%	58%	54%	68%	63%	59%
15-21 days	19%	11%	20%	7%	40%	19%	23%	12%
22-28 days	8%	1%	5%	0%	3%	1%	7%	1%
More than 28 days	2%	1%	2%	1%	1%	0%	3%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Average days per hunter	14	10	13	10	15	12	14	11

* The study area results reflect the average across all eight countries.

The remainder of the trip was most commonly spent on shopping (61%), photo-safaris or nature tours (54%), and relaxation (54%) (Table 2). This holds true regardless of the country visited.

Table 2. Other activities visiting hunters engaged in while in country (check all that apply)

	South Africa	Namibia	Zimbabwe	Study Area
Shopping	69%	24%	52%	61%
Photo-safari/Nature tours	55%	27%	44%	54%
Relaxing/Enjoy sun & weather	58%	23%	59%	54%
Visiting with friends & family	18%	9%	28%	20%
Hiking	12%	10%	13%	16%
Other	13%	6%	18%	13%
Business	5%	3%	7%	5%

Twenty percent of visiting hunters traveled alone. But when hunters did travel with someone, the travel party most commonly consisted of two people (65%) (Figure 2). Hunting parties tend to be slightly smaller than the travel party, meaning hunters are bringing along others who are adding to the overall economic contributions generated by the direct hunting activity. Seventy five percent of hunting parties include one to two people. Hunting parties larger than four people are uncommon (Table 3).

Figure 2. Travel party size

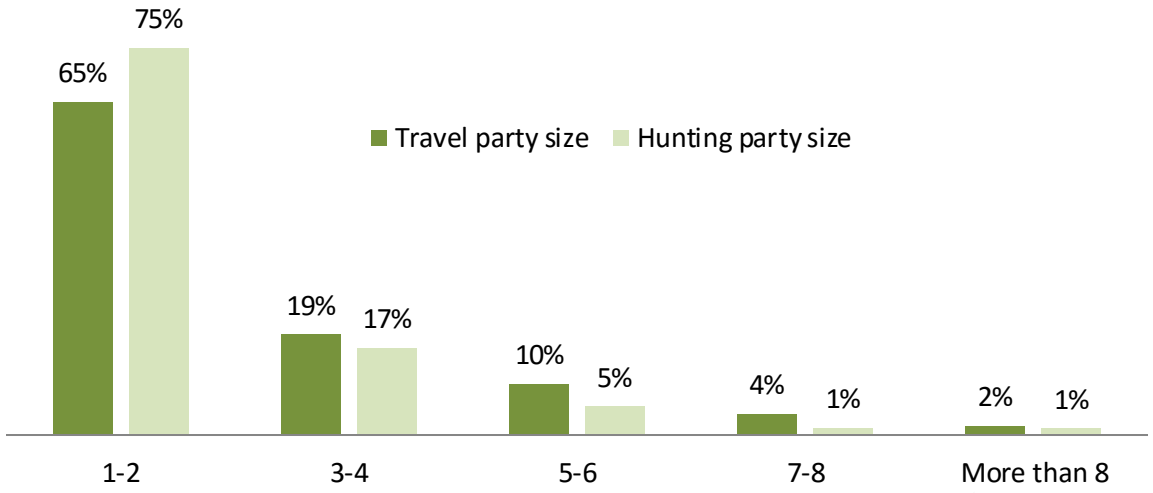


Table 3. Size of the travel party group*

# of people	South Africa		Namibia		Zimbabwe		Study Area	
	Travel party	Hunt party	Travel party	Hunt party	Travel party	Hunt party	Travel party	Hunt party
1-2	58%	70%	66%	76%	82%	87%	65%	75%
3-4	22%	18%	18%	16%	14%	13%	19%	17%
5-6	10%	7%	12%	6%	3%	0%	10%	5%
7-8	7%	3%	2%	0%	1%	0%	4%	1%
More than 8	3%	2%	2%	2%	0%	0%	2%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Average size	3.1	2.4	2.8	2.1	2.1	1.7	2.8	2.1

*Note: While the differences in travel party sizes are quantitatively slight, testing does show that the travel and hunting party sizes in Zimbabwe are statistically smaller than those visiting South Africa or Namibia.

Forty-one percent of visiting hunters are accompanied by their spouse or partner (Table 4). Thirty-six percent are accompanied by friends or colleagues. Hunters were least likely to be accompanied by their children or grandchildren under 18 years of age.

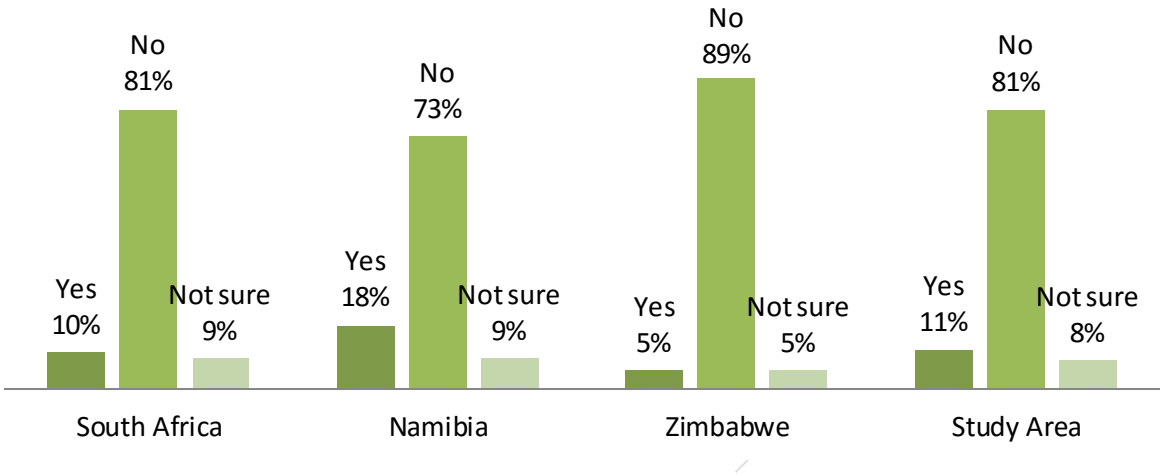
Table 4. Members of the hunting party (check all that apply)*

	South Africa	Namibia	Zimbabwe	Study Area
Spouse/partner	47%	40%	36%	41%
Friends or colleagues	38%	37%	25%	36%
I traveled alone	16%	20%	25%	20%
Other family member(s)	17%	19%	20%	19%
Children or grandchildren (under 18 years)	14%	8%	4%	9%

*Note: Statistical tests of the distributions within each country yield no significant differences across countries with the exception of the proportion of parties brining kids and/or friends along to South Africa relative to parties going to Zimbabwe

Over 80 percent of hunters would not have traveled to their destination countries if they were not able to participate in hunting-related activities (Figure 3). The absence of hunting would mean a complete loss of hunters' spending to their host countries along with the lost economic impact associated with the members of hunters' travel party who did not hunt.

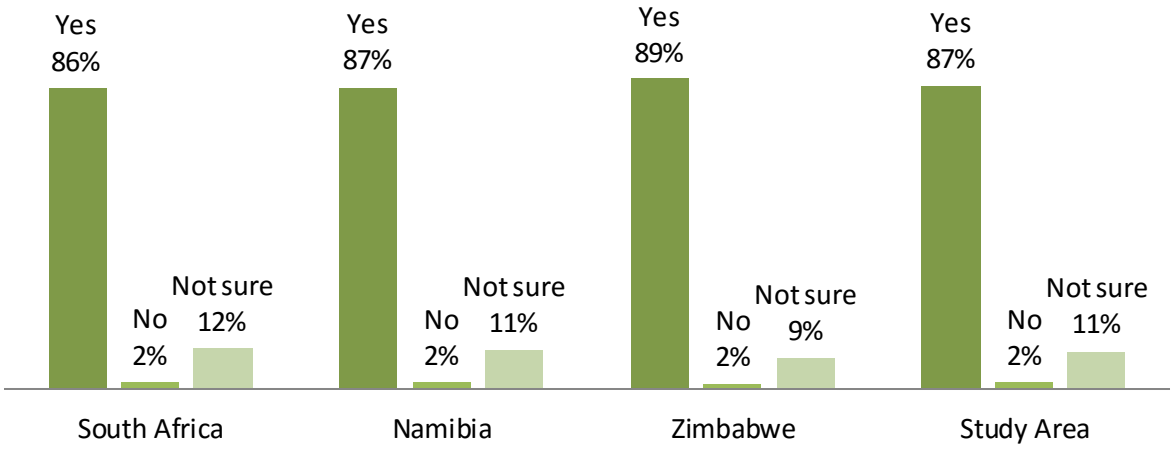
Figure 3. Likelihood of taking trip if not able to hunt*



*There is no statistical differences between the countries reported here.

An overwhelming majority of hunters tell us they do plan to hunt in Africa in a future trip (Figure 4), suggesting a high degree of satisfaction with the hunting experience. Candid comments shared by hunters who respond to the survey are included in Appendix G. Eighteen percent of respondents did choose to share their thoughts with us. One constant theme was a high level of enjoyment with the experience.

Figure 4. Plans to hunt in Africa on a future trip



For twenty-eight percent of the visiting hunters, this trip was their first to Africa to hunt (Table 5). Approximately one half had hunted in Africa between one and five times prior to their most recent trip.

Table 5. Number of times hunted in Africa before most recent trip

	South Africa	Namibia	Zimbabwe	Study Area
None	29%	42%	15%	28%
1-5 times	50%	41%	50%	47%
6-10 times	14%	9%	21%	15%
11-15 times	3%	5%	6%	4%
16-19 times	1%	0%	5%	1%
20 or more times	4%	4%	3%	5%

The mostly commonly-visited country prior to the most recent trip was South Africa (Table 6). Namibia and Zimbabwe were also major destinations for prior hunting travel among respondents. It is interesting to note the degree to which hunters visit and hunt in different countries. For example, among hunters who most recently visited South Africa, 83% have visited South Africa in the past. Forty four percent had also visited Namibia and 38% had visited Zimbabwe. Similar diversity in destination countries is evident among all sample respondents who had previously traveled to the study area. The survey asked for and recorded the countries actually visited and hunted. Stopping in a country to make a transfer to another plane or ground transportation to their destination country was not counted.

Table 6. Countries hunted prior to the most recent trip

Most recent country visited =>	South Africa	Namibia	Zimbabwe	Study Area
Previously hunted:				
South Africa	83%	64%	73%	77%
Zimbabwe	38%	48%	76%	51%
Namibia	44%	57%	53%	48%
Botswana	12%	15%	22%	18%
Mozambique	17%	11%	20%	17%
Tanzania	10%	11%	24%	17%
Zambia	6%	8%	15%	13%
Cameroon	7%	7%	13%	10%
Central African Republic	1%	2%	7%	5%
Ethiopia	3%	3%	4%	4%

Visiting hunters seek out a variety of sources for information to base their decision to hunt in Africa. Information provided at a sportsmen's show, recommendations from family or friends, and prior hunting experience, either in their destination countries or other countries in southern Africa, influenced the decision to hunt in Africa for approximately 50% of visiting hunters (Table 7). Another third of hunters also seek out articles across various media outlets and use information provided by clubs or groups of which they are a member.

Table 7. Sources of information (check all that apply)

	South Africa	Namibia	Zimbabwe	Study Area
Information gathered at a sportsmen's show	53%	47%	62%	52%
Friends or family recommendations	43%	51%	48%	48%
Prior experience hunting in this or other countries in southern Africa	44%	37%	65%	47%
Articles in outdoor or hunting media, including internet sites	32%	36%	35%	33%
Hunting club/other social or recreational group I belong to	35%	28%	35%	32%
Other	13%	16%	17%	14%
Travel agent	6%	8%	9%	7%
Articles in non-outdoor or hunting media, including internet sites	4%	4%	2%	4%

The opportunity to experience a different country and culture, fulfillment of a lifelong dream to hunt in Africa, and the chance to hunt different types of animals were the three most commonly reported psycho-social motivations influencing the decision to hunt in Africa (Table 8).

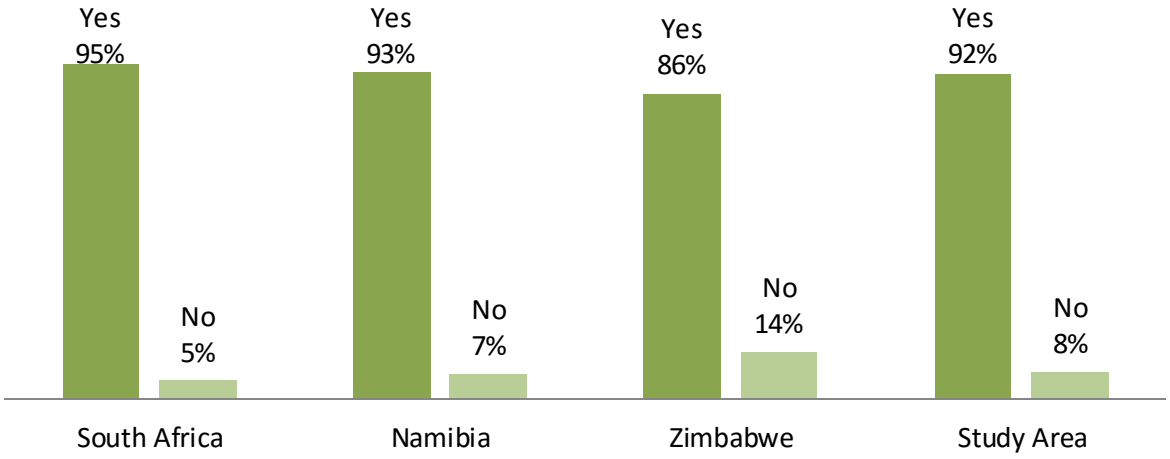
Table 8. Psycho-social motivations influencing the decision to hunt in Africa

	South Africa	Namibia	Zimbabwe	Study Area
To see and experience a different country and culture	71%	74%	77%	74%
It has been a long-time dream to hunt in Africa	66%	79%	71%	70%
I wanted to try hunting different types of species	70%	62%	80%	69%
The thrill of the chase	44%	41%	71%	50%
I wanted to bring home a hunting trophy	48%	39%	45%	45%
To have an outdoor expedition experience	38%	47%	55%	45%
A friend, relative, or colleague asked or encouraged me to go	31%	34%	30%	31%
Other	11%	10%	5%	9%
It was something I tried as part of a vacation	8%	5%	2%	5%

II. The Hunting Experience

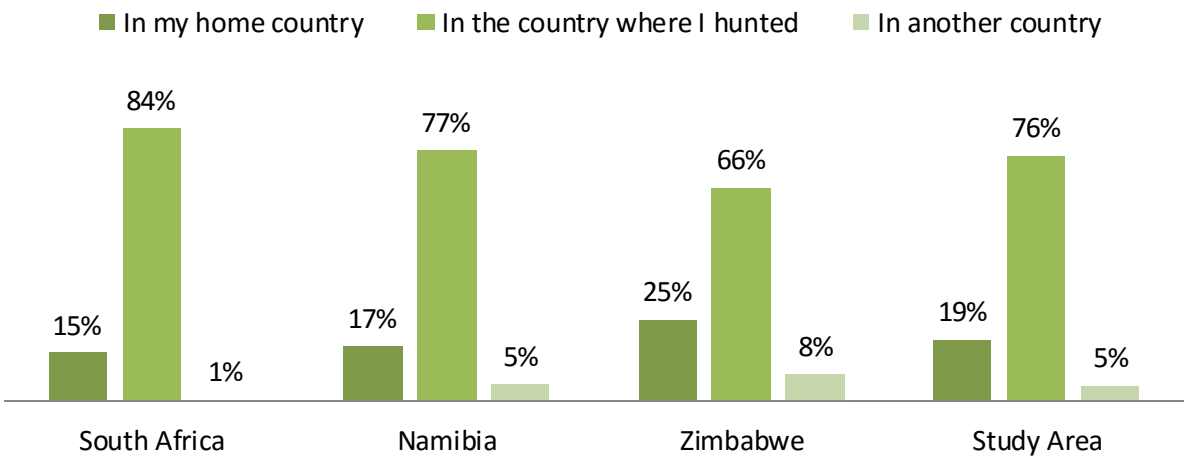
The majority (86% or greater) of hunters who took game exported at least one game trophy, too (Figure 5). Insights into species-specific harvest and interests are shared in Appendix E.

Figure 5. Percentage of hunters exporting game trophy



Among those hunters who exported game trophies, the majority (81% across all countries) hired a company within their country of home residence to receive trophies and complete the importation process. The majority of hunters also hired either a taxidermist or a firm to export trophies, or both. And, these businesses were largely located within the destination country where the hunting took place (Figure 6).

Figure 6. Location of taxidermist and/or export service company



Three-quarters of visiting hunters purchased a hunting package that covered multiple services and hunting arrangements (Figure 7). Services most commonly included were food and beverage, lodging, in-country ground transportation and the professional hunter fee (Table 9). Gratuities, firearm rental, ammunition and trophy processing were least-commonly included within the package cost.

Figure 7. Percentage of hunters who purchased a hunting package

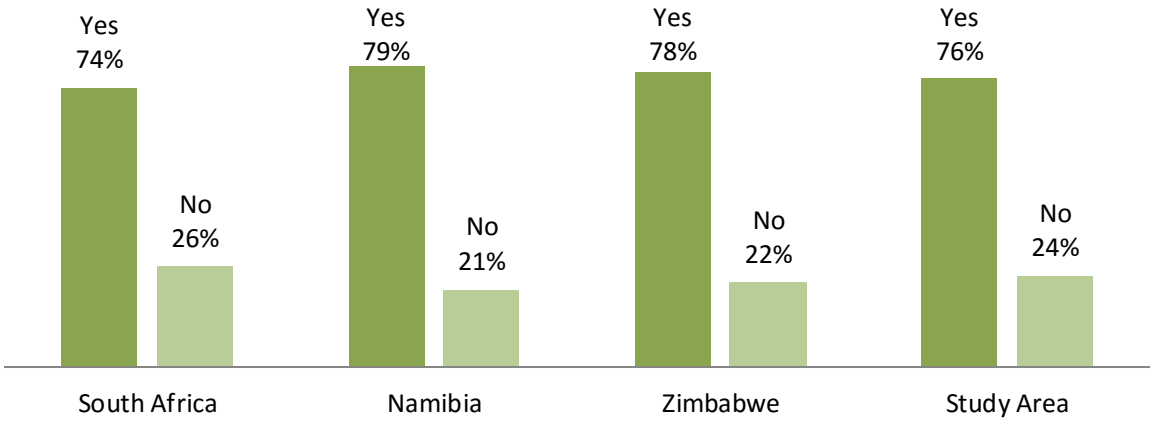


Table 9. Goods and services included with hunting package (Check all that apply)

	South Africa	Namibia	Zimbabwe	Study Area
Accommodations	99%	98%	98%	99%
Food & beverage	99%	98%	98%	98%
Professional hunter fee/ Outfitter fee	96%	100%	100%	98%
Ground transportation (from airport and on hunt)	93%	97%	91%	94%
Licenses &/or permits	77%	87%	84%	83%
Trophy fees (fees paid per game animal taken)	76%	86%	76%	79%
Camp staff services	74%	72%	88%	77%
Conservation fees (not licenses)	38%	52%	60%	51%
Gratuities and tips	29%	33%	33%	31%
Firearm rental & ammunition costs	18%	17%	10%	17%
Shipping	16%	15%	10%	15%
Taxidermy	11%	11%	2%	9%
Other goods and services	7%	6%	3%	5%

III. The Average Cost of the Trip

Hunters, on average, spent just under $13,000 on a hunting package, which is just part of the cost for a hunt in Africa (Table 10). The reported average cost of the package ranges from $9,000 to $19,000 depending upon the country visited. Table 10 shows the results of our detailed analysis of advertised safari package costs offered by professional hunters operating in each of the participating countries. Included are the minimum and maximum potential costs of a package per hunter per day as well as the total cost per hunter assuming an 11 day hunting trip (the average based on the hunter survey results). The average cost of a package reported by hunters is found to fall within the range of package pricing offered by the professional hunters and outfitters, as identified by examining advertised rates.

Table 10. Minimum and maximum cost of hunting packages by country ($US)

	# of companies reviewed	# of packages	Cost of package per hunter per day		Total cost of package per hunter*	
Country			Min	Max	Min	Max
Botswana	16	34	$240	$4,300	$2,640	$47,300
Ethiopia	9	52	$1,200	$3,685	$13,200	$40,535
Mozambique	13	59	$142	$4,857	$1,562	$53,427
Namibia	16	52	$300	$3,929	$3,300	$43,219
South Africa	21	113	$320	$5,000	$3,520	$55,000
Tanzania	12	84	$1,500	$5,000	$16,500	$55,000
Zambia	11	57	$500	$5,000	$5,500	$55,000
Zimbabwe	14	145	$400	$3,500	$4,400	$38,500

*Total cost assumes an eleven day hunting trip.

On average, hunters spent slightly more than $3,900 on items or services provided outside of the destination country prior to the trip (Table 11). When in the country where they hunted, they spent close to $3,800 on additional items and services. Approximately one-third of this spending was allocated to expenses related to professional hunters and outfitters, in addition to the fees included in the cost of their hunting package. Another 25% was allocated to hunting expenses such as firearms, ammunition, etc. An additional three days were spent in their destination country engaged in non-hunting activities resulting in greater spending where hunters purchased items such as transportation, lodging, food, entertainment and gifts. This additional spending contributes to the national economies of each country as a result of hunting-related tourism.

Average total spending per hunter is estimated at $26,000. Average in-country spending on the hunting activity (package and in-country expenditures) is estimated to be $16,700. Accounting for the proportion of hunters who utilize taxidermy and export services inside of the destination country, hunters are estimated to spend an average of another $4,000 on those services. Total in-country direct spending is $20,600. At the country-level, hunters in South Africa and Namibia typically spend less than hunters who visit Zimbabwe. In a report focusing on the hunting industry in the Southern African

Development Community (SADC) region, Bartlett and Patterson (2005, p. 86) say that actions by the country of Zimbabwe to "limit quotas, minimum trophy size, and develop a limited off-take, high-value industry" have earned the country a reputation as a quality hunting destination. This evidence would support the higher reported spending among hunters visiting Zimbabwe. Detailed spending profiles for each of the countries and the study area are included in Appendix F.

Table 11. Estimated average hunter spending per trip ($US)

	South Africa	Namibia	Zimbabwe	Study Area*
Hunting package	**$9,066**	**$9,781**	**$18,875**	**$12,921**
Spending at home	**$3,434**	**$3,413**	**$5,114**	**$3,963**
Spending in country	**$3,534**	**$2,330**	**$5,794**	**$3,766**
Trip-related	*$879*	*$632*	*$1,244*	*$1,000*
Hunting related	*$2,228*	*$1,290*	*$4,134*	*$2,355*
Professional hunter fees & outfitters	$1,103	$770	$1,965	$1,176
License and/or permit	$41	$133	$294	$133
Hunting expenses	$1,040	$366	$1,705	$941
Conservation fees	$45	$20	$170	$104
Other items	*$426*	*$408*	*$416*	*$411*
Total taxidermy & export	**$5,042**	**$3,545**	**$6,348**	**$5,152**
In-country portion of taxidermy	$4,235	$2,730	$4,190	$3,916
Total spending per hunter	**$21,076**	**$19,068**	**$36,131**	**$25,802**
In-country spending per hunter				
Package, in-country and taxidermy**	**$16,835**	**$14,840**	**$28,859**	**$20,602**
	N=165	**N=117**	**N=73**	**N=389**

*The study area spending profile is used as the direct spending estimates for Botswana, Ethiopia, Mozambique, Tanzania, and Zambia.

**Adjusted to reflect only that portion of spending that occurs in-country.

At this point it would be beneficial to pause and compare these estimates of hunter spending with spending estimates from other studies. In Table 20, we report the number of hunters and their spending for a number of the participating countries, and over multiple years in some instances, as reported in existing literature. A portion of that table is contained in Table 12. Also included in Table 12 is a calculated average spending per hunter per trip for those countries where both hunter and spending is available. It is important to note that the hunter spending value is widely defined across these studies. Hunters' expenditures typically include daily fees and trophy fees, and in a minority of cases revenues include spending that occurs outside of hunting-related activities. This, in part, explains some of the differences seen within these historical spending estimates as well as between these and our spending estimates. Nevertheless, the spending estimates from previous studies provide relative benchmarks from which to evaluate the hunter spending estimates calculated as part of this latest effort.[4]

Table 12. Historical estimates of average hunter spending per trip ($US)

Country	Year	Number of hunters per year	Industry Revenue (million)	Average spending per hunter[a]	Source
Botswana	2000	339	$12.6	$37,000	Bartlett & Patterson (2005)
	2007	350	$20.0	$57,143	Lindsey, Roulet, and Romanach (2007)
Ethiopia	2007	50	$1.3	$26,000	Lindsey, Roulet, and Romanach (2007)
	2008	57	$1.5	$26,848	Seige (2010)
Mozambique	2008	542	$5.0	$9,225	Booth (2010 & 2012)
Namibia	2000	3,644	$19.6	$5,379	Humavindu & Barnes (2003)
	1998-2003	-	-	$4,750-$8,330	Samuelsson & Stage (2007)
	2007	5,363	$28.5	$5,314	Lindsey, Roulet, and Romanach (2007)
South Africa	2007	8,530	$100.0	$11,723	Lindsey, Roulet, and Romanach (2007)
	2012	8,387	$98.2	$11,709	SA PH Stats (2013)
	2012	-	$156.0	$17,280	Van De Merwe et al. (2012)
Tanzania	2007	1,654	$27.6	$16,687	Lindsey, Roulet, and Romanach (2007)
Zambia	2007	250	$5.0	$20,000	Lindsey, Roulet, and Romanach (2007)
Zimbabwe	2007	1,874	$16.0	$8,538	Lindsey, Roulet, and Romanach (2007)

[a] Authors calculations based on hunter counts and spending.

Beginning with South Africa, historical estimates range from $11,700 to $17,000. The most recent estimate of $17,000 applies techniques similar to those taken here, which includes both hunting and non-hunting related spending during the trip. Thus, the direct spending estimates are highly comparable. We find that the two estimates are similar in magnitude, with our estimates for South

[4] An observation can also be made about the typical number of days hunters spend in each country. The average days per hunter ranges between 9-16 days across the observed countries, which is in line with the results of this study's findings. The historically estimated number of hunting days in Namibia however is lower (3-5 days per hunter), which may help explain in part the lower historically reported spending estimates. Other factors that can drive differences in spending include the species targeted. For example, the cost to take one of the big five species is much higher than a plains animal such as oryx, and countries such as Zimbabwe that typically offer more opportunities to harvest a big five species may therefore experience greater revenues per day of hunting.

Africa equaling $16,800 per hunter. Please note all spending estimates have been converted to 2014 U.S. dollars to permit comparisons.

Looking next at Namibia, hunter spending per trip estimates range from $5,300 to $8,300. Expenditures from Samuelsson & Stage and Humavindu & Barnes include both hunting and non-hunting related spending, to some degree. However, in both cases, limitations within the studies potentially impact the results' precision. In the Samuelsson & Stage report, sample selection bias, respondent sample size, and recall bias all influence spending estimates. In addition, Humavindu & Barnes report that their methodology conservatively estimates the number of hunter days and by extension spending per hunter; therefore, their estimates are lower relative to our estimates for Namibia, which equal $14,800 per hunter. In addition, Namibia's overall tourism industry has reportedly grown at significant rates in recent years, potentially offering more hunting and non-hunting experiences and increased opportunities for visitors to spend money per trip.

According to Lindsey, Roulet, and Romanach, the amount spent per visiting hunter in Zimbabwe is estimated to be $8,500. More recent estimates suggest that hunter spending is higher. Booth (2009) examines the comparative pricing of hunting-related tourism packages in Southern and Eastern Africa and reports the average safari package cost across each country in the study area, including Zimbabwe. He finds that package prices can range from $35,000 for a 10-day Buffalo and plains game safari to $87,000 for a "Big Four" safari (trophy fees are included in these package costs which is most reflective of the high success rate experienced among all hunters evaluated in this research). The additional spending that occurs outside of hunting-related activities is not included in these values, thereby adding to these base prices for each package, along with potential discretionary spending within the country on non-hunting activities which may have increased over time due to inflationary issues and increased opportunities for non-hunting activities. Additionally, the Reserve Bank of Zimbabwe (2014) reports spending on export shipments alone total $6,600 per hunter on average, which also does not include package or other expenses incurred on the trip. This evidence suggests that spending per hunter per trip is higher than $8,500. Our estimates place hunter spending at $28,800. Please note that all results are reported in standardized 2014 U.S. dollars to overcome effects of high inflation rates, plus most hunters to Zimbabwe do not pay their hunting costs in Zimbabwe currency, thus further shielding inflationary effects.

The spending estimate across the eight countries comprising the study area was used to calculate total direct spending and economic contributions for Botswana, Ethiopia, Mozambique, Tanzania, and Zambia. The study area's estimate reflects the overall average across all visiting hunters and all eight countries covered in this effort, and the spending within the destination countries is estimated to be $20,600 per hunter. Comparing this to the historical estimates, we find them to be similar in magnitude for Ethiopia and Zambia (Table 12). In the case of Tanzania, our estimate of $20,600 is greater than historical estimates. Booth (2009) suggests that hunting package prices alone can be higher across all types of packages, suggesting that hunter spending is greater than the historical estimates.

In the case of Botswana, the study area estimate of $20,600 is quite a bit lower than historical estimates suggest as the amount spent by the average tourist hunter. Evidence from Booth (2009) finds that the higher estimates are potentially in line with the relative costs of hunting package costs. However, we elect to take a conservative approach in the absence of a sufficiently large enough sub-set within the

respondent sample to develop a country-level hunter spending profile. Given this study covered hunting efforts in the targeted countries between 2012 to 2014, and that hunting was severely curtailed in 2014, this certainly reduced hunting and visits to Botswana over the entire study period and affected survey responses and hunter spending to an unknown degree.

IV. The Economic Impact of Hunting-related tourism

Two measures – participation and spending – structure the methodological approach for estimating the economic contribution of hunting-related tourism for each country. In the previous section, spending was estimated. In this section, participation and economic contributions are investigated.

The number of visiting hunters arriving in each country varies widely across the participating countries (Table 13). South Africa received the greatest number of visiting hunters while Ethiopia received the fewest number of visiting hunters.

Table 13. Estimated annual tourist hunter visitation and direct in-country spending ($US). Annual averages from 2012-2014.

Country	Licensed international hunter population	Estimated total direct hunter spending		
		Average	*Lower Bound*	*Upper Bound*
Botswana	**350**	**$7,210,737**	*$6,057,345*	*$8,364,648*
Ethiopia	**21**	**$432,644**	*$363,441*	*$501,879*
Mozambique	**428**	**$8,817,701**	*$7,407,268*	*$10,228,770*
Namibia	**7,076**	**$105,007,764**	*$76,402,081*	*$133,667,310*
South Africa	**8,387**	**$141,197,113**	*$109,074,641*	*$173,397,835*
Tanzania	**794**	**$16,358,071**	*$13,741,520*	*$18,975,802*
Zambia	**398**	**$8,199,638**	*$6,888,067*	*$9,511,800*
Zimbabwe	**1,361**	**$39,276,470**	*$26,870,661*	*$51,682,279*
Study Area	**18,815**	**$326,500,138**	*$246,805,022*	*$406,330,324*

Note: Licensed international hunter population estimates are reported directly from each country through personal communications or gathered at the AWCF conference hosted by Ethiopia in 2014.

Multiplying the estimated in-country spending with the number of visiting hunters generates the total direct hunter spending within each country (Table 13). Again, the country-specific direct spending estimates were used to estimate total hunter spending in South Africa, Namibia, and Zimbabwe. For all other participating countries, the study area direct spending estimates were used. Total direct spending by visiting hunters ranges from $141 million in South Africa to $432,000 in Ethiopia. Based on the analysis of the business operation survey, professional hunters say that the majority of this spending remains in-country. When asked specifically about their business spending that occurs outside of the country, responses do vary by country of operation but, in general, they report spending little to no

money outside of the country. When spending does occur outside the country, it is most commonly on marketing and advertising expenses.

A degree of uncertainty is associated with a project of this nature. It is challenging to reach the target population of visiting hunters to collect information about their trip. Even when a sample of the population can be reached there might be some hesitancy on the part of a hunter to fully disclose their information or to participate at all. And, in many cases, there are only a handful of comparative studies. For this reason, we include the estimated averages as well as the statistically calculated lower and upper bound of estimates. For these lower and upper bounds, the interpretation is that the true value of direct spending, for example, falls within these bounds at a statistically-based confidence level of 95%. These upper and lower bounds are calculated as approximately two standard deviations above and below the calculated mean. This approach is based on the assumptions of that the sample gathered is statistically reliable and that the distribution around the mean is normally distributed. The approach used to develop the survey sample included multiple rounds administered via different approaches in an effort to reach a broad distribution of the hunter population. While the specifics about the population of visiting hunters are not known, we assume our sample is a statistically reliable representation of that population. The distribution of spending based on our sample is roughly normal, with a slight skew to the right, as some hunters spend more than others and the lower bound limited by zero (a value of zero is not possible as all hunters have to pay something to hunt). But with larger sample sizes, it is feasible to use a t-distribution to determine confidence intervals. So, the upper and lower bounds use the calculated mean and the standard error of the mean to estimate the upper and lower bounds of the confidence interval around the mean.

Indirect contributions are the secondary effects generated from the direct contribution, such as the retailers buying additional inventory and the wholesalers and manufacturers buying additional materials. Indirect contributions affect not only the industry being studied, but also the industries that supply the first industry. An induced contribution results from the salaries and wages paid by the directly- and indirectly-affected industries. The employees of these industries spend their income s on various goods and services. These expenditures are induced contributions, which, in turn, create a continual cycle of indirect and induced effects.

The direct, indirect and induced contribution effects sum together to provide the overall economic contribution of the activity under study. As the original retail purchase (direct contribution) goes through round after round of indirect and induced effects, the economic contribution of the original purchase is multiplied, benefiting many industries and individuals.

Using multipliers derived from the WTTC data, it was possible to measure hunters' total economic contribution to each national economy as well as the contribution to GDP. The GDP contribution of hunting-related tourism is a "value added" measure of economic output reflecting the difference between gross output (sales and other income) and intermediate output (goods and services imported or purchased from other industries).

Table 14. Estimated contribution to GDP and total output driven by direct hunter spending ($US)

Country	Contribution to GDP (Value Added)			Total Output		
	Average	*Lower Bound*	*Upper Bound*	Average	*Lower Bound*	*Upper Bound*
Botswana	**$8,076,025**	*$6,784,226*	*$9,368,406*	**$14,262,837**	*$11,981,428*	*$16,545,275*
Ethiopia	**$644,640**	*$541,527*	*$747,800*	**$1,064,305**	*$894,064*	*$1,234,622*
Mozambique	**$12,080,250**	*$10,147,957*	*$14,013,415*	**$18,693,526**	*$15,703,407*	*$21,684,993*
Namibia	**$115,508,540**	*$84,042,289*	*$147,034,041*	**$262,519,409**	*$191,005,203*	*$334,168,274*
South Africa	**$206,147,785**	*$159,248,976*	*$253,160,840*	**$344,520,956**	*$266,142,124*	*$423,090,718*
Tanzania	**$28,790,206**	*$24,185,075*	*$33,397,412*	**$39,586,533**	*$33,254,478*	*$45,921,442*
Zambia	**$10,413,540**	*$8,747,845*	*$12,079,986*	**$17,219,239**	*$14,464,940*	*$19,974,780*
Zimbabwe	**$44,775,176**	*$30,632,553*	*$58,917,798*	**$76,196,351**	*$52,129,082*	*$100,263,621*
Study Area	**$426,436,162**	*$324,330,447*	*$528,719,697*	**$774,063,157**	*$585,574,726*	*$962,883,724*

Estimated contributions to GDP range from $206 million in South Africa to $645,000 in Ethiopia (Table 14). A less conservative approach which factors into the model the intermediate demand for goods and services in addition to final demand is the Total Output estimate. Total output estimates range from $344 million in South Africa to $1.0 million in Ethiopia.

Estimated total employment supported by hunting-related tourism ranges between 300 full- and part-time jobs in Ethiopia to more than 14,000 full- and part-time jobs in Tanzania (Table 15). These jobs represent not only the employment supported by direct retail sales but also those supported by indirect and induced economic activities and are in sectors supporting the businesses visited by visiting hunters.

Table 15. Estimated jobs supported by direct spending and through multiplier spending

	Estimated employment supported by total economic contribution		
Country	**Average**	*Lower bound*	*Upper bound*
Botswana	**316**	*298*	*411*
Ethiopia	**503**	*423*	*584*
Mozambique	**10,690**	*8,980*	*12,401*
Namibia	**8,367**	*6,087*	*10,650*
South Africa	**12,742**	*9,843*	*15,647*
Tanzania	**14,161**	*11,896*	*16,428*
Zambia	**782**	*657*	*908*
Zimbabwe	**5,861**	*4,009*	*7,712*
Study Area	**53,423**	*42,194*	*64,741*

According to the International Union for Conservation of Nature's (IUCN) Species Survival Commission, "Trophy hunting is a form of wildlife use that, when well-managed, may assist in furthering conservation objectives by creating the revenue and economic incentive for the management and conservation of the

target species and its habitat, as well as supporting local livelihoods."[5] (IUCN p. 4) In aggregate, the economic contributions are sizable, generating an estimated $774 million in total output, $426 million in value added contributions to GDP, and 53,000 in full- and part-time jobs. While these contributions are measured countrywide, they are felt most at the community level in those areas visited by hunters. Hunting-related jobs generally occur in impoverished rural areas with extremely high unemployment. A job in these areas is arguably much more valuable than a job in the city where opportunities are greater, and impacts many more lives. And in these areas, hunting offers an alternative for land-use and incentives for wildlife conservation in areas that might not otherwise be suitable for ecotourism alone (Lindsey et al. 2006).

The contribution of hunting-related tourism to wildlife conservation efforts also varies from country to country. Taking a very narrow and simplistic view based on the evidence collected through this project, we estimate a portion of the contribution to conservation among all eight countries, collectively. To do this, we draw from both the Visiting Hunter survey as well as the Professional Hunter business operations survey. On average, visiting hunters spend $12,900 on their hunting package. According to professional hunters operating in the study area, 17% of their total business expenses are allocated toward fees paid to landowners (private, community, and government). Based solely on this data, the contribution to conservation through landowner fees is estimated to be within the range of $26.5 to $40.2 million each year (using the upper and lower bounds of the 95% confidence interval).[6]

Again, this is calculated as a simplistic measure of spending on those expenses identified as conservation or landowner fees aggregated across the licensed visiting hunter population.[7] We would argue that this is an imprecise and even a conservative estimate at best, as it does not include any portion of the trophy fee also included within the package cost. This area of research deserves dedicated in-depth analysis for a variety of reasons. First, there is interest in knowing the contribution hunting-related tourism makes to the funds available for conservation with more precision. And, understanding the degree to which political and social factors within each country play a role in the distribution and effectiveness of conservation monies is critical to understanding the landscape of wildlife management. There is evidence that, in those countries where the level of land and resource ownership is divested to individual communities or conservancies, conservation funds can be significant sources of revenue at the local level, generating economic and societal benefits (Taylor 2009; NACSO 2011).

[5] The International Union for Conservation of Nature is an international organization which focuses on conservation and sustainable uses of natural resources.

[6] Payments to landowners affect conservation in several general ways. In many cases, land is owned communally, and payments by hunters to the community provides revenues for schools, clinics and other beneficial services, thus providing the local community an incentive to conserve wildlife and support anti-poaching efforts. Payments to private landowners reduces the pressure to convert natural habitat into agricultural or other developments, thus maintaining habitat for all species of wildlife.

[7] This conservation estimate is calculated using the upper and lower bounds of the average amount spent directly on a hunting package as reported by visiting hunters and the proportion of expenditures allocated to conservation costs as reported by professional hunters through their business survey. For example, the average spending on a hunting package within the region is $12,921. Professional hunters report that 17% of their expenses are allocated to landowner or conservation fees. This equates to an average of $2,197. The measure's methodology is imprecise which in turn impacts the precision of the estimate itself. Also, we draw from the survey of professional hunters which is limited to a small population of professional hunters who market tours in the United States, a sub-set of all professional hunters operating within the eight country region.

DISCUSSION

Hunting provides significant, positive economic impacts to many areas of Africa, and is an important part of the tourism economy. It all begins with direct spending within a country by visiting hunters. Direct spending per hunter varies from $14,800 in Namibia, $16,400 in South Africa, and $29,500 in Zimbabwe to $20,600 in each of the other five countries within the study area. This spending, totaling $326.5 million annually, then stimulates rounds of spending through the local and national economies, touching and benefiting many people and creating additional benefits, including $426.4 million in Gross Domestic Product and supporting over 53,400 jobs.

These impacts begin with the individual hunter. Efforts to recruit additional hunters to each country can be significant, as shown in Table 16. For example, for every hunter who visits Tanzania, on average, national GDP increases by more than $36,000 and 18 jobs are supported. Efforts focusing on recruiting additional hunters may provide significant returns to national economic development efforts, especially if the focus is to enhance rural economies where other economic opportunities are limited.

Table 16. Average Economic Impacts Generated Per Hunter, 2012-2014

Country	Number of Visiting Hunters	Spending In-Country Per Hunter[2]	Contribution to GDP (Value Added) per Hunter	Full- and Part-Time Jobs Supported Per Hunter
Botswana	350	$20,602	$23,074	1
Ethiopia	21	$20,602	$30,697	24
Mozambique	428	$20,602	$28,225	25
Namibia	7,076	$14,840	$16,324	1
South Africa	8,387	$16,835	$24,579	2
Tanzania	794	$20,602	$36,260	18
Zambia	398	$20,602	$26,165	2
Zimbabwe	1,361	$28,859	$32,899	4
Average	**18,815**	**$20,602**	**$22,665**	**3**

However, the findings in this report provide additional insights and thoughts. Hunting's support of conservation, for example, stands out, along with insights about the uniqueness of hunting as an economic generator. These points and more are presented here.

1. Hunting provides economic benefits beyond just the hunters themselves. Over 80% of hunters traveled with one or more others. The typical travel party had three people, one of whom did not hunt, but still must spend significant dollars for accommodations, transportation and other goods and services which stimulates even greater economic impacts than the figures presented here.
2. Hunters are interested in more than just the actual hunt. Their desire to experience more than just hunting helps spread their economic benefits to all parts of each nation's economy. As shown earlier in Table 2, nearly two thirds engage in shopping while in Africa, with over half also participating in photo safari activities, indicating hunting and photo safari are not mutually

exclusive activities. When hunters participate in other activities besides hunting, their spending benefits a broader section of the economy. Likewise, their absence would have impacts on parts of each nation's economy not normally viewed as connected to hunting.

3. For tourists visiting to hunt, their dollars, associated jobs and economic growth would be lost to Africa if hunting was not available. Roughly eighty percent of hunters report they would not have traveled to their destination countries if they were not able to participate in hunting-related activities. Attempts to substitute other activities for hunting would fail to attract their dollars in the eight-nation study area.
4. An overwhelming majority of hunters tell us they plan to hunt in Africa again in a future trip, suggesting a high degree of enjoyment and satisfaction with the hunting experience. Candid comments shared by hunters who respond to the survey are included in Appendix G, and reflect their satisfaction and passion for hunting in Africa. These types of feedback indicate future demand for hunting opportunities should continue, thus benefiting future African communities if hunting and wildlife is properly managed and permitted.
5. According to the International Union for Conservation of Nature's (IUCN) Species Survival Commission, "Trophy hunting is a form of wildlife use that, when well-managed, may assist in furthering conservation objectives by creating the revenue and economic incentive for the management and conservation of the target species and its habitat, as well as supporting local livelihoods."[8] Hunting assigns positive economic values to wildlife in two general ways. First, funds are required to keep habitat in its natural state and to fund wildlife research and law enforcement activities. Through the payment of fees to private landowners and communities to access their lands, and through the purchase of licenses and permits, cash is raised to help ensure wildlife in the future through sustained natural habitat, effective management and law enforcement. Second, by providing jobs and income to local communities, hunting conveys a positive value to wildlife which incentivizes communities to protect game species and the land they – and all wildlife species – depend upon. These positive values for wildlife are critical, considering many rural parts of Africa – especially where photo safari and other economic activities are not viable – place negative values on wildlife when crops are trampled and livestock lost to predation. When local communities hold negative values for wildlife, residents will intentionally engage in efforts to either reduce or completely eliminate problem species, such as elephants and large cats. Such efforts are minimized when wildlife provides positive economic benefits to the local community. The cash resulting from these positive values can then be used in part to protect crops and livestock through enhanced fencing and other means, as well as to benefit the local community via education, transportation and health improvements.

   Evidence from this research indicates that the estimated contribution to conservation through fees paid to landowners (private, community, and government) alone is estimated to be within the range of $26.7 million to $40.2 million each year (which is an imprecise and even a conservative estimate at best given it does not consider trophy fees which also typically go to landowners and communities). Plus, as shown earlier in this report, hunters' spending supports tens of thousands of jobs and helps boost GDP growth which encourages local communities and

[8] The International Union for Conservation of Nature is an international organization which focuses on conservation and sustainable uses of natural resources.

national governments to enact effective conservation measures and policies. Eliminating hunting would likely significantly reduce efforts to conserve and protect African wildlife, and result in many species being regarded as economic negatives in many places. The limited understanding of the specific amounts of funding generated by hunting for conservation, and how these funding mechanisms operate and could be improved, shows the need for in-depth research to quantify a more precise measure of hunting's conservation contributions. Research is also needed to better understand the degree to which political and social factors within each country play a role in the distribution and effectiveness of conservation monies if future conservation funding is to provide the maximize benefits possible.

6. Hunting occurs in regions away from urbanized areas where most economic activities occur. These activities typically constitute a majority of most nations' economic output, and include manufacturing, services and more. However, rural areas typically do not share in the wealth produced in more developed places. The areas where hunting occurs are generally not physically attractive enough for photo safari operations. Agriculture also may not be a reasonable economic opportunity in many areas where hunting occurs or these areas would already be farmed. Altogether, these considerations show that hunting provides important economic opportunities for many areas where other forms of income are limited.

This report provides a greater understanding of hunting's contributions to Africa and conservation. Readers are encouraged to examine these results carefully and compare the findings to other sources of information to develop the best understand possible of hunting's role in Africa. The authors look forward to additional research by others into this topic.

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APPENDICIES

Appendix A: Methodology

Appendix B: Summary of current literature

Appendix C: Visiting hunter survey

Appendix D: Professional hunter & outfitter business operations survey

Appendix E: Species-specific interest, harvest, and export

Appendix F: Detailed spending profiles for South Africa, Namibia, Zimbabwe and the Study Area

Appendix G: Voice of the hunter

Appendix A: Methodology

METHODOLOGY

This effort began as a result of discussions about the economic importance of hunting-related tourism at the 12th African Wildlife Consultative Forum (AWCF) in Zambia in 2013. Eight countries in southern and southeastern Africa worked collaboratively with Southwick Associates to provide data and information for this project (Figure A 1). These particular countries were selected based on the identifiable population of visiting hunters as well as the ability of their hunting industry to provide necessary data. To the extent that hunting occurs in other neighboring nations, this report does not reveal and therefore remains conservative in its estimation of the economic contributions generated by hunting in Africa.

Figure A 1. Participating counties in southern and eastern Africa

The overarching approach included the following project phases: 1) quantifying the number of hunters in each of the eight countries, 2) determining how much a hunter spent per trip, and 3) using economic multipliers to estimate annual economic contributions for each participating country. Each of these phases are described in more detail in subsequent sections.

I. Quantifying the current population of visiting hunters

Initial steps were taken to gather detailed contact information for licensed visiting hunters within each country in late March 2014. The goal was two-fold: 1) quantify the number of visiting hunters in 2012 and 2013 and 2) provide a link through which an online survey, exploring trip and spending behaviors, could be administered (the Visiting Hunter survey is discussed in detail in the next sub-section). The first phase of the project included a letter from Southwick Associates outlining the requested data, methods for sharing data files, and how to contact Southwick Associates. We requested at that time to receive contact information for visiting hunters for surveying purposes no later than the end of April, 2014.

The feedback from country representatives was supportive. However, some countries were prevented by regulation from sharing the contact information of their licensed hunters while others did not maintain such information and referred us to their professional hunters and outfitters operating in-country.

Following the soft deadline at the end of April, 2014, contacts in each country received follow-up emails at regular intervals with reminders of the need for the information. However, Southwick Associates received very little visiting hunter contact information for use in administering economic surveys. Southwick Associates requested the assistance of the SCI Foundation (SCIF), a non-profit conservation organization with an extensive network in Africa, to encourage government contacts to share information. SCIF's communication efforts resulted in receiving hunter contact information from a total of four of the nine participating countries. However, these data lacked any substantive contact information for their hunters, which would allow the implementation of either a mail or online survey of activity and expenditures. Follow-up discussions with these nations revealed that contact information for hunters would also not be available at the national wildlife management agency level. Like the initial responding nations, collaboration with the professional hunters and/or outfitters would be necessary, though difficult due to companies' desire to protect the privacy of their clients and maintain their list's security.

Determining the annual number of hunters within each country was a challenge, but less challenging than securing hunters' contact information. The initial request was made in mid-July, 2014. Feedback to this request was slow and required follow-up appeals for many countries. Those were sent approximately every couple of weeks. Representatives from participating countries were again asked to report hunter numbers and harvested trophy counts at the African Wildlife Consultative Forum (AWCF) held in Ethiopia in 2014. With the exception of Botswana, we were provided with international hunter counts at this venue for each country.

II. Quantifying international hunter spending on their most recent trip

Contacting the international hunting tourist

At the project's outset, participating countries agreed to provide international tourist hunter contact information. With this information, Southwick Associates would then implement either a mail-based or online survey. Given the challenges faced with gathering contact information from each country, the initial survey approach was no longer feasible. Therefore, an alternative survey method was identified using an anonymous online survey of hunters launched with the cooperation of professional hunters and outfitters working within the study area.

In early June, 2014, Southwick Associates reached out to professional hunters' associations in the targeted nations with introductions from SCIF staff. This revised approach consisted of distributing the anonymous online survey with the help of professional hunters as the conduit to their hunting clients. This was regarded as feasible as all visiting hunters are required to use the services of professional hunters. The goal was to provide a simple, streamlined, transparent and confidential process in hopes that the professional hunters would be willing and able to reach out to their customers and request their response to the survey, thereby eliminating the need for Southwick Associates to collect and maintain the professional hunters and outfitter's confidential customer contact information which was not reported as likely to happen by the professional hunting associations in the targeted countries.

At the same time, Southwick Associates also fielded the survey to its proprietary HunterSurvey panel of U.S. hunters to identify those who had hunted in Africa within the prior two years. Those hunters were also asked to participate in the confidential survey.

Visiting hunter survey implementation

The visiting hunter survey was developed within Southwick Associates' online survey platform (survey is available for review in Appendix C). The structure of the survey focuses on three aspects of the trip: 1) trip location and duration, 2) the hunting experience, and 3) psycho-social factors related to the trip. Within the hunting experience section, hunters were asked to report their spending associated with the trip. Hunter spending can be further split into four categories: 1) spending associated with an outfitter's/professional hunter's package, 2) spending at home for items to be used on the trip, 3) spending in the destination country on items associated with the trip, and 4) taxidermy and export spending incurred when sending a trophy back to their country of residence.

Three rounds of surveys took place. The first round occurred in July 2014 when professional hunters in each participating country were asked via their national professional hunters association to share a message and survey link with their hunting clients. At the same time, the survey was sent to Southwick Associates' HunterSurvey panel. The second round occurred in February 2015 after direct meetings with professional hunters and their association representatives at the Safari Club International's Annual Hunters Convention held in Las Vegas. At these meetings, professional hunters were again asked to share the survey link with their clients. The third round occurred in April 2015 when a final call to hunters was implemented via hunting-related newsletters and forums associated with international

hunting organizations to reach the international hunting community. The visiting hunter survey was then closed at the end of May 2015.

Respondent sample summary

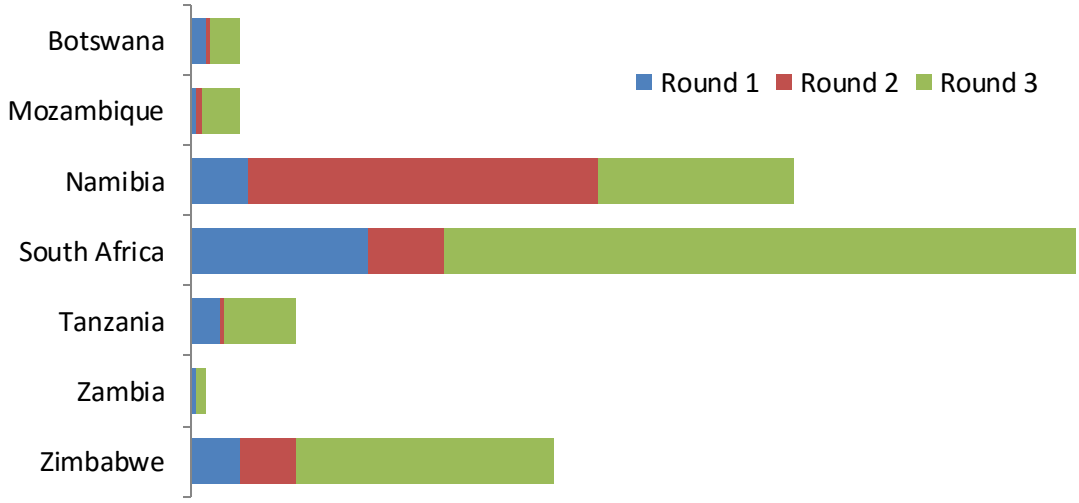
A total of 432 international hunters submitted a survey, whether partial or complete (Table A 1). Slightly fewer (389) submitted a survey with all expenditure questions completed.

Table A 1. Response by country visited

Country	Total	Survey		
		Wave 1	*Wave 2*	*Wave 3*
Botswana	**10**	30%	10%	60%
Mozambique	**10**	10%	10%	80%
Namibia	**126**	10%	58%	33%
South Africa	**185**	20%	9%	71%
Tanzania	**22**	27%	5%	68%
Zambia	**3**	33%	0%	67%
Zimbabwe	**76**	13%	16%	71%
Study Area	**432**	16%	24%	60%

Figure A 2 shows the overall distribution of the respondent sample by survey round as a means to evaluate the relative contribution from each round. Round 1 garnered 16% of the overall sample. Round 2 contributed 24% of total respondents. Also, note the surge in responses from Namibia during that round. The professional hunter association in Namibia implemented extra efforts which resulted in this surge. Round 3 provided the largest proportion (60%) of responding hunters.

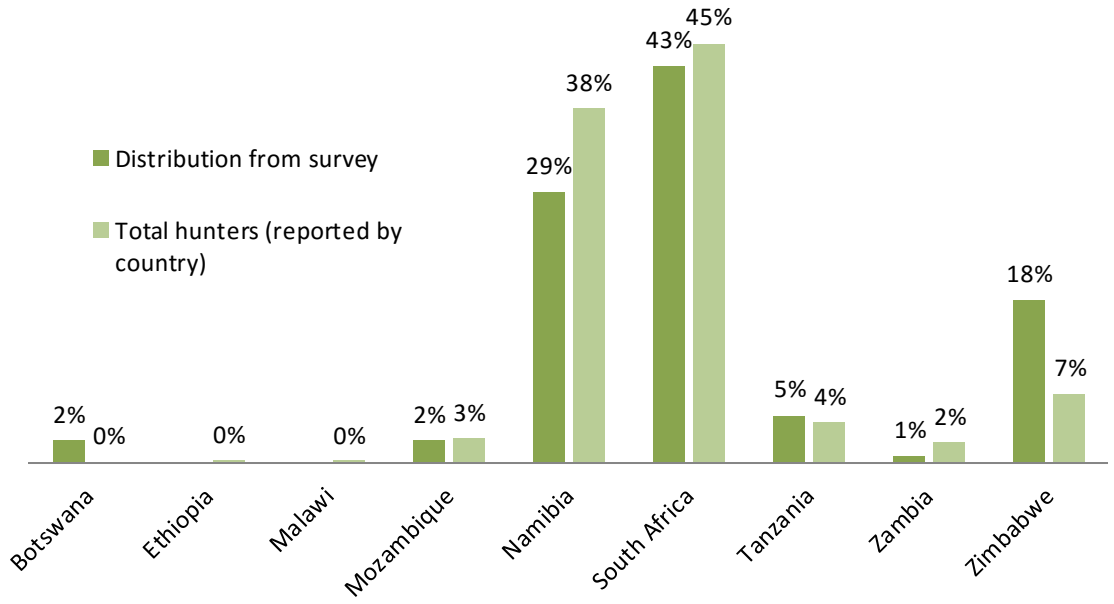
Figure A 2. Distribution of survey response by country and round



Considering all of the participating countries, the majority of responding hunters visited South Africa on their most recent trip to hunt (Figure A 3). Based on the number of licensed international hunters as

reported by country, South Africa received the largest proportion of hunters followed by Namibia and then Zimbabwe. Chi-squared testing of the two distributions indicates that the absence of a statistically significant difference exists between the two distributions. Thus, the diversity of the respondent sample is representative of the diversity of the countries visited to hunt.

Figure A 3. Country visited by survey respondent relative to country-level population of licensed visiting hunters



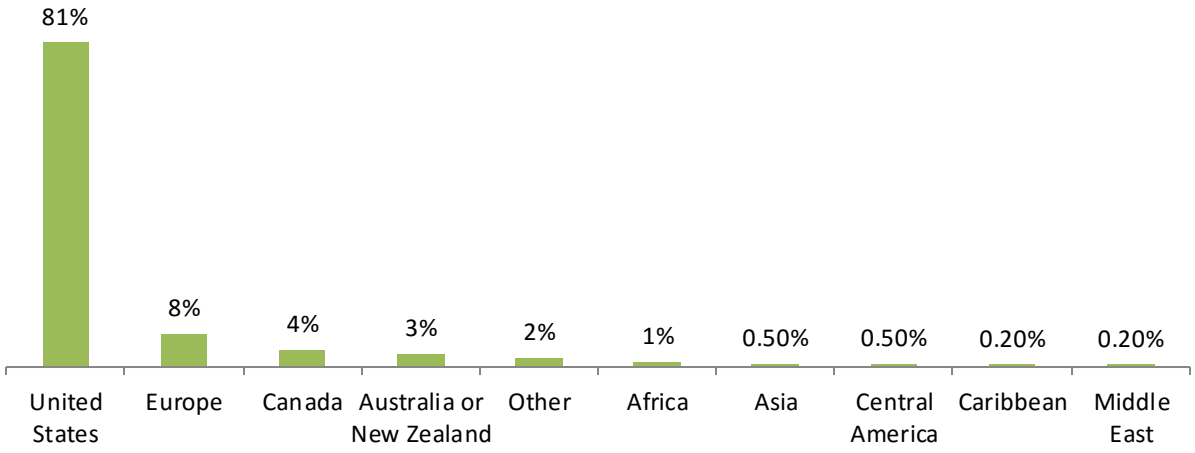
The largest percentage of hunters who responded to the survey is male, over the age of 61 years, and has a household income of $100,000 or more (Table A 2). The profile of the responding hunter is the same regardless of whether the hunter resides in or outside of the United States.

Table A 2. Demographic profile of survey sample

Characteristic	Non-U.S. residents	U.S. residents	All	Characteristic	Non-U.S. residents	U.S. residents	All
Gender				**Household income**			
Male	75%	84%	82%	**Less than $20,000**	3%	1%	1%
Female	0%	1%	1%	**$20,000 - $49,999**	7%	5%	5%
Unknown	25%	15%	17%	**$50,000 - $74,999**	8%	9%	9%
Age				**$75,000 - $99,999**	8%	10%	10%
Under 21 years	0%	0%	0%	**$100,000 - $149,999**	27%	25%	26%
21 to 30 years	4%	1%	1%	**$150,000 - $249,999**	19%	23%	22%
31 to 40 years	7%	7%	7%	**$250,000 or more**	27%	28%	28%
41 to 50 years	16%	13%	14%				
51 to 60 years	36%	30%	31%				
61 years or older	38%	49%	47%				

The diversity of the respondent sample across countries of residence, however, is somewhat limited (Figure A 4). More than 80% of the sample reflects U.S. hunters while the balance represents all other international hunters. Given this, we also explore the statistical difference in reported spending profiles between U.S. and non-U.S. residents.

Figure A 4. Country of residence distribution of respondents

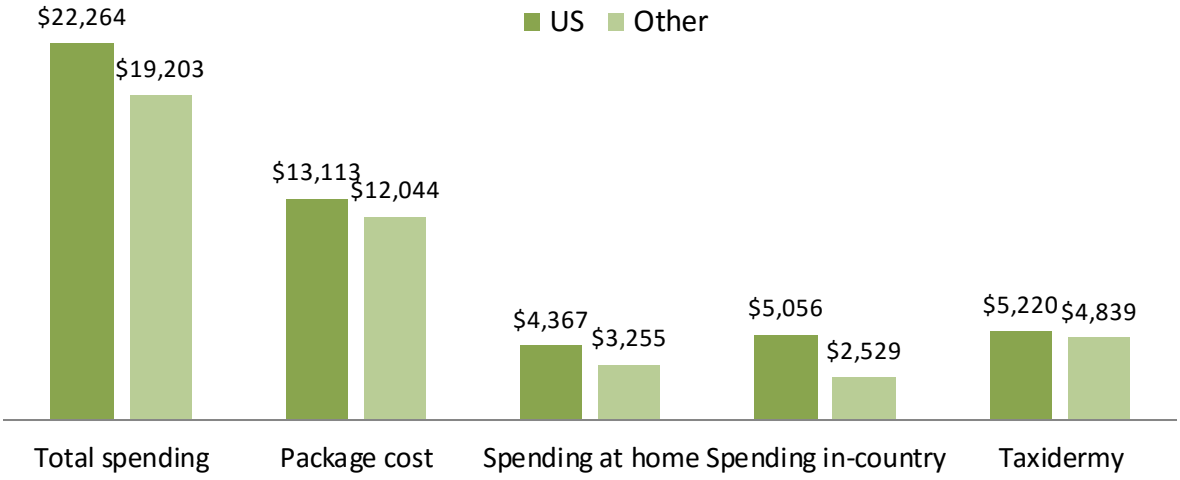


Hunter spending profiles were estimated through the Visiting Hunter survey responses. Individuals were asked to report their total spending on the trip. This spending was then adjusted to reflect the hunter's share of costs, thus isolating a per-hunter value for the trip. Spending was divided into four categories: spending within their country of residence (at home), spending within their destination country (in-country), costs associated with a hunting package, and costs associated with taxidermy and export of trophies.

At-home spending includes commercial transportation, such as airfare, clothing, and related gear to be used while on the trip. In-country spending includes transportation, lodging, food, professional hunter expense, fees & licenses, as well as relevant hunting expenses. Hunters typically spend additional days in-country participating in non-hunting activities and general relaxation. It is assumed that these costs occurred only as a result of the trip and should be included as part of the total economic contribution of hunting-related tourism. Therefore, spending on gifts & souvenirs, entertainment, and amusement fees are captured as part of the direct in-country spending. Hunting package costs reflect the total cost of the package purchased on a per hunter basis. And, taxidermy spending also reflects spending on animals taken for trophy and exported to the hunter's country of residence.

The purpose of Figure A 5 is to show the similarity in spending between U.S. residents and non-residents. Later in the report we will explore each spending category in detail.

Figure A 5. Hunter spending by residency (U.S. resident versus Non-U.S. resident)



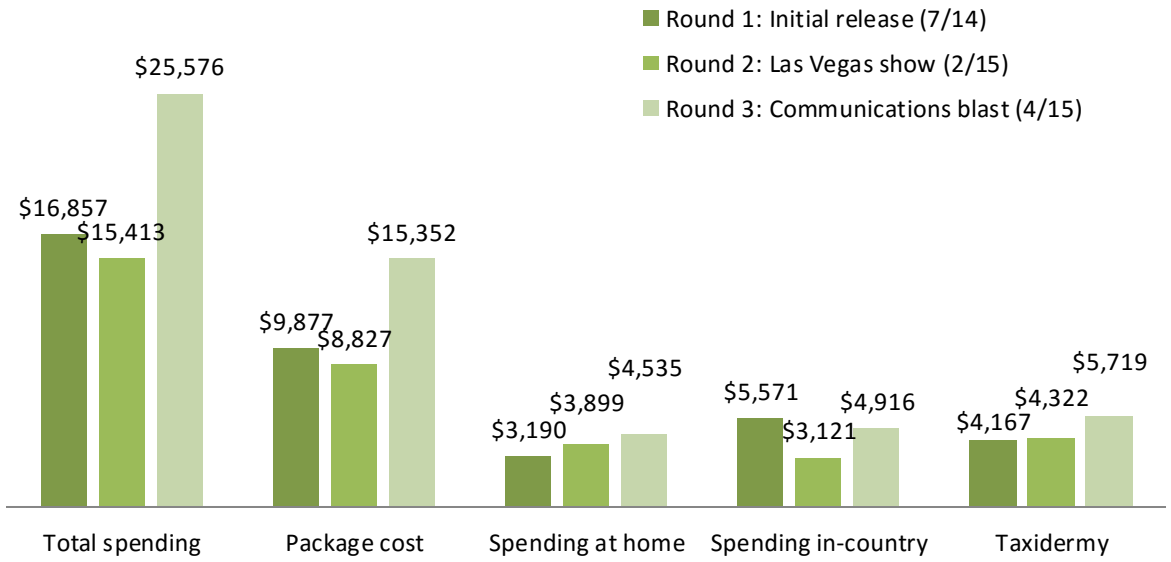
Statistical testing does reveal a statistically significant difference in the 'spending at home' and 'spending in-country' categories between U.S. residents and non-residents. In both cases, U.S. hunters spend more than non-U.S. hunters. The higher at home spending is driven largely by airfare and the higher in-country spending is driven by professional hunter and hunting equipment expenses. The professional hunters survey conducted as part of this project reported that hunters who reside in North America tend to spend approximately 20% more than visiting hunters who reside in Europe, and more than hunters from other locations. Additional detail about the professional hunter survey is provided in an upcoming section and the survey tool is included in Appendix D. These insights support the slightly higher spending pattern seen in Figure A 5.

No statistically significant differences were found in the package or the taxidermy cost categories. Because the package cost accounts for the largest portion of total spending, no statistically significant difference was found in estimated total spending between the two groups. Therefore, no sample adjustment is necessary to balance spending between the two categories.

We also evaluate spending by category across the three rounds of surveys recognizing that the different approaches might have reached non-similar audiences. The initial outreach efforts avoided directly contacting hunting organizations, given the potential for biasing the response sample towards more-avid and therefore higher-spending hunters. The preferred approach was to enlist the aid of the professional hunters to reach out to all of their clients as the target audience, and not to enlist groups that may or may not serve a greater percentage of higher spending hunters. However, due to limited responses, these organizations were then enlisted in the third round.

The average amount spent on the trip reported by respondents to the third round is statistically greater than the average amount spent by respondents in the first two rounds (Figure A 6). We also find that the group of respondents from the third round is more affluent, relative to the other two rounds, based on the distributions of household income categories. And, lastly, respondents from the third round have hunted in Africa more frequently, suggesting a higher level of avidity.

Figure A 6. Hunter spending by survey round



In light of this evidence, an exhaustive search for reliable data with which to benchmark our respondent sample was undertaken. Demographic profiles are not available to describe the visiting hunter population within each country. In most cases, country-level wildlife and tourism agencies do not house or have access to that information. Rather, if available, they would request such data from the professional hunters and outfitters, who would in turn be highly protective of their client's personal information. And, in discussions with professional hunters and outfitters, it was reported that most would likely not possess income data.

Alternatively, the use of proxy information such as CITES (Convention on International Trade of Endangered Species of Fauna and Flora) data to adjust for the type of species exported was explored. The assumption being that the species exported would be reflective of the type of species pursued and highly correlated with the cost of the hunting package. However, this approach was found to be imperfect given multiple weaknesses with the data.[9]

Ultimately, the decision was made to not weight the respondent sample given the absence of benchmarks for the hunter population of the area under study that would indicate our respondent sample is distinctly different from the expected population of visiting hunters. However, a similar study done by Van Der Merwe et al. (2013) examined visiting hunters in South Africa alone. A comparative analysis of respondent demographic profiles finds that their respondent sample and this project's total respondent sample are similar in distributions of home country of residency, gender, and age. In

[9] It was assumed that higher-income and more-avid hunters would be more likely to take higher-priced game such as big or dangerous game and if our sample was biased towards higher-spending hunters, our sample would show a greater percentage of the exports being comprised of these higher-priced species. And, through the Visiting Hunter Survey, we collected detailed species harvest and export data with which to compare to proxy databases such as the CITES dataset. Two pertinent factors challenge the precision of the comparison with the CITES database. First, a great deal of correlation in the documentation process is required for precise recording of an animal on the part of both the exporting and the importing country. For our purposes, estimating the distribution of each species across all exports requires us to calculate the total number of animals exported. And, a review of the CITES data indicates that discrepancies between the two parties are common and can range from a difference in the recorded counts to differences in the type of trade term (trophies, bodies, skulls, skin, etc.). Second, our data is based at the hunter level and reflects the type(s) of species exported, not a count of each particular species exported. Summation at the species level provides us with a count of hunters who exported that particular species while the CITES data reflects the number of species exported which is an imprecise comparison at best. Through this effort, we found that the respondent sample exported proportionally less big game species and more plains games species suggesting that our estimates are potentially conservative.

economic studies, age often closely correlates with income. We also found that the estimates of hunter spending per trip were similar in magnitude. The correlation between the two studies helps assure that the data collected across this project's three rounds of surveys reliably reflects all visiting hunters.

III. Economic modeling to estimate the contributions of hunting-related tourism

There are three types of economic contribution: direct, indirect and induced. A direct contribution is defined as the economic contribution of the initial purchase made by the consumer (the original retail sale). Indirect contributions are the secondary effects generated from a direct contribution, such as the retailer buying additional inventory, and the wholesaler and manufacturers buying additional materials. Indirect contributions affect not only the industry being studied, but also the industries that supply the first industry. An induced contribution results from the salaries and wages paid by the directly and indirectly effected industries. The employees of these industries spend their income on various goods and services. These expenditures are induced contributions, which, in turn, create a continual cycle of indirect and induced effects.

The direct, indirect and induced contribution effects sum together to provide the overall economic contribution of the activity under study. As the original retail purchase (direct contribution) goes through round after round of indirect and induced effects, the economic contribution of the original purchase is multiplied, benefiting many industries and individuals. Likewise, the reverse is true. If a particular item or industry is removed from the economy, the economic loss is greater than the original lost retail sale. Once the original retail purchase is made, each successive round of spending is smaller than the previous round.

The availability of detailed input-output models of the national economies for each of the participating countries is limited. And, when available, the modeling is complicated by the ability to tailor the model to measure the impact of travel and tourism, which affects multiple sectors of the economy. With regards to the estimated economic contributions of visiting hunters to a nation's economy, this research makes use of the secondary data available from the World Travel and Tourism Council (WTTC) to quantify the economic impact of hunting-related tourism within a nation.[10]

The WTTC data reflect a broad panel of tourists who travel to a particular destination for a variety of reasons. Measures of spending by foreign and domestic tourists, typically identified as the direct economic contribution, are available through the WTTC's work. Also quantified is the indirect and induced spending generated as a result of tourist spending. Netted from these contributions are the intermediate domestic supply chain purchases as well as import purchases. The resulting measure reflects the contribution to the nation's GDP, a "value added" amount that includes only the value added by the intermediate supply chain and final demand. Including, rather than netting out, the value of intermediate supply chain purchases also enables the estimation of a total output multiplier measure,

[10] The World Travel and Tourism Council was originally formed by a group of worldwide Travel & Tourism industry leaders. Over the last twenty years, it has evolved to include other partner industries and, together with Oxford Economics, they publish economic analysis specific travel and tourism for nations around the globe.

which is seen as a relatively less conservative measure of economic contribution in that it essentially double-counts the value of the good or service as it moves through the supply chain to the final consumer. As with all studies that utilize WTTC data, the assumption is made that the tourists under study spend at establishments in a manner that is similar to all international tourists. Given the limited infrastructure available to support tourists within the study area, hunters' spending likely benefits similar if not the same supporting businesses, making this a reasonable assumption. WTTC is also able to provide direct and total employment impacts of general travel and tourism.

Applying the relationships between direct spending as it moves through the economy to total value added and total output enables the estimation of the contribution of hunting-related tourism to each nation's GDP and output. A similar relational approach is used to estimate the contribution to employment. The output, GDP and employment multipliers are shown in Table A 3.

The size of the respondent samples for South Africa, Namibia, and Zimbabwe were large enough to produce direct spending profiles at the country-level. The sample sizes for the remainder of the countries visited were inadequate to develop similar country-level profiles. For these cases, an average spending profile for all eight countries visited – including South Africa, Namibia and Zimbabwe - was also estimated and is identified as the "study area" in the remainder of this report. For the remaining five countries where individual spending profiles were not possible, a single average per-hunter spending profile was used for each country.

Three additional estimates were calculated using these estimates of direct spending by visiting hunters for each participating country.

Total Output – also known as "total economic effect" or "total multiplier effect," this measure reports the sum of the direct, indirect and induced contributions resulting from the original spending. This figure explains the total activity in the economy generated by a retail sale. Another way to look at this figure is, if the activity in question were to disappear and participants did not spend their money elsewhere, the economy would contract by this amount.

Contribution to GDP—there are multiple ways to measure this "value added" contribution made by the industries involved in the production of hunting-related tourism goods and services. For example, for a given industry, value added equals the difference between gross output (sales and other income) and intermediate inputs (goods and services imported or purchased from other industries). As such, it represents the contribution to GDP in a given industry for production related to hunting-related tourism. Alternatively, the GDP measure reflects a total income measure capturing compensation to employees, gross profits, and taxes. The common pathway being that spending by hunters becomes income for the seller.

Employment – this figure reports the total jobs in all sectors of the economy as a result of the activity under study. These are not just the employees directly serving recreationists or manufacturing their goods, they also include, for example, the truck driver who

delivers food to the lodges serving recreationists and the accountants who manage the books for companies down the supply chain, etc. This figure is based on direct, indirect and induced effects.

Table A 3. Output, GDP, and employment multipliers by country

	Output multiplier	GDP multiplier	Employment multiplier
Country			
Botswana	2.0	1.1	2.2
Ethiopia	2.5	1.5	2.5
Mozambique	2.1	1.4	2.6
Namibia	2.5	1.1	4.3
South Africa	2.4	1.5	2.2
Tanzania	2.4	1.8	3.0
Zambia	2.1	1.3	2.9
Zimbabwe	1.9	1.1	2.3

We recognize that this is a non-traditional approach to generating multipliers to measure economic contributions within an economy. As a result, we also explored a more standard approach using a separate database, Eora MRIO.[11] Using the input-output tables provided and standard methodologies we calculated multipliers for a minimum of seven industries involved with the hunting-related tourism industry. Comparison of the WTTC-based multipliers reported above with those based on the Eora MRIO data are found to be of similar magnitude. Given our goal to estimate contributions to GDP and employment as well as the limitations of the data available, we hold that the WTTC multipliers provide an effective approach to adequately measure contributions.

[11] Eora MRIO Database is an economic tool developed at the University of Sydney and provides a collection of multi-region input-output databases for each of the countries participating in this research effort.

IV. Additional supportive analysis

Professional hunter & outfitter business operations survey

A survey of professional hunters, outfitters, and their professional organizations was implemented among all participating countries with the goal of informing the economic modeling process. The survey itself focused on key business aspects from expenditure categories, size of the company (measured via employment), and the proportion of spending that occurs in the country whe re they operate. The survey tool and analysis is included in Appendix D. The survey was implemented through a messaging campaign to professional hunters, outfitters, and representatives within their professional organizations. The messages asked them to complete the survey through an online platform or to share with their members. This campaign began in early November 2014. No responses were received as a result of this approach.

The approach was evaluated and reconceived to address the reluctance to participate in the survey. Southwick Associates re-implemented the survey at the SCI Convention held in Las Vegas in February 2015. Face-to-face interviews were completed by Southwick Associates with 36 professional hunters and outfitters who attended the convention. The respondent sample from this particular survey is limited by its small size and composition. However, it does provide insights which we use judiciously to inform the discussion around the economic contributions of visiting hunters in each country.

Additionally, an internet-based search was undertaken in August of 2015 to gather information about professional hunter and outfitter package rates. Hunting operations were identified using contact information available from each country's professional hunters association websites. While this may not be an exhaustive list of professional hunters and outfitters in each country, the group is assumed to be reflective of the overall population. In addition to the cost of the package, additional pertinent information such as the type of animal(s) pursued and the number of hunters included was also recorded. The purpose was to ground-truth the variation in hunting package spending found between countries. Anecdotal evidence suggests that hunting packages are indeed higher in some countries, relative to others. The analysis from the internet search is used to inform the discussions about reported hunting package costs in an upcoming section. For each of the eight countries, we found the range of existing package pricing as identified online followed the spending reported in the Visiting Hunters survey.

Appendix B: SUMMARY OF CURRENT LITERATURE

Over the last decade, a number of studies have been conducted to evaluate the hunting-related tourism industry within the southern African region. Table B 1 summarizes several studies focusing on the number of visiting hunters and their spending. Lindsey and colleagues (2007) and Booth (2010) provide the majority of the data across a number of countries in the South African Development Community. Countries participating in this research effort are highlighted. A handful of other reports add additional depth by providing national estimates specific to hunting or hunting-related tourism within one country.

Table B 1. Historical hunting-related tourism numbers, size and spending

Country	Year	Hunters/ year	Hunters Spending (million)[a]	Number of outfitters (prof. hunters)	Source
Botswana	2000	339	$12.6		Bartlett & Patterson (2005)
	2007	350	$20.0	13 (?)	Lindsey, Roulet, and Romanach (2007)
	2008	-	$40.0		Booth (2010)
Ethiopia		50	$1.3	4 (15)	Lindsey, Roulet, and Romanach (2007)
	2008	57	$1.5		Seige (2010)
Mozambique	2008	542	$5.0	? (127)	Booth (2010 & 2012)
Namibia	2000	3,644	$19.6		Humavindu (2003)
	2004	-	$9.6		Booth (2010)
	1998-2003	-	-	-	Samuelsson & Stage (2007)
	2007	5,363	$28.5	? (505)	Lindsey, Roulet, and Romanach (2007)
South Africa	2003/2004	-	$68.3		Booth (2010)
	2007	8,530	$100.0	1,000 (2,000)	Lindsey, Roulet, and Romanach (2007)
	2012	8,387	$98.2		SA PH Stats (2013)
	2012	-	$156.0		Van De Merwe et al. (2012)
Northern Cape region of South Africa		-	$34.3		Saayman, van der Merwe, & Rossouw (2011)
Tanzania	2001	-	$39.2		Booth (2010)
	2007	1,654	$27.6	42 (221)	Lindsey, Roulet, and Romanach (2007)
	2008	-	$56.3		Booth (2010)
Zambia	2002	-	$3.6		Booth (2010)
	2007	250	$5.0	22 (?)	Lindsey, Roulet, and Romanach (2007)
Zimbabwe	2000	-	$18.5		Booth (2010)
	2007	1,874	$16.0	149 (545)	Lindsey, Roulet, and Romanach (2007)
	2007	-	$15.8		Booth (2010)

[a] Hunter spending is widely defined across these studies. Revenues typically include daily fees and trophy fees, and in a minority of cases revenues include spending that occurs outside of hunting-related activities. Nevertheless, they provide a historical reference of the number of visiting licensed hunters and the contribution of direct spending.

Lindsey, Roulet, and Romanach (2007) explore the economic significance of hunting, among other issues, in order to inform discussions around the topic of the "acceptability and effectiveness of trophy

hunting as a conservation tool." Based on recent statistics from countries with "significant" hunting industries, they estimate that a minimum of 18,700 hunters can generate gross revenues of at least $201 million USD in direct spending in sub-Saharan Africa.

The authors also discuss a number of different issues related to hunting as a conservation tool. Three in particular are 1) hunting generates revenues in areas where alternative such as photographic ecotourism may not be viable, 2) hunting generates high revenues from low volumes of hunters, and 3) there is relatively low leakage of revenues relative to ecotourism.

Booth (2010) presents a similar picture of the "gross value of hunting-related tourism" across a number of the same countries. His data is woven into Table 20 and suggests that hunting-related tourism generates at least $ 190 million USD in gross revenue per year, an estimate very similar to Lindsey's estimate above.

Samuelsson and Stage (2007) explore direct expenditures at the individual hunter level as well as the indirect economic impact of that spending across a host of different economic activities. The research itself is driven by a 2003 mail-based survey of individuals who visited Namibia and acquired a trophy export permit sometime during the previous five years. The research is challenged by sampling and recall bias along with the ability to draw statistical inferences due to the size of the respondent population (See Table B 2 below for the number of respondents providing expenditure information). For that reason, the weighted standard errors are included in conjunction with the reported average per hunter expenditures.

The authors point out that hunting tourism has long been an important part of Namibian tourism and of Namibian wildlife policy, but the sector has been poorly explored in economic terms at that time. The multiplier effects of direct spending have been particularly challenging to estimate over the years due the lack of detailed information regarding linkages between sectors of the economy. It is important to bear in mind that Samuelsson and Stage (2007) was a preliminary analysis and findings are best used with caution.

Table B 2. Expenditures in N$ by an average survey respondent visiting two types of destinations

	Communal conservancies		Private farms	
	Per hunter		Per hunter	
	Average	Weighted SE	Average	Weighted SE
Hunting related expenditures				
Net revenue to hunting establishment	20,654	*16,793*	15,172	*2,242*
Guides	7,451	*7,003*	6,178	*5,429*
Transportation cost within Namibia	1,589	*605*	2,701	*849*
Taxidermists and trophy preparation	9,836	*14,571*	3,825	*7,551*
Costs of additional hunting equipment	12	*76*	213	*748*
Other hunting-related expenditure	1,151	*3,444*	581	*2,293*
Total hunting-related expenditures	40,694	*29,004*	28,669	*26,926*
Non-hunting related expenditures				
Accommodations	3,292	*5,900*	1,426	*5,579*
Meals and drinks	3,036	*471*	1,185	*372*
Transportation	7,262	*15,383*	1,316	*5,541*
Tour operators/guides	-	-	252	*1,810*
Handicrafts	3,393	*7,262*	1,204	*3,840*
Other shopping	2,818	*4,566*	1,620	*4,012*
Other expenditure	2,457	*3,952*	280	*981*
Total non-hunting expenditure	22,257	*40,849*	7,281	*17,366*
N	10		67	

Note: In 2003, US $1 equaled N$7.56
Source: Samuelsson & Stage (2007)

Two more recent studies detail hunter spending in South Africa. The first by Saayman, van der Merwe, and Rossouw (2011) is a reportedly pioneering research effort exploring the economic impact of two types of hunting (trophy and biltong) at a provincial level in South Africa and, using a Social Accounting Matrix, estimating the economic impact of hunting spending. Table B 3 below reports their total spending estimates by both categories of hunters.

Table B 3. Expenditure directly related to hunting in the Northern Cape Province, 2007 (Rand)

Category	Hunters (all)	Trophy hunters	Biltong hunters
Accommodation	62,316,410	3,303,410	59,013,000
Fuel	54,850,859	1,778,759	53,072,100
Food	34,123,519	2,006,119	32,117,400
Meat processing	29,166,264	1,310,664	27,855,600
Ammunition	23,718,965	534,965	23,184,000
Gear	20,875,678	1,096,678	19,779,000
Daily fees	17,910,671	1,203,671	16,707,000
Beverages	18,202,177	735,577	17,466,600
Butchery facilities	13,395,753	334,353	13,061,400
Clothes	11,046,182	267,482	10,778,700
Toiletries	3,487,741	133,741	3,354,000
Medicine	3,416,419	93,619	3,322,800
Tobacco	1,323,164	173,864	1,149,300
Other	13,709,824	401,224	13,308,600
Game/Species	388,499,947	20,925,847	367,574,100
Total	696,043,575	34,299,975	661,743,600

Note: Biltong hunters are typically local hunters who pursue game for meat. Hunters are more likely to be foreign hunters who pursue game for horns or skin.

Source: Saayman, van der Merwe, and Rossouw (2011).

It is estimated that the R$696 million can generate an additional R$78.3 million of indirect and induced impact. The production multiplier is calculated at 1.11 meaning that for every Rand spent, an additional 11 cents are generated. Also, the estimated number of jobs supported by hunting activities is 9,072.

The second study by Van de Merwe et al. (2012) provides further insights about the international hunting population who visit South Africa. As is the case with this report, their goal is to inform the discussions and decision-making processes related to wildlife management and growth of recreational opportunities. The average spending by a hunter is estimated to be $17,280 (Table B 4). With almost 9,000 international tourists hunting in South Africa, the total direct economic contribution of hunting is approximately $156 million.

Table B 4. Estimated in-country spending by South Africa's visiting hunters ($US)

Expenditure categories	Amount spent
Commercial transport	$1,411
Other transportation	$390
Food	$64
Daily fees	$3,337
Ammunition	$53
Clothing	$91
Hunting gear	$150
Trophy fees	$7,891
License & permits	$372
Other	$731
Shipping	$2,789
Total in-country spending	$17,280

Source: Van de Merwe et al. (2012)

Appendix C: Southern Africa Visiting Hunter Survey

Survey administered online

1. Did you travel to any of the following countries in the past two years for the primary purpose of hunting? (If you visited multiple countries during that time, please tell us about your most recent trip)

❑ Botswana	❑ Mozambique	❑ Tanzania	❑ I didn't travel to any of these particular countries during that time
❑ Ethiopia	❑ Namibia	❑ Zambia	
❑ Malawi	❑ South Africa	❑ Zimbabwe	

2. During your trip, in addition to hunting, what other types of activities did you participate in?

❑ Photo-safari/Nature tours	❑ Shopping
❑ Hiking	❑ Visiting with family and friends
❑ Relaxing-Enjoy sun & weather	❑ Other:_____
❑ Business	

3. a) What was the total number of days you spent in the country on this trip? _____# of days
   b) Of these days, how many days did you spend hunting during the trip? _____# of days

4. If you were not able to participate in a hunting safari or trophy hunting trip, would you have still have gone on the trip?

❑ Yes	❑ No	❑ Not sure

5. Who traveled with you on the trip?

	How many traveled with you?
❑ I traveled alone	
❑ Spouse	
❑ Children	
If checked, how many children?	_____ children
❑ Other family member	
If checked, how many family member(s)?	_____ family members
❑ Friend or colleague	
If checked, how many friend(s) or colleague(s)?	_____ people

6. How many members in your group did not hunt but were observers or there to see the sights?

_____ # of members who did not hunt

7. Which types of game did you hunt? (Check all that apply)

- ❑ Big Five (Includes Elephant, Rhinoceros, Cape buffalo, Lion, and Leopard)
- ❑ Dangerous (Includes Buffalo, Crocodile, Elephant, Hippopotamus, Leopard, Lion, and Rhinoceros)
- ❑ Plains Game (Includes, but not limited to, Antelope, Blesbock, Bush pig, Caracal, Duiker, Gemsbok, Giraffe, Impala, Jackal, Kudu, Lechwe, Nyala, Springbok, and Zebra)
- ❑ Other. Please briefly describe: _____

8. Did you take any game?

❑ Yes	❑ No

9. Which game species did you take? (Check all that apply)

❑ Antelope	❑ Cheetah	❑ Impala	❑ Rhinoceros
❑ African Wildcat	❑ Crocodile	❑ Jackal	❑ Sable

❑ Badger	❑ Caracal	❑ Kudu	❑ Serval
❑ Barbary sheep	❑ Elephant	❑ Lechwe	❑ Springbok
❑ Blackbuck	❑ Gemsbok	❑ Leopard	❑ Tiger
❑ Blesbock	❑ Giraffe	❑ Lion	❑ Waterbuck
❑ Buffalo	❑ Hippopotamus	❑ Lynx	❑ Wildebeest
❑ Bush Pig	❑ Hunting leopard	❑ Oryx	❑ Zebra
			❑ Other: _____

The next questions relate to spending. Please reflect on the expenditures you made for your hunting trip. We ask that you report the total amount spent on travel expenses, including the amount spent for yourself and others in your travel party. And, please include any expenditure made by others for you. Expenditures can be reported in either US dollars or Euros.

10. Did you purchase a hunting package that covered multiple services and hunting arrangements?

❑ Yes ❑ No

11. a) What was the total cost of the hunting package? _____Total cost (either USD or Euro)

b) Please divide the total cost of the hunting package across others who were included in the package.

	Percentage
Of the total cost of the package, what was for your costs (versus others who accompanied you on the trip)?	
What percentage of the package cost was for people who went with you <u>but did not hunt</u>?	

12. What types of goods and services were included with your hunting package?

❑ Accommodations	❑ Trophy fees	❑ Shipping
❑ Food & beverage	❑ License &/or permits	❑ Camp staff services
❑ Ground transportation	❑ Firearm rental & ammo	❑ Gratuities and tips
❑ Professional hunter fee	❑ Taxidermy	❑ Other:_____

13. a) Did you export any game trophies back to your home?

❑ Yes ❑ No

b) Did you hire a company within your home country to receive your trophies and handle importation permit fees?

❑ Yes ❑ No

14. a) Did you hire taxidermist & export services?

❑ Yes ❑ No

b) If yes, where was the taxidermist & export service company located?

❑ In my home country
❑ In the country where I hunted
❑ In another country

15. How much did you spend on the taxidermist and export company? _____Total cost (either USD or Euro)

16. Of your total taxidermist and export expenditures, what percent was for game taken by you personally or by minors who hunted with you? _____Percentage

17. Did you spend any money at home, before you left for your trip, on goods and services for this trip?

❑ Yes	❑ No

18. a) How much was spent for the following items **BEFORE** you arrived?

	Total expenditures
Airfare (commercial airlines, not including air taxis to your hunting site)	
Clothing or gear	
Other hunting-related purchases made prior to departing home. Please briefly describe:_____	
In which currency are these reported	

b) Please divide the total cost of the goods & services purchased at home across others who were included in those costs.

	Percentage
Of the total expenditures made at home, what percentage was for your share (versus others who accompanied you on the trip)?	
What percentage of the expenditures made at home was for people who went with you but did not hunt?	

19. a) **WHILE** in-country, approximately how much did you spend for the following items?

	Total expenditures
Transportation (car rental, taxis, buses, gasoline, local flights, etc.)	
Lodging: hotels, rental, camping, etc.	
Restaurants, bars, carry-out food	
Groceries, food, liquor bought in stores (not in restaurants or bars)	
Professional hunter or outfitter fees (including trophy fees)	
License and/or permit fees	
Hunting expenses (except guide fees): firearms, ammunition, export fees, taxidermy, and any other expenses associated with your hunting trips excluding trophy fees	
Clothing, hats, boots, outdoor apparel and gear	
Gifts & souvenirs of any type	
Entertainment and amusement/admission fees	
Personal items (toiletries, clothes, medicine, etc.)	
Any other expenses made in [insert country name]. What was it for? _____	
In which currency are these expenditures reported?	

b) Please divide the total cost of the goods & services purchased while traveling across others who were included in those costs.

	Percentage
Of the total expenditure made in-country, what percentage was for your share (versus others who accompanied you on the trip)?	
Of the total expenditures made in-country, what percentage was for others who went with you <u>but did not hunt</u>?	

20. How satisfied were you with your hunting experience?

❑	Very satisfied	❑	Satisfied	❑	Neither satisfied or unsatisfied	❑	Unsatisfied	❑	Very unsatisfied

21. Do you plan to hunt in Africa on a future visit?

❑	Yes	❑	No

22. a) Prior to this most recent trip, how many times have you hunt in Africa? (Do not count this most recent trip) _____# of trips

b) Please tell us the African countries you have hunted in prior to this most recent trip. (Hunters who indicate they have hunted in Africa before will be provided a check box list of each country.)

23. Which sources of information had the greatest influence on your decision to hunt in Africa, and where you hunted? You can choose more than one:

- ❑ Information gathered at a trade show
- ❑ Prior experience hunting in this or other countries in southern Africa
- ❑ Friends or family recommendations
- ❑ Articles in outdoor or hunting media, including internet sites
- ❑ Articles in non-outdoor, non-hunting media and internet sites
- ❑ Travel agent
- ❑ Hunting club / other social or recreational group I belong to
- ❑ Other, please tell us:_____

24. Which of the following influenced your decision to hunt in Africa?

- ❑ It has been a long-time dream to hunt in Africa
- ❑ The thrill of the chase
- ❑ To see an experience a different country and culture
- ❑ A friend, relative, or colleague asked or encouraged me to go
- ❑ I wanted to bring home a hunting trophy
- ❑ I wanted to try hunting different types of species
- ❑ It was something I tried as part of a vacation
- ❑ To have an expedition experience
- ❑ Other: _____

25. What is your country or region of citizenship?

❑	Asia	❑	Africa	❑	Australia
❑	Canada	❑	Caribbean	❑	Central America
❑	Europe	❑	South America	❑	United States
				❑	Other:_____

26. Which category best describes your total household income before taxes for last year?

❑	Less than $20,000	❑	$100,000 - $150,000
❑	$20,000 - $50,000	❑	$150,000 - $250,000
❑	$50,000 - $75,000	❑	More than $250,000
❑	$75,000 - $100,000		

27. Which category best describes your age?

❑	Under 21	❑	55 to 65
❑	21 to 39	❑	65+
❑	40 to 55		

28. What is your gender?

❑	Male	❑	Female

Appendix D: Professional hunter/outfitter business operations survey

Outfitter/PH operations survey: Socioeconomics of hunting-related tourism in southern & eastern Africa

(Survey results shown in red)

1) Which country do you represent? ___(distribution of respondents reported on next page)_____

2) Thinking about the total expenses associated with an outfitters/professional hunting operation, how would the expenses be divided across the categories below? (The sum of all categories should total 100%)

Lodging	10%
Food & beverage	8%
All hunting-related labor (full & part time including administrative; not labor expenses for farming and other non-hunting revenue operations)	11%
Administrative (not including staff; includes rent, office equipment, accounting and other professional services)	5%
Advertising and travel	12%
Ground transportation (fuel, vehicle maintenance)	8%
Fee to the professional hunter	4%
Additional hunting staff labor (administrative, tracking, skinning, trophy prep, maintenance)	4%
Fees to landowners (private, community, government)	16%
Licenses and fees paid for your client	2%
Conservation fees paid per hunter (not applicable in all countries)	1%
Outfitter/ professional hunters licenses and fees	2%
Ammunition/hunting equipment (including firearms, dogs, etc.)	2%
Taxidermy and/or shipping (if not paid by the client directly)	1%
Capital investment/depreciation (major capital items such as facilities, vehicles and land)	9%
Other: Please define	1%

3) Assume the typical outfitter/professional hunting operation hosts 20 clients each year. On average, how many of the following would be employed for hunting purposes only:

Full-time, year-round	19
Temporary, to prepare for hunting season (not applicable to all countries)	21
Temporary, for hunting season only	19

4) Thinking about the total expenses associated with an outfitter/professional hunter operation, how much of that spending is spent outside of the country?

	Outside of country
Lodging or accommodations	2%
Food & beverage	16%
Advertising and travel	44%
Camp staff labor	0%
Ground transportation (fuel, vehicle maintenance, etc.)	5%
Hunting staff labor	2%
Ammunition, firearms and other hunting-specific equipment	0%
Taxidermy	0%
Administrative expenses	6%
Operation capital expenses (lodge/camp improvements, vehicle purchases, firearm purchases, etc.)	28%

5) Approximately, what percentage of your hunting clients come from each of these different regions?

Asia	2%
Africa	1%
Australia	1%
Canada	3%
Caribbean	0%
Central America	0%
Europe, including Russia	16%
South America	2%
United States	74%
Other: (please describe)	1%

6) For every Euro spent by a typical European hunter, how much more or less do hunters from other regions spend?

If a region's hunters spend:

Less than - record a % value below 100%.

The same as- record a % value of 100%

More than – record a % value above 100%

__100% Europe

___136% Asia

___ 88% Australia/New Zealand and region

___124% Middle East

___122% North America

___ 74% Other parts of Africa

___106% South America / Central America

Respondent's country of operation

Country	count	%	Country	count	%
South Africa	16	44%	Tanzania	4	11%
Namibia	10	28%	Zimbabwe	3	8%
Zambia	4	11%	Botswana	1	3%
Mozambique	4	11%	**Total**	**36**	**100%**

Appendix E: Species-Specific Interest, Harvest and Export

Quantifying and reporting the species and numbers harvested was not a goal of this report, but insights were gained which may be of interest to many. Species-specific insights are the focus of this appendix.

Hunters typically pursue plains game such as kudu, impala, and zebra (Table E-1). Comparing the top ten types of game pursued by country reveals some differences in the type of game pursued by visiting hunters. Most notably hunters in Zimbabwe are more likely to pursue big game such as buffalo, leopard, and elephant.

Table E 1. Top ten game species planned to target while on hunt by country

South Africa		Namibia		Zimbabwe		Study Area	
Impala	51%	Gemsbok/Oryx	69%	Buffalo	56%	Kudu	50%
Warthog	50%	Kudu	68%	Zebra	56%	Warthog	49%
Kudu	47%	Warthog	63%	Impala	46%	Zebra	47%
Wildebeest	47%	Zebra	56%	Kudu	40%	Gemsbok/Oryx	42%
Gemsbok/Oryx	44%	Springbok	46%	Leopard	40%	Impala	40%
Zebra	41%	Wildebeest	38%	Bushbuck	36%	Wildebeest	38%
Blesbok	39%	Antelope	35%	Warthog	34%	Antelope	33%
Springbok	38%	Hartebeest	33%	Elephant	33%	Springbok	31%
Antelope (all types)	34%	Impala	30%	Eland	33%	Buffalo	25%
Nyala	30%	Eland	26%	Baboon	27%	Eland	25%

Readers are encouraged not to misinterpret these data. Hunters are likely not traveling to any of these countries primarily to pursue species such as warthog, though this species is consistently a top species in each country. Species such as warthog and many antelope are low cost and abundant, and are commonly added to a hunter's overall hunting package as a bonus or add-on enticement. Other higher-cost, more highly valued species that may not be as highly ranked may be the primary attraction for visiting hunters.

Also, the species listed in the "Study Area" columns in this appendix's tables may not be found, or endemic, to all eight countries within the study area. For example, Blesbok is only found in South Africa but due to the high volume of hunters visiting South Africa, appears in the overall results as presented in the "Study Area" averages.

The species of game taken is largely dependent both on those species planned to pursue as well as those species actually encountered on the hunt. There is a high degree of similarity between Table E-1

and Table E-2, game species pursued and taken, respectively, suggesting that most hunts were successful at encountering their target species.

Table E-2. Top ten species taken during hunt by country

South Africa		Namibia		Zimbabwe		Study Area	
Impala	56%	Gemsbok/Oryx	72%	Impala	51%	Impala	45%
Wildebeest	49%	Zebra	54%	Zebra	48%	Zebra	45%
Kudu	45%	Kudu	50%	Buffalo	45%	Kudu	41%
Blesbok	41%	Warthog	49%	Elephant	31%	Gemsbok/Oryx	40%
Gemsbok/Oryx	40%	Springbok	42%	Kudu	24%	Wildebeest	39%
Springbok	40%	Wildebeest	37%	Bushbuck	24%	Warthog	33%
Zebra	39%	Impala	30%	Wildebeest	23%	Springbok	30%
Warthog	32%	Hartebeest	30%	Leopard	21%	Blesbok	22%
Other	27%	Jackal	19%	Baboon	16%	Buffalo	21%
Nyala	24%	Antelope	17%	Warthog	15%	Hartebeest	19%

Table E-3 shows the top ten game species exported by country visited. As with game pursued, comparison of the top ten types of game pursued reveals the distinct country-level differences in the type of game exported by visiting hunters. Most notably, hunters in Zimbabwe are more likely to export their big game such as buffalo, leopard, and elephant they took during the hunt.

Table E-3. Top ten game species exported

South Africa		Namibia		Zimbabwe		Study Area	
Wildebeest	51%	Gemsbok/Oryx	67%	Zebra	53%	Zebra	45%
Impala	50%	Warthog	50%	Buffalo	44%	Kudu	43%
Kudu	49%	Kudu	50%	Impala	42%	Impala	40%
Zebra	43%	Zebra	49%	Bushbuck	30%	Wildebeest	39%
Blesbok	41%	Springbok	42%	Kudu	28%	Gemsbok/Oryx	38%
Gemsbok/Oryx	38%	Wildebeest	35%	Leopard	23%	Warthog	36%
Springbok	36%	Impala	31%	Wildebeest	23%	Springbok	29%
Warthog	36%	Hartebeest	29%	Elephant	19%	Buffalo	21%
Nyala	31%	Steenbok	17%	Eland	19%	Hartebeest	21%
Bushbuck	22%	Eland	17%	Duiker	16%	Blesbok	20%

Hunters took an average of five to six animals. The number of species taken by hunters in each country ranges from six in South Africa and Namibia to five in Zimbabwe. Recognizing hunters were not asked to directly report the number of animals taken, it is not possible to precisely report the number of animals

taken per hunter. The survey asked hunters to check boxes reporting which species they took, but not the number taken. Assuming the typical hunter only takes one of each species, which is reasonable given authors' discussions with hunters who have visited Africa, then the results statistically show hunters visiting South Africa and Namibia tend to take more game than hunters in Zimbabwe. The results also show that returning hunters – those who have previously hunted in Africa – tend to harvest fewer species, indicating a possible focus on taking specific higher-cost species compared to first time hunters who may be seeking a general African hunting experience. However, given the survey only identifies the species taken and not the actual number harvested, knowing for certain will require further investigation.

Appendix F: Detailed Spending profiles by country

Table F 1. Average international hunter spending in South Africa

Expenditure category	Average	*Std. Error*	95% Confidence Interval	
			Lower bound	*Upper bound*
Hunting package	**$9,066**	*$857*	*$7,351*	*$10,781*
Spending at home				
Airfare	$2,593	*$212*	*$2,169*	*$3,017*
Clothing	$466	*$60*	*$346*	*$586*
Other hunting related items	$328	*$51*	*$226*	*$430*
Other	$47	*$14*	*$19*	*$75*
Sub-total	**$3,434**		**$2,760**	**$4,108**
Spending in country				
Trip-related	**$879**		**$605**	**$1,153**
Transportation	$322	*$52*	*$218*	*$426*
Lodging	$332	*$55*	*$222*	*$442*
Restaurants	$156	*$18*	*$120*	*$192*
Groceries	$69	*$12*	*$45*	*$93*
Hunting related	**$2,228**		**$1,309**	**$3,157**
Professional hunters	$1,103	*$248*	*$607*	*$1,599*
Outfitters	$0	*$0*	*$0*	*$0*
License and/or permit	$41	*$23*	*$0*	*$86*
Hunting expenses	$1,040	*$169*	*$702*	*$1,377*
Conservation	$45	*$25*	*$0*	*$95*
Other items	**$426**		**$294**	**$558**
Clothing	$35	*$7*	*$21*	*$49*
Gifts & souvenirs	$261	*$28*	*$205*	*$317*
Entertainment	$37	*$7*	*$23*	*$51*
Personal items	$21	*$4*	*$14*	*$28*
Other	$73	*$20*	*$32*	*$114*
Sub-total	**$3,534**		**$2,209**	**$4,868**
Total taxidermy & export	**$5,042**	*$470*	*$4,102*	*$5,982*
In-country portion of taxidermy	$4,235	*$395*	*$3,446*	*$5,025*
Total spending per hunter	**$21,076**		**$16,422**	**$25,740**
Net (in-country) spending per hunter*	***$16,835***		***$13,005***	***$20,675***

N=165

Table F 2. Average international hunter spending in Namibia

Expenditure category	Mean	Std. Error	95% Confidence interval	
			Lower bound	*Upper bound*
Hunting package	**$9,781**	*$1,122*	*$7,537*	*$12,025*
Spending at home				
Airfare	$2,585	*$278*	*$2,029*	*$3,141*
Clothing	$499	*$74*	*$350*	*$648*
Other hunting related items	$296	*$63*	*$170*	*$422*
Other	$33	*$14*	*$5*	*$60*
Sub-total	**$3,413**		**$2,554**	**$4,271**
Spending in country				
Trip-related	**$632**		**$351**	**$913**
Transportation	$213	*$47*	*$119*	*$307*
Lodging	$249	*$66*	*$117*	*$381*
Restaurants	$120	*$18*	*$84*	*$157*
Groceries	$50	*$9*	*$31*	*$68*
Hunting related	**$1,290**		**$446**	**$2,141**
Professional hunters	$770	*$256*	*$258*	*$1,282*
Outfitters	$0	*$0*	*$0*	*$0*
License and/or permit	$133	*$70*	*$0*	*$274*
Hunting expenses	$366	*$86*	*$194*	*$538*
Conservation	$20	*$13*	*$0*	*$47*
Other items	**$408**		**$253**	**$562**
Clothing	$40	*$9*	*$21*	*$58*
Gifts & souvenirs	$258	*$35*	*$188*	*$328*
Entertainment	$30	*$9*	*$13*	*$47*
Personal items	$13	*$3*	*$6*	*$20*
Other	$67	*$21*	*$25*	*$109*
Sub-total	**$2,330**		**$1,050**	**$3,617**
Total taxidermy & export	**$3,545**	*$337*	*$2,871*	*$4,219*
In-country portion of taxidermy	$2,730	*$259*	*$2,211*	*$3,249*
Total spending per hunter	**$19,068**		**$14,012**	**$24,132**
Net (in-country) spending per hunter	***$14,840***		***$10,797***	***$18,890***

N=117

Table F 3. Average international hunter spending in Zimbabwe

Expenditure category	Mean	Std. Error	95% Confidence level	
			Upper bound	*Lower bound*
Hunting package	**$18,875**	*$2,376*	*$14,123*	*$23,627*
Spending at home				
Airfare	$3,977	*$525*	*$2,927*	*$5,027*
Clothing	$729	*$124*	*$481*	*$977*
Other hunting related items	$338	*$69*	*$200*	*$476*
Other	$70	*$29*	*$12*	*$128*
Sub-total	**$5,114**		**$3,620**	**$6,608**
Spending in country				
Trip-related	**$1,244**		**$700**	**$1,787**
Transportation	$741	*$158*	*$425*	*$1,057*
Lodging	$304	*$74*	*$155*	*$453*
Restaurants	$150	*$28*	*$95*	*$206*
Groceries	$48	*$11*	*$25*	*$71*
Hunting related	**$4,134**		**$1,745**	**$6,524**
Professional hunters	$1,965	*$561*	*$843*	*$3,087*
Outfitters	$0	*$0*	*$0*	*$0*
License and/or permit	$294	*$118*	*$58*	*$530*
Hunting expenses	$1,705	*$453*	*$799*	*$2,611*
Conservation	$170	*$63*	*$45*	*$296*
Other items	**$416**		**$200**	**$632**
Clothing	$76	*$17*	*$43*	*$110*
Gifts & souvenirs	$251	*$58*	*$135*	*$367*
Entertainment	$21	*$9*	*$2*	*$40*
Personal items	$17	*$6*	*$5*	*$28*
Other	$51	*$18*	*$14*	*$87*
Sub-total	**$5,794**		**$2,645**	**$8,943**
Total taxidermy & export	**$6,348**	*$920*	*$4,508*	*$8,188*
In-country portion of taxidermy	$4,190	*$607*	*$2,975*	*$5,404*
Total spending per hunter	**$36,131**		**$24,896**	**$47,366**
Net (in-country) spending per hunter	***$28,859***		***$20,194***	***$38,793***

N=73

Table F 4. Average international hunter spending for the Study Area (reflects the average of all hunters and all countries visited)

Expenditure category	Mean	Std. Error	95% Confidence level	
			Lower bound	*Upper bound*
Hunting package	**$12,921**	*$877*	*$11,167*	*$14,675*
Spending at home				
Airfare	**$2,959**	*$168*	*$2,623*	*$3,295*
Clothing	**$575**	*$45*	*$485*	*$665*
Other hunting related items	**$375**	*$37*	*$301*	*$448*
Other	**$55**	*$10*	*$35*	*$75*
Sub-total	**$3,963**		**$3,444**	**$4,482**
Spending in country				
Trip-related	**$1,000**		**$784**	**$1,215**
Transportation	$444	*$50*	*$345*	*$543*
Lodging	$337	*$39*	*$260*	*$414*
Restaurants	$156	*$13*	*$131*	*$181*
Groceries	$63	*$7*	*$49*	*$77*
Hunting related	**$2,355**		**$1,657**	**$3,056**
Professional hunters	$1,176	*$170*	*$837*	*$1,515*
Outfitters	$1	*$1*	*$0*	*$4*
License and/or permit	$133	*$38*	*$57*	*$209*
Hunting expenses	$941	*$115*	*$711*	*$1,171*
Conservation	$104	*$26*	*$52*	*$156*
Other items	**$411**		**$324**	**$497**
Clothing	$43	*$5*	*$32*	*$53*
Gifts & souvenirs	$253	*$20*	*$213*	*$293*
Entertainment	$29	*$4*	*$20*	*$37*
Personal items	$18	*$2*	*$14*	*$22*
Other	$69	*$12*	*$45*	*$92*
Sub-total	**$3,766**		**$2,765**	**$4,767**
Total taxidermy & export	**$5,152**	*$356*	*$4,440*	*$5,864*
In-country taxidermy & export	$3,916	*$271*	*$3,374*	*$4,457*
Total spending per hunter	**$25,802**		**$21,816**	**$29,789**
Net (in-country) spending per hunter	***$20,602***		***$17,307***	***$23,899***

N=389

Appendix G: Voice of the Hunter

Comments provided by visiting hunters completing the visiting hunter survey
• African safaris is something everyone should experience.
• 99% of the hunters are good and help toward the conservation of animals and the financial income of Africa. 100% of the Poachers are BAD.
• A great trip with family members with a tremendous wildlife experience like none other!
• Africa is addictive, once you hunt one time, you will be drawn to start planning your next hunt there.
• Africa is God's country
• Africa offers one of the least expensive hunting/tourist type trips for a family or group who enjoy hunting, wildlife and the outdoors.
• Africa was an amazing experience and I will be returning there in the future.
• as noted, I had hunted Africa a couple of times and felt it was a great place to introduce the god grandson to hunting and some history and seeing how daily life is in RSA. Due to school, etc. hunting here during school times and hard to get away.
• Both trips were fantastic. Unlike any experience I have had anywhere else.
• can't wait to go back
• Can't wait to do it again, such an incredible value for the money spent
• Do it!! You'll never regret it!!
• Don't stop the hunting
• Ethical Hunting is the only savior for the game and the land not only in Africa but everywhere in the world. Without ethical conservation hunting the great lands / flora and fauna will only be in history books 'modified' by those who want their version of Hunting portrayed. Thank you,
• everyone needs to go to Africa and hunt cape buffalo and elephant and of course, plains games. Throw in the leopard too if possible.
• Everyone should go if possible
• everyone, hunter or not, should experience Africa at least once in their life….
• Go for the longer time period of hunting instead of the one week wonders.
• GOOD TIME AND OFF MY BUCKET LIST
• Hunters fund conservation; they actually invest in worthwhile habitat and species conservation efforts. There is not a single anti-hunting organization that does that.
• Hunting is an essential part of conservation. To take care of the Fauna and Flora for sustainable use is critical. The next generation needs to be trained and groomed to do the right thing. Take care and to be responsible.
• Hunting overseas, not just Africa, helps the people as well as the wildlife. It is good for all involved, and it's just great fun!!
• I am going back this year to hunt leopard and cape buffalo.
• I am now concerned about bringing trophies back to US and the new rules of taking your rifle with you to hunt
• I am returning to south Africa in May of 2015
• I cannot wait to go back again this July!

• I certainly believe that having the hunting community coming to Africa will help sustain the populations of the different species. The poachers will take Over if the hunters, PH's , etc. Are forced out of Africa. The governments of these African countries have to be stronger agai nst the poachers and stop the corruption!
• I chose to hunt in Namibia because the game was free ranging. I have never hunted for trophies for myself in a fenced situation. I have however used fenced areas for clients hunting with me.
• I definitely want to hunt other countries in Africa. I am concerned about increase in travel for hunters, both in the US and abroad.
• I enjoyed all three trips and plan to go back one more time.
• I had a wonderful experience. My brother's was more lackluster.
• I have a much greater appreciation of the struggles and accomplishments of South Africans due to my time spent in that country.
• I have taken the Big Five and employed and fed many gracious and wonderful African people. Our hunting also greatly promotes friendship and contact between Americans and other peoples.
• I hope these countries and the US do not regulate hunters to the extent that it is so difficult to go or that you cannot import your trophies that it is not worth returning to Africa. Concerned that over regulation will lead to the loss of wildlife.
• I hope this opportunity continues as I would love to take my kids when they become adults!!
• I hunted elephant unsuccessful in 2011 wishing you I go back but now due to the import ban and my budget for those countries banned I fear I am too late to ever be able to go again it also has discouraged me from booking any other trips
• I love hunting in Africa and anticipate going back many times in the future.
• I love Namibia, I felt very home there
• I love Tanzania and the local people there.
• I love to hunt Africa and will continue to do so as long as it remains affordable. Dangerous game hunting is not affordable. I hope plains game hunts don't also get obscenely expensive
• I most sincerely regret not doing so before this. I do not kill just to put it on the wall but I do want to go back for another safari.
• I shall hunt Africa as long as it is legal and I can still follow a track.
• I try to tell others about Africa but cannot explain it well, I tell them they just have to go and experience it themselves, it is unbelievable.
• I will be hunting there again
• I will continue to hunt Africa as long as I am able. Hunting is the number one conservation tool in the world. No sport hunted animal will ever go extinct!
• I will continue to hunt in Africa every 4-5 years as my health and income will allow. I am planning a trip in the next two years with my sons. Hopefully the politics of hunting will not change for the worse (animal rights and cites issues) as I plan on hunting e lephant and cape buffalo.
• I won trip thru SCI & hunting in S.Africa was not on my bucket list but an experience I will never forget.
• I would like to hunt in several other countries for additional species. Because of my experiences hunting I am comfortable taking additional family members back on a photo

safari. Which I am doing in Feb. of 2015. Fifteen of our extended family are going to South Africa, Swaziland, Zimbabwe and Zambia.
• if hunting goes away so does the animals
• If I cannot bring the trophies to EU, I will not go hunting in Africa.
• If the environment in the African countries does not change I will unlikely hunt there again . I am going to hunt Namibia in 2015 and see what my experience is. Certain groups both in Africa and out of Africa seem to want and destroy what is good about Africa and it is certainly a shame!
• IF YOU HAVE'NT GONE TO AFRICA - GO NOW -YOUR NOT GETTIN ANY YOUNGER
• if you want to hunt Africa go NOW! it is fast falling away by both restrictions and affordability.
• It was a wonderful experience.
• It's unfortunate that South Africa hassles foreign hunters with fees and charges assessed by the airlines and the country itself.. There needs to be other option other than South Africa as a port of entry.
• Just to say I don't make a ton of money but really enjoy the country and hunting there. There are some great people there and try hard to please you.
• Leave our hunting pleasure alone so it is there for the future hunters
• love to hunt Africa !
• Loved your people and country
• My boy loved it. I would like to live there
• Plan on spending 20,000 plus this summer a two booked trips to SA
• plan, plan, plan
• Regulations on hunting should be science based
• taking my son to Africa 2015
• Thanks for the opportunity to share what is a very important part of my life, please protect us from the ignorant that do not know or go.
• The biggest problem with hunting in Africa is the increasing bureaucracy of firearms transportation and governments. Hunting in Africa is a lifetime experience and creates a value of wild animals that are renewable and harvestable. The Other problem is you can't get inoculated to stop the irresistible passion to return and hunt again. The abundance of high quality big game animals in Namibia is amazing.
• The ivory ban is ridiculous and completely without support of any scientific evidence
• The opportunity to visit & hunt in Africa is something all sportsmen world-wide should be able to partake. As a lifelong hunter & outdoorsman I was glad to see the responsible game management, fair chase, and complete use of every animal harvested.
• The P.H. and his family that I hunted were the hardest working, most family oriented, nicest and professional people I have ever been around!
• The present ban on importation of Ivory makes it very difficult to justify the expense involved with hunting elephant. it hurts the local people and destroys their source of income.
• The recent import ban on elephants from Zim will prevent me from going there again.
• The trip And country is awesome
• This hunt went far beyond what I or my wife ever expected for this hunting safari! Extraordinary!

• USF&W needs to work with range countries in Africa and make its decisions about importation of CITES species (i.e.: Elephant from Zimbabwe) from a basis of actual verifiable scientific evidence and not from anecdotal accusations from animal rights groups.
• Usfws need to lift bans on elephant hunting in Zimbabwe and Tanzania.
• USFWS needs to stop lawful hunting activities by US citizen's through non-scientific, emotional decisions about elephants!!! Dummies.
• Very much enjoy Africa, its people and the whole Safari experience. Will be there again two weeks from today!!!
• Whenever I go to Africa, I cannot wait to go back. There is always something new and wild to see. The people have always been very friendly. But, remember, you are a guest of a hunting company. I am finding that it is more expensive all the time.
• Without the trophies that keep the memories fresh throughout a lifetime, the trip would be prohibitively expensive.
• would not have made either trip if it were to be non-hunting