



The \$200 million question

How much does trophy hunting really contribute to African communities?

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ADDING VALUE TO SOCIETY

Final report

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SUMMARY

Advocates for the African trophy hunting industry invariably claim that hunting revenues provide benefits to rural communities. Responding to calls to list African lions on the US Endangered Species Act, Safari Club International officials stated:

Hunters and hunting actually benefit Africa's lions — as well as its humans. Revenues from hunting generate \$200 million annually in remote rural areas of Africa. (Rudolph and Hosmer 2011)

Analysis of literature on the economics of trophy hunting reveals, however, that communities in the areas where hunting occurs derive very little benefit from this revenue.

How much revenue reaches communities?

We're more closely allied with the photographic operators than the hunters. They are finishing off the wildlife before we've had a chance to realize a profit from it. Hunters don't recognize us; they only recognize the government ...25 percent of hunting fees goes into the 'hole' at the district. We're supposed to get 5 percent: we don't even see that. (Sachedina 2008, p152)

Research published by the pro-hunting International Council for Game and Wildlife Conservation and the UN Food and Agriculture Organisation, supported by other authors, finds that hunting companies contribute only 3% of their revenue to communities living in hunting areas. The vast majority of their expenditure does not accrue to local people and businesses, but to firms, government agencies and individuals located internationally or in national capitals. As the quote above demonstrates, expenditure accruing to government agencies rarely reaches local communities due to corruption and other spending requirements.

How important is the trophy hunting industry?

Trophy hunting advocates present the industry as large, citing figures such as \$200m in annual revenue. But in the context of national economies, the industry is tiny, contributing at best a fraction of a percent of GDP. Nature based tourism does play a significant role in national development, but trophy hunting is insignificant. Across the investigated countries, trophy hunting revenue was only 1.8% of tourism revenues.

Where does the \$200m estimate come from?

Rudolph and Hosmer (2011)'s \$200m figure is based on Lindsey, Roulet and Romanach (2006), a study based on weak sources and methodology. \$100m of this estimate is based on an unpublished study by the Professional Hunters Association of South Africa. Estimates of expenditure in several other countries are based on personal communication with safari companies and other unverifiable sources. The \$200m estimate should be used with caution.

Would a listing of lions on the US ESA impact communities or the African economy?

A study by hunting advocates, Lindsey et al (2012), has suggested that reduced lion hunting would have minimal impact on the financial viability of trophy hunting. Even this study has been found to overstate the significance of lions to the industry. The industry is primarily driven by hunting of buffalo and plains game such as antelope.

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INTRODUCTION

Despite being listed by the IUCN as “vulnerable” African lions are targeted by commercial trophy hunting operators in at least 8 countries (Lindsey et al. 2012). Numbers of wild lions have been in rapid decline in recent years. Estimates of the current population are between 32,000 and 35,000 (Riggio et al. 2012), a decline of more than 30% in the last twenty years (Nowell et al. 2012). While the main causes of this decline are habitat encroachment and human-animal conflict between lions and farming communities, studies such as Packer et al. (2010) have shown that trophy hunting is also directly contributing to this decline. There is little debate, even from hunting advocates such as Lindsey et al. (2012), that the long-term viability of wild lion populations will be enhanced if fewer lions are shot by trophy hunters.

Commercial trophy hunting operates to differing degrees in around 14 African nations, the major countries being South Africa, Tanzania, Botswana and Zimbabwe (Booth 2010). Trophy hunting attracts much attention due to the nature of the business – foreign tourists (aided by foreign hunting companies) killing wild animals, including endangered species, in low-income countries with limited governance.

Several animal protection organizations, including the International Fund for Animal Welfare (IFAW), Humane Society International (HSI) and Born Free Foundation / Born Free USA have formed the African Lion Coalition to lobby for increased legal protection of wild lion populations. One initiative of the coalition is a petition to list the African lion as endangered under the Endangered Species Act (ESA) of the United States. The impact of such a listing would be to end the importation into the USA of lion parts, including hunting trophies. An ESA listing does not amount to a ban or moratorium on lion hunting; it is aimed at conserving the species by reducing the “take” of lions by Americans.

In response to the African Lion Coalition’s campaign for ESA listing of African lions, the presidents of Safari Club International and the Safari Club International Foundation claimed:

Hunters and hunting actually benefit Africa’s lions — as well as its humans. Revenues from hunting generate \$200 million annually in remote rural areas of Africa. (Rudolph and Hosmer 2011)

While claims are often made about the value of hunting tourism, more comprehensive analysis of benefits accruing to populations where hunting occurs is harder to come by. The prices paid for hunting trips and trophy fees seem expensive by US standards and even more so by African standards. A 21 day lion hunt for example, can cost the hunting party between \$20,000 and \$70,000 (Lindsey et al. 2012). But without understanding the different stakeholders involved and where this money goes, it is difficult to assess how much local communities actually benefit.

There are many stakeholders in the African trophy hunting industry. The hunters themselves are almost entirely foreigners, with an estimated 46% of lion trophies being imported into the USA (Telecky 2013). Agents, hunting operators (or “outfitters”) and professional hunters are also almost entirely foreign. Government agencies at national, sub-national and local levels are also stakeholders through fees and permits. Lastly, but most importantly for protection of wildlife, are the local communities who live in areas with hunting concessions.

Local communities are the most important stakeholders in conservation discussions as it is their local environment and their livelihoods that are in question. Without the strong involvement of local people it is impossible to reduce poaching, reduce human-animal conflict, reduce agricultural encroachment on wildlife habitat and ensure the sustainable management of the area in question.

Sustainable management will depend on long term, reliable and equitable revenue streams accruing to local communities. The crucial question for understanding trophy hunting's potential to provide incentives for conservation, therefore, is how much hunting revenue is shared with local communities.

This paper

In this paper we test some of the central themes of the trophy hunting debate:

- How much hunting revenue is received by communities in trophy hunting areas?
- How much of revenue translates into economic benefit for rural people?
- Is \$200m a lot of money across Africa?
- Would a listing of lions on the US ESA have an impact on rural African communities?

REVENUE SHARING WITH LOCAL COMMUNITIES

Despite many authors recognizing the importance of revenue sharing with local communities for conservation initiatives, most concede that little revenue trickles down to the local level:

Despite some successes, rural communities living in or near wildlife areas rarely benefit adequately from trophy hunting activities. Inequitable distribution of hunting revenues represents the most serious threat to the long term sustainability of the industry. (Lindsey 2008)

A few of the forward-looking outfitters are entering into dialogue with the communities and engage in small-scale social upliftment projects. However, most companies do mere 'window dressing' and are not taken to task, as the requirements set by the Wildlife Division are particularly vague in this regard. Hunting outfitters, and indeed many tourist providers want it to be their privilege to decide when and how to engage with communities without having the need imposed upon them. They prefer a paternalistic approach rather than a true empowerment of the communities to manage the wildlife. (Baldus and Cauldwell 2004 p34)

A study jointly published by the International Council for Game and Wildlife Conservation and the UN Food and Agriculture Organisation, Booth (2010), explored the income and expenditure of hunting companies in Tanzania, which has the largest trophy hunting industry in East Africa.

Booth (2010) had access to confidential financial records of trophy hunting companies and was able to compile an "approximate income and expenditure statement of a hypothetical company in Tanzania". Booth's results provide an insider's insight into which stakeholders benefit from trophy hunting. We see that very little of the expenditure of these operators, or "outfitters", accrues locally, with only around 3% going to community development.

Table 1: Expenditure of hunting operators

Gross expenditure	Expenditure as a percentage of income ¹	Description	Area where expenditure accrues
Operating expenses	24%	Various - food, drink, vehicle and camp maintenance.	Various, local, national, international
Wildlife division fees	22%	Various fees charged by Tanzania Wildlife division.	National
Management costs	17%	Town and camp management, managerial salaries, director drawings, business travel.	Local (camp management), national, international.
Wages and welfare	11%	Staff wages, social welfare tax.	Local and national
Support service industries	9%	Payments to hotels, air charter, "professional services", etc.	National and international
Professional hunter expenses	6%	Remuneration and associated costs of professional hunters.	International
Area and community development	3%	Payments to community-based organisations, payments to communities, payments for welfare, education, etc.	Local
Administrative costs	2%	Service and utility costs.	Local and national
Central and local government levies/duties, etc.	1%	Royalties, duties, various licences.	Local and national

Source: Booth (2010) p23

Few of these expenditure items will be at the local level, and the great majority of spending is on items that accrue outside the hunting areas. Processed food and drink items will be largely imported internationally or from urban areas. Fees and levies accrue largely to central governments. While some camp management and maintenance will provide opportunities for local employment and income to locally owned businesses, wages, directors' drawings, business travel, etc. will almost entirely accrue to parties far from hunting areas. Remuneration of professional hunters, withdrawals by directors, business travel and profits will almost certainly accrue largely to international parties (Booth 2010 p24).

¹ Note that these percentages differ slightly from Booth's original calculations, as all items are expressed as a percentage of gross revenue. Booth expressed only profit as a percentage of revenue, with other items here expressed as a percentage of total cost.

In this breakdown of spending, Booth does not mention the problem of corruption that is pervasive in regional governments. Authors from all sides of the conservation debate acknowledge the problems that corruption brings to conservation efforts and the barrier it presents to ensuring benefits reach communities, see for example IUCN (2009); Mbaiwa (2004); Peake (2004); Barnett and Patterson (2006); Sachedina (2008); Nelson and Nshala (2007). For an overview of the effects of corruption on conservation efforts, see Smith and Walpole (2005).

Booth (2010) also notes:

Capital replacement and commission payments to hunting agents and for professional hunters' commissions for the clients which are generally paid outside the country are not included here. (p23)

This suggests that the benefits of hunting are spread even thinner than suggested above.

Booth's estimate of a mere 3% of revenues being shared with local communities is supported by other authors such as Sachedina (2008) and IUCN (2009).

Sachedina (2008) conducted extensive fieldwork in northern Tanzania investigating the role of foreign NGOs, tourism and hunting in conservation and development. He found that little hunting revenue was shared with local communities:

In reality, few benefits filtered to local communities; probably closer to 3-5 percent of hunting revenues actually reached villages where hunting occurred. (p150)

[Hunting] utilises extensive areas and hunting operators contribute minute fractions of their turnover to legally mandated community development. (p386)

In an interview with a village official:

We're more closely allied with the photographic operators than the hunters. They are finishing off the wildlife before we've had a chance to realize a profit from it. Hunters don't recognize us; they only recognize the government ...25 percent of hunting fees goes into the 'hole' at the district. We're supposed to get 5 percent: we don't even see that. (p152)

Attitudes towards tourists were combined with a vigorous resentment towards tourist hunting in Simanjoro, which was longstanding, intense and widespread. Villagers felt that hunting was destructive, exploitative, and disempowering, and jeopardised village [community-based tourism] revenues. (p166)

IUCN (2009) investigated the benefits that actually accrued to communities in several countries in Africa and compared this with the area of land hunting concessions occupied. They then calculated the return to communities per hectare of hunting concession.

Table 2: Benefits of hunting per hectare

Country	Benefits distributed to local communities per hectare (\$USD)
Zambia	0.06
Tanzania	0.04
Namibia	0.16
C.A.R.	0.06
Burkina Faso	0.07
Benin	0.18

Source: IUCN (2009) p72

We see that across Africa local communities receive minimal benefit from trophy hunting, particularly when we consider the vast areas of land that hunting concessions occupy.

HOW IMPORTANT IS THE TROPHY HUNTING INDUSTRY?

While all sides of the trophy hunting debate acknowledge that local communities must benefit more from hunting revenues, little consideration is given to how much difference reforming the industry would actually make to economic development and poverty alleviation efforts in Africa. The implication of authors such as Safari Club International's Rudolph and Hosmer (2011) is that trophy hunting is a large industry. \$200m in trophy hunting revenue – or even 3% of this revenue as discussed above – sounds significant when presented in the context of undeveloped rural communities, but it is an insignificant amount in the context of national economies.

We see below that tourism revenues in lion range countries are between 0.6% and 6.4% of GDP. Tourism as a whole plays a modest role in overall economic activity, but is more significant as an employer due to its labor intensive nature (UNWTO 2006).

Table 3: Tourism and GDP

Country	GDP 2011 ^a US\$m	Inbound tourism revenue estimate ^b USD\$m	Tourism revenue as percentage of GDP
South Africa	408,240	9,547	2.3%
Ethiopia	31,710	522	1.6%
Cameroon	25,460	159	0.6%
Tanzania	23,710	1,457	6.1%
Zambia	19,210	125	0.7%
Botswana	17,300	218	1.3%
Namibia	12,300	517	4.2%
Burkina Faso	10,190	72	0.7%
Zimbabwe	9,900	634	6.4%
Total	558,020	13,251	2.4%

^a World Bank website

^b UNWTO (2012)

Note – all figures have been converted to 2011 dollars for comparison

Most tourism in African lion range countries is non-consumptive nature tourism. Among holiday and leisure visitors, nature-based attractions are the dominant motivations for travelling to southern Africa. Aside from tourists who are visiting friends and relatives, tourism industries in lion range countries is almost entirely based on nature tourism (Scholes and Biggs 2004).

While nature tourism is a significant part of the economy of some lion range countries, in all countries, trophy hunting is a small percentage of overall tourism revenues, as shown in the table below.

Table 4: Hunting and tourism

Country	Tourism revenue ^a US\$m	Trophy hunting revenue ^b US\$m	Trophy hunting revenue as a percentage of tourism revenue
South Africa	9,547	112	1.2%
Ethiopia	522	1.45	0.3%
Cameroon	159	2.4	1.5%
Tanzania	1,457	32.9	2.3%
Zambia	125	7	5.6%
Botswana	218	25.4	11.7%
Namibia	517	32.8	6.3%
Burkina Faso	72	0.8	1.1%
Zimbabwe	634	20	3.2%
Total	13,251	234.75	1.8%

^a UNWTO (2012)

^b Lindsey, Roulet and Romanach (2006)

Note – all figures have been converted to 2011 dollars for comparison

Trophy hunting is a very small part of the tourism industry in most countries. Overall trophy hunting accounts for less than 2% of tourism revenues. Even this seems an overstatement – several figures above, including the outlier figure of Botswana are based on unpublished sources, discussed below. Note also that despite reports of high hunting revenues in Botswana, trophy hunting is to be banned there from 2014 (Khama 2012).

As a portion of any national economy, trophy hunting is completely insignificant, with revenue never accounting for more than 0.27% of GDP (Namibia). Authors such as Barnett and Patterson (2006) who claim trophy hunting can account for several percent of GDP are misguided.

We saw above that trophy hunting revenues fail to reach rural communities. Any suggestion that trophy hunting can play a significant role in economic development at a wider scale is completely implausible when the industry is considered in the context of national economic activity.

WHERE DOES THE \$200M ESTIMATE COME FROM?

The source of the industry revenue figures quoted above, Lindsey, Roulet, and Romanach (2006) is also the likely source of Rudolph and Hosmer's (2011) \$200m revenue claim. As the only continent-wide estimate of trophy hunting revenue, this study is widely quoted by both hunting advocates like Rudolph and Hosmer and opponents such as IUCN (2009). Given the prominence of this figure, it is worth examining the study in more detail.

Lindsey, Roulet and Romanach's paper is based on a literature review of "published and unpublished literature" and personal communications with trophy hunting industry sources. The revenue-related figures are reproduced in Table 5 below:

Table 5: African trophy hunting revenue estimate

Country	Revenue estimate (USD \$m)	Source	Note
South Africa	100	Professional Hunters Association of South Africa Website www.phasa.co.za	No such estimate available on site at time of writing. No response to repeated requests for information.
Namibia	28.5	Damm (2005)	Author's estimates based on Ministry of Environment and Tourism visitor statistics.
Tanzania	27.6	Baldus and Cauldwell (2004)	Authors' estimates based on Selous Game Reserve data.
Botswana	20	Botswana Wildlife Management Association	Publication not available on internet. No response to repeated requests for information.
Zimbabwe	16	Booth, 2002. Analysis of Wildlife Markets (sport hunting and tourism). WWF-SARPO Report, Harare.	Publication not available.
Zambia	5	Lewis and Alpert (1997)	Figure in source report is actually \$3.1m.
Cameroon	2	Mayaka et al. (2005)	This is a secondary source, Lindsey, Roulet and Romanach seem not to have read primary source document, which is not available on the internet.
Central African Republic	1.4	Roulet, P.A., 2004a. Ph.D. Thesis, Orleans University.	Source in French, not reviewed here.
Ethiopia	1.3	Personal communication from safari company	
Burkina Faso	0.6	Chardonnet, B 1999.	Source in French, not reviewed here.
Total	202.4		

Table 5 shows that few of the sources used to compile Lindsey, Roulet, and Romanach's (2006) estimate of trophy hunting revenue are publically available or employ any sort of systematic methodology. Almost half of their final estimate is from a South African estimate that does not seem to exist. Another study quoted by Lindsey, Roulet and Romanach is Damm (2005). This study lists estimates of South African hunting revenue of \$68m and \$81m and also emphasizes the paucity of data available.

Of the studies used by Lindsey, Roulet and Romanach, only the figures from Namibia and Tanzania are easily available and show any working and methodology. While no more thorough estimate exists at this time, the widely quoted \$200m revenue estimate is based on very weak sources and methodology and should be used with caution.

IMPACT OF AN ESA LISTING

The African Lion Coalition's proposal to list lions on the United States Endangered Species Act would limit the importation of lion trophies hunted in Africa. This does not equate to a ban on hunting of lions, but aims to reduce the number of lions shot by American hunters, as it is thought fewer trophy hunters would choose to hunt lions if they are unable to return home with a trophy. The results of Lindsey et al. (2006) suggest that trophies are important to hunters and that the listing would reduce the number of lions hunted.

Reduction in the number of lions hunted would have a minimal impact on the overall revenues of the trophy hunting industry, estimated by Lindsey, Roulet, and Romanach (2006) at \$200m per year, discussed above. Lindsey et al. (2012) modelled the financial importance of lion hunting to the African trophy hunting industry under several scenarios. Under their "sustainable off-take" scenario, which assumes a reduction from current rates to 0.5 lions are hunted per 1000km², these authors found no impact on the financial viability of trophy hunting operations in Mozambique, Namibia and Zambia, and minor impacts in Tanzania and Zimbabwe.

Lindsey et al.'s (2012) results overstate any impacts, as their model assumes that lion hunters will not substitute a lion hunt with another hunt. The most likely response of American hunters to lion trophy import restrictions will not be to refrain from hunting altogether, but instead to hunt another species (Campbell 2012). Lions are only the fourth most preferred species by American hunters according to a survey by Lindsey et al. (2006). This survey did not include consideration of cost, and given the high prices of lion trophies further substitution is likely to occur in real world markets.

These results are supported by authors such as Baldus and Cauldwell (2004), who found that that "buffalo are by far the most important species", contributing 22.1% of trophy fees in Tanzania, far more than any other species. Booth (2009) also found that "Trophy buffalo are the most important species driving the economics of the hunting industry in southern and eastern Africa". While lion hunts are expensive, cheaper hunting packages focused on plains game, i.e. not including larger, more dangerous animals, are far more popular and are the "bread and butter" of the hunting industry (pp15-16).

Given the relatively minor role that lion hunting plays in overall trophy hunting revenue generation and the ability of hunters to substitute lion hunts with hunts of other species, it seems highly unlikely that an ESA listing would have any material impact on the industry.

CONCLUSIONS

Contribution to community development is minimal

Trophy hunting advocates consistently portray the industry as a major contributor to African community development. Our research indicates that its contributions are in fact minimal. Authors from all sides of hunting and conservation debates agree that local communities are key stakeholders for conservation initiatives, yet they generally receive minimal benefits from trophy hunting.

A study published by the pro-hunting International Council for Game and Wildlife Conservation and the UN Food and Agriculture Organisation found that hunting operators in Tanzania contribute only 3% of their turnover to the communities that are affected by hunting. These calculations are supported by other authors and the conclusion that hunting contributes insufficiently to community development is widely acknowledged.

Would reforms help improve the situation of disadvantaged communities?

Industry advocates imply that a solution is to reform the industry to share more of its revenue. However, the trophy hunting industry is not a large industry in terms of its contribution to GDP or as a part of the wider tourism industry. Improving economic development and the lives of communities is not, therefore, going to be affected by minor changes in the trophy hunting industry, but will be better served by broader development efforts and sustainable tourism. Studies that estimate the revenue of the trophy hunting industry are generally based on weak data and should be used with caution.

Listing African lions on the ESA will have minimal impacts on the trophy hunting industry

Efforts to list the African Lion on the US Endangered Species Act will have minimal impacts on the trophy hunting industry and therefore on communities in Africa. The trophy hunting industry is driven by hunting of buffalo and plains game – lion hunting is not a major revenue generator for the industry. Pro-hunting studies have concluded that reduced lion hunting would make almost no difference to the area of financially viable hunting land.

A very low cost contribution to conservation

A reduction in the number of lions hunted will, however, increase the chances of the species' survival in the wild and maintain an important asset for future generations. There are many factors influencing the long-term sustainability of wild lion populations including hunting, habitat loss, prey depletion and agricultural expansion. One threat that the USA can directly assist with is to reduce hunting by American hunters. The ESA listing provides a chance to help lions at almost no cost to people.

REFERENCES

- Baldus, R, and A Cauldwell. 2004. "Tourist Hunting and Its Role in Development of Wildlife Management Areas In Tanzania." In *Sixth International Game Ranching Symposium – Paris July 6-9, 2004*, 1–45. Paris, France.
- Barnett, Rob, and Claire Patterson. 2006. *Sport Hunting in the Southern African Development Community (SADC) Region: An Overview*.
- Booth, Vernon R. 2009. *A Comparison of the Prices of Hunting Tourism in Southern and Eastern Africa*. Joint publication of FAO and CIC. Budapest.
- Booth, Vernon R. 2010. *Contribution of Hunting Tourism: How Significant Is This to National Economies*. Joint publication of FAO and CIC.
- Campbell, Roderick. 2012. *Mane Assumptions - A Review of Lindsey Et Al (2012) The Significance of African Lions for the Financial Viability of Trophy Hunting and the Maintenance of Wild Land*. A report for the African Lion Coalition, prepared by Economists at Large, Melbourne, Australia. <http://www.ecolarge.com/work/mane-assumptions/>.
- Damm, Gerhard. 2005. "Hunting in Namibia 2004: A Summary." *African Indaba* 3 (4): 1–20.
- Damm, Gerhard R. 2005. "Hunting in South Africa: Facts, Risks, Opportunities." *African Indaba* 3 (4&5). http://www.huntinglegends.com/wp-content/uploads/2008/10/damm_hunting_southafrica_20051.pdf.
- IUCN. 2009. *Big Game Hunting in West Africa. What Is Its Contribution to Conservation? Area*. Published by the International Union for Conservation, Gland, Switzerland and Cambridge, UK.
- Khama, Ian. 2012. "State of the Nation Address." *Government of Botswana Website*. <http://www.gov.bw/en/News/2012-State-of-the-Nation-Address/>.
- Lindsey, P, P Roulet, and S Romanach. 2006. "Economic and Conservation Significance of the Trophy Hunting Industry in Sub-Saharan Africa." *Biological Conservation* 134 (4) (February): 455–469. doi:10.1016/j.biocon.2006.09.005. <http://linkinghub.elsevier.com/retrieve/pii/S0006320706003831>.
- Lindsey, P. A., R. Alexander, L. G. Frank, A. Mathieson, and S. S. Romanach. 2006. "Potential of Trophy Hunting to Create Incentives for Wildlife Conservation in Africa Where Alternative Wildlife-based Land Uses May Not Be Viable." *Animal Conservation* 9 (3) (August): 283–291. doi:10.1111/j.1469-1795.2006.00034.x. <http://doi.wiley.com/10.1111/j.1469-1795.2006.00034.x>.
- Lindsey, Peter A. 2008. "Trophy Hunting in Sub Saharan Africa: Economic Scale and Conservation Significance." *Best Practices in Sustainable Hunting*: 41–47.

- Lindsey, Peter Andrew, Guy Andrew Balme, Vernon Richard Booth, and Neil Midlane. 2012. "The Significance of African Lions for the Financial Viability of Trophy Hunting and the Maintenance of Wild Land." Ed. Brock Fenton. *PLoS ONE* (1) (January 11). doi:10.1371/journal.pone.0029332. <http://dx.plos.org/10.1371/journal.pone.0029332>.
- Mayaka, Theodore B., Theo Hendricks, Justus Wessler, and Herbert H.T. Prins. 2005. "Improving the Benefits of Wildlife Harvesting in Northern Cameroon: a Co-management Perspective." *Ecological Economics* 54 (1) (July): 67–80. doi:10.1016/j.ecolecon.2004.09.020. <http://linkinghub.elsevier.com/retrieve/pii/S0921800904003945>.
- Mbaiwa, Joseph E. 2004. "The Socio-Economic Benefits and Challenges of a Community-Based Safari Hunting Tourism in the Okavango Delta, Botswana." *The Journal of Tourism Studies* 15 (2): 37–50.
- Nelson, Fred, and Rugemeleza Nshala. 2007. "The Evolution and Reform of Tanzanian Wildlife Management." *Conservation and Society* 5 (2): 232–261. <http://conservationandsociety.org/article.asp?issn=0972-4923;year=2007;volume=5;issue=2;spage=232;epage=261;aulast=Nelson>.
- Nowell, K., C. Breitenmoser-Wursten, U. Breitenmoser, and M. Hoffmann. 2012. "Panthera Leo." *IUCN Redlist*. <http://www.iucnredlist.org/details/15951/0>.
- Packer, C, H Brink, B M Kissui, H Maliti, H Kushnir, and T Caro. 2010. "Effects of Trophy Hunting on Lion and Leopard Populations in Tanzania." *Conservation Biology : the Journal of the Society for Conservation Biology* 25 (1) (March): 142–53. doi:10.1111/j.1523-1739.2010.01576.x. <http://www.ncbi.nlm.nih.gov/pubmed/20825444>.
- Peake, Debbie. 2004. "Botswana 2004 - A Review." *African Indaba* 2 (3): 7–12. <http://www.africanindaba.co.za/Archive04/AfricanIndabaVol2-3.pdf>.
- Riggio, Jason, Andrew Jacobson, Luke Dollar, Hans Bauer, Matthew Becker, Amy Dickman, Paul Funston, et al. 2012. "The Size of Savannah Africa: a Lion's (Panthera Leo) View." *Biodiversity Conservation* (doi:10.10. doi:10.1007/s10531-012-0381-4. www.springerlink.com.
- Rudolph, Larry, and Joe Hosmer. 2011. "Why Being Hunted Is Good for Africa's Lions." *Daily Caller*. <http://dailycaller.com/2011/03/04/why-being-hunted-is-good-for-africas-lions/>.
- Sachedina, H.T. 2008. "Wildlife Is Our Oil : Conservation , Livelihoods and NGOs in the Tarangire Ecosystem , Tanzania." *Word Journal Of The International Linguistic Association*. University of Oxford. http://african-environments.ouce.ox.ac.uk/pdf/sachedina_dphil.pdf.
- Scholes, R.J., and R. Biggs. 2004. *Ecosystem Services in Southern Africa: A Regional Assessment*. Regional scale component of the Southern African Millennium Ecosystem Assessment.

- Smith, Robert J., and Matthew J. Walpole. 2005. "Should Conservationists Pay More Attention to Corruption?" *Oryx* 39 (03) (April 5): 251–256. doi:10.1017/S0030605305000608. http://www.journals.cambridge.org/abstract_S0030605305000608.
- Telecky, Teresa. 2013. *Comments on U.S. Fish and Wildlife Service Docket No. FWS-R9-ES-2012-0025*. Submission by The Humane Society of the United States, Humane Society International and The Fund for Animals on US FWS 90-day finding that listing the African lion subspecies as endangered may be warranted.
- UNWTO. 2006. *Report of the World Tourism Organization to the United Nations Secretary-General in Preparation for the High Level Meeting on the Mid-Term Comprehensive Global Review of the Programme of Action for the Least Developed Countries for the Decade 2001-2010*. <http://www.un.org/special-rep/ohrls/ldc/MTR/WorldTourisminput.pdf>.
- UNWTO. 2012. *UNWTO Tourism Highlights*. United Nations World Tourism Organization,. http://mkt.unwto.org/sites/all/files/docpdf/unwtohighlights12enlr_1.pdf.