

BENEFITS OF REGULATED HUNTING FOR LEOPARD (*PANTHERA PARDUS*)

Legal, regulated tourist hunting of African leopard (*Panthera pardus*) benefits the species through mitigation of the primary threats: habitat loss and fragmentation; increased human populations leading to higher incidence of human-wildlife conflict; poaching and illegal wildlife trade; and prey base declines.ⁱ

- **Habitat:** The threat of habitat loss is mitigated in part by fully-protected national parks, which provide over 400,000 km² of relatively secure habitat for leopard across the six Southern African Development Community (SADC) countries that rely on regulated hunting to sustain their leopard and leopard prey populations.ⁱⁱ The national parks are > 30,000 km² larger than in 1982, when the leopard was downlisted to “threatened” under the U.S. Endangered Species Act, and leopard are estimated to be present in most of the parks in Mozambique, Namibia, Tanzania, Zambia, and Zimbabwe.ⁱⁱⁱ Regulated hunting revenues help cover the costs of policing these parks, which in most cases do not generate sufficient revenue to cover all enforcement expenses.^{iv}
- **Habitat:** The threat of habitat loss is further mitigated by areas dedicated to regulated hunting. In Mozambique, Tanzania, Zambia, and Zimbabwe, hunting areas include government reserves, communal wildlife management areas, and private ranches. They are substantially larger than the national parks and represent over 700,000 km².^v Leopard are estimated to be present across almost all hunting areas.^{vi}
- **Habitat:** According to the 2016 IUCN *Red List* assessment of leopard, the species’ total extant range exceeds 8.5 million km², with between 4.3 million and 6.3 million km² of range available in Southern and East Africa. Most decline in the leopard’s range has occurred in areas where the species is already listed as endangered. It is no accident that the countries where the leopard has no value have declining leopard populations and habitat, while the leopard is “healthiest” in the SADC countries where it is threatened-listed and valued as a tourist-hunted game animal.^{vii}
- **Habitat:** Communal wildlife areas are particularly important additional habitat. Community-based natural resource management was in the nascent stages in 1982, when the leopard was downlisted. It is now an important component of wildlife management policies in Zimbabwe and Namibia, and of growing importance in Tanzania, Zambia, Mozambique, and South Africa. Communal wildlife management areas provide almost 400,000 km² in habitat across Mozambique, Namibia, Tanzania, Zambia, and Zimbabwe.^{viii}
- **Conflict Reduction:** Revenue-sharing and infrastructure projects in communal areas funded by hunting revenues also help increase rural communities’ tolerance for dangerous game like leopard.^{ix} Leopard and similar game are otherwise retaliated against for damage to rural community livelihoods through predation on livestock (and sometimes, community members).^x
- **Conflict Reduction:** Sustainable use of leopard improves rural community livelihoods, and greatly reduced problem animal control (PAC) in communal areas. In Zimbabwe, from 2011 to 2015, leopard hunts in CAMPFIRE Areas generated almost \$500,000 for communities, and there were zero reported PAC offtakes.^{xi}

- **Illegal Trade:** Illegal commercial trade in leopard parts occurs primarily in the North and West African countries in which the species is listed as endangered. Reports from SADC countries indicate that illegal commercial trade in leopard parts is low, suggesting the species appears to be valued more as regulated trophy trade than for illegal products in those countries.^{xii}
- **Prey Base:** The 2016 IUCN *Red List* noted a 24% increase in ungulate species (leopard prey) in Southern Africa. This healthy prey base helps to sustain the healthy leopard population in the SADC. The West and Central African countries facing the highest levels of bushmeat poaching and prey base depletion do not rely on regulated hunting as a basis for their national conservation policies.^{xiii}



Photo Credit: Duncan Watson

- **Regulated Hunting:** In the SADC countries, leopard hunting is regulated by the Convention on International Trade in Endangered Species (CITES) Resolution Conf. 10.14, which sets a maximum annual export quota for each country requesting trade in sport-hunted leopard trophies.^{xiv} Compliance with these quotas is overseen by the CITES Secretariat, Animals Committee, Standing Committee, and Parties.^{xv}
- **Regulated Hunting:** Leopard hunting is further regulated by national laws and policies that have been “beefed up” in the past few years in response to expressed concerns. For example, over the past several years, the SADC countries have invested in greater leopard management, which had not been a prior area of focus because the species was considered so numerous. Among other things, Namibia has been conducting a national leopard survey funded by the government and hunting operators. Zimbabwe held its first workshop on leopard (2012), which led to reduced quotas and increased size limits.^{xvi} Tanzania imposed a limit on the length of lawful leopard trophies (2015).^{xvii} South Africa imposed a zero quota in 2015 due to the inability to find that leopard hunting offtakes were supported by sufficient data given the country’s small population.^{xviii} The Southern African range states held their first regional Large Carnivores Workshop in February 2018 to share data and establish common practices and data collection points.
- **Regulated Hunting:** Leopard hunting offtakes are typically low. In Mozambique, 60 leopard were hunted in 2015, fulfilling half the national CITES export quota. In South Africa, 36 leopard were hunted in in 2015. In Tanzania, 139 leopard were hunted in 2015/2016 from a quota of 500.^{xix}

- Regulated Hunting:** Leopard are on quota in far more countries and on far more blocks than any other species in Mozambique, Namibia, Tanzania, Zambia, and Zimbabwe.^{xx} Income from leopard safaris is crucial to both national wildlife authorities, which rely in large part on income from regulated hunting to fund enforcement and management activities,^{xxi} and to hunting operators, as leopard hunting generates the second-most income of any species in Tanzania and Zambia, the third-most income in Zimbabwe and Namibia, and the fourth-most income in Mozambique.^{xxii} Leopard hunts are also required to be fairly long—an average of 14 days (12 in Mozambique, 16 in Tanzania), which generates daily fees that operators reinvest in anti-poaching and management activities. On average, hunting operators invest approximately \$80,000 in anti-poaching each year, which reduces the burden on the government wildlife authority and increases protected habitat for leopard and prey species.^{xxiii}

ⁱ A.B. Stein et al., *Panthera pardus*, IUCN Red List (2016), unpaginated.

ⁱⁱ Mozambique: ~88,000 km², National Administration for Conservation Areas, *Comment on U.S. Endangered Species Act Review of the Leopard* (Jan. 2017), p. 3; South African: ~40,000 km², South African National Parks, <https://www.sanparks.org/about/>; Tanzania: ~58,000 km², Ministry of Natural Resources and Tourism, *Comment on ESA Status Review of the Africa Leopard (Panthera pardus) in Tanzania* (2017), p. 3; Zambia: ~64,000 km², Country Presentation (Nov. 2015); Zimbabwe: ~28,000 km², Parks and Wildlife Management Authority, *Enhancement and Non-Detrimental Findings for Panthera leo in Zimbabwe* (Oct. 2016).

ⁱⁱⁱ Presentations at the first Southern African Large Carnivore Management Meeting (2018).

^{iv} P.A. Lindsey et al., *The Performance of African Protected Areas for Lions and Their Prey*, 209 *Biological Conservation* (2017), p. 138.

^v Note the figures are not available for Namibia and South Africa. In South Africa, note that private ranches are almost five times larger than the national parks. Mozambique: ~135,000 km² (~1.5 times larger than the national parks), National Administration for Conservation Areas (2017), p. 3; Tanzania: ~304,000 km² (~5 times larger than the national parks), Ministry of Natural Resources and Tourism (2017); Zambia: ~180,000 km² (2.8 times larger than the national parks), Country Presentation (2015); Zimbabwe: over 88,000 km² (3.1 times larger than the national parks, and without including all conservancies or communal land), Parks and Wildlife Management Authority (2016).

^{vi} Presentations at the first Southern African Large Carnivore Management Meeting (2018).

^{vii} Stein (2016).

^{viii} National Administration for Conservation Areas (2017), p. 3; Namibian Association of Conservancy Support Organizations, *The State of Community Conservation in Namibia* (2015); Ministry of Natural Resources and Tourism (2017); Zambia Country Presentation (2015); CAMPFIRE Association, *Press Statement on Lifting of the Suspension of Elephant Trophy Imports into America* (Nov. 21, 2017), <https://www.campfirezimbabwe.org/index.php/news-spotlight/26-press-statement-21-november-2017>.

^{ix} For example, in Namibia, safari hunting revenues are essential to keeping at least 52 communal conservancies operating and providing over 50,000 km² in habitat, over 250 jobs, and over N\$ 45 million. NACSO (2015); R. Naidoo et al., *Complementary Benefits of Tourism and Hunting to Communal Conservancies in Namibia*, 30 *Conservation Biology* (Jan. 8, 2016). In Tanzania, from 2013 to 2015, a sample of 27 hunting operators contributed over \$3.1 million in community investment and created over 1,200 permanent jobs. Conservation Force, *Tanzania Operators Summary Report* (2016). In Zimbabwe, CAMPFIRE operates on the basic principle that people are more tolerant of the negative effects of living with wildlife if wildlife has value for them. CAMPFIRE revenues accrue from regulated hunting in communal areas, including leopard hunting, and “are used to support a variety of social services that benefit a large proportion of the local community.” CAMPFIRE Association, *The Role of Trophy Hunting of Elephant in Support of the Zimbabwe CAMPFIRE Program* (Dec. 2016).

^x Lindsey (2016), p. 138; A. Loveridge, C. Packer, A. Dutton, *Science and Recreational Hunting of Lions*, in B. Dickson et al. (eds.), *Recreational Hunting, Conservation and Rural Livelihoods: Science and Practice* (2009).

^{xi} Zimbabwe Parks and Wildlife Management Authority & Zimbabwe Professional Hunters and Guides Association, *Proceedings of a Collaborative Workshop on Leopard Management in Zimbabwe* (Mar. 7-8, 2016), p. 28.

^{xii} National Administration for Conservation Areas (2017), p. 8; Ministry of Natural Resources and Tourism (2017), p. 6; Parks and Wildlife Management Authority, *Preliminary Non-Detriment Finding Assessment for Leopards in Zimbabwe* (Dec. 2012), p. 9. There is some illegal trade in leopard skins for ceremonial use among members of the Nazareth Baptist Church, but the extent of the trade is difficult to quantify and is being controlled through collaboration of South Africa's Department of Environmental Affairs and the non-profit Panthera. C. Torchia, *In South Africa, Conservationists Offer Fake Leopard Hides*, Associated Press (Jan. 28, 2017), <http://www.sfgate.com/news/crime/article/In-South-Africa-conservationists-offer-fake-10890867.php>.

^{xiii} Stein (2016).

^{xiv} Res. Conf. 10.14, <https://www.cites.org/sites/default/files/document/E-Res-10-14-R16.pdf>.

^{xv} Decisions taken at the last Conference of the Parties in October 2016 have prompted range nations to review their current leopard quotas, evidencing the effective oversight of the CITES trade. CITES Conference of the Parties 17, Decisions 17.114-17.117, *Quota for Leopard Hunting Trophies* (2017).

^{xvi} Parks and Wildlife Management Authority (2012), p. 11.

^{xvii} Ministry of Natural Resources and Tourism, *Wildlife Conservation (Tourist Hunting) Regulations* (2015).

^{xviii} Staatskoerant/Government Gazette, *Non-Detriment Finding for Leopard (Panthera pardus)*, *South Africa* (Sept. 10, 2015).

^{xix} Administration for National Conservation Areas (2017), p. 5; South Africa Department of Environmental Affairs, pers. comm. (2017); Ministry of Natural Resources and Tourism (2017), p. 8.

^{xx} P.A. Lindsey et al., *Lions and the Viability of Trophy Hunting*, 7 PLoS ONE 1 (Jan. 2012), p. 6.

^{xxi} Administration for National Conservation Areas (2017), p. 10-11; Namibian Game Products Trust Fund, *Report on the Activities of the GPTF: 2012-2016* (Sept. 2016), p. 4-7; Ministry of Natural Resources and Tourism (2017), p. 10; Parks and Wildlife Management Authority (2016); Parks and Wildlife Management Authority, *Legal Trade, Conservation, and Rural Livelihoods: A Zimbabwean Perspective, Presentation at the Workshop on CITES and Livelihoods* (Nov. 23-25, 2016), p. 10.

^{xxii} Lindsey (2012), p. 6.

^{xxiii} Administration for National Conservation Areas (2017); Conservation Force, *Zambia Operators Summary Report* (2016) Conservation Force (2016); Parks and Wildlife Management Authority (2016).