



The values behind calculating the value of trophy hunting

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Naidoo et al. (2016) assessed benefits from hunting and tourism in Namibia from 1998 to 2013 at 77 communal conservancies, which provide community-based wildlife conservation. They found that hunting and tourism each generates roughly the same economic value and that if trophy hunting were banned, some conservancies would be unable to cover their operating costs. As a result, the authors concluded that trophy hunting provides a benefit to conservation. We find problems with both their methods, which rely on opaque assumptions about the value of trophy-hunted meat and their conclusions about trophy hunting's relationship to conservation in Namibia. Both their methods and conclusions rest on narrow (and in some aspects unclear) assumptions about values. Furthermore, conservation decisions are not and should not be driven by economic benefits alone.

According to Naidoo et al.'s results, hunting and tourism produce almost equal total benefits in 2013—around US\$3 million. Their finding that “direct benefits from hunting are of roughly similar magnitude to those from tourism for communal conservancies in Namibia” rests on assumptions about the indirect value of the meat provided “to the community at large.” Total value was calculated by aggregating 3 data sets: fees paid to conservancy management committees; salaries of community members employed in the tourism or hunting industry; and nonfinancial benefits. This last category was their means of adding the assumed value of meat from hunting.

The authors state that the value of meat represents 32% of the US\$5.41 million total value of hunting from 2011 to 2013 (i.e., US\$1.73 million). This value assigned to the meat seems to account for the large discrepancy between the nonfinancial benefits of tourism versus hunting (around US\$0.75 million) shown in their figure 1(d). The value of trophy hunting, particularly that it is more economically valuable than tourism, relies en-

tirely on this assumption about meat because without the added meat value, tourism value far outweighs trophy hunting.

The authors' results and thus conclusions rest so squarely on the estimated value of meat that their assumptions should have been made more clear. They state that the price reflects the supposed market costs of buying alternative meat and that the 2013 conversion was 18 Namibian dollars (US\$1.87) per kilogram of meat. The authors do not explain how they calculated the number of kilograms of meat; explain who consumed the meat or how it was distributed; say what alternative meat or food they considered; or mention relevant counterfactuals, namely, whether the communities would have been worse off without the meat.

Previous work shows that trophy hunting of game meat accounts for 36.5% of game meat consumed in Namibia—much of the rest comes from farms (Lindsey 2011). It does not follow from their results that in the absence of trophy hunting, conservancies would convert their land to something else. Instead, conservancies may rely more heavily on farming game meat, rather than selling animals as trophies (many of these landowners also process and export game meat to the European Union). Moreover, while supporting the operating costs of conservancies is no doubt critical to conservation, the authors provide only a cursory assessment of the causal impact of hunting on actual conservation results. Their examples rely on correlations, across different periods, without controlling for confounding factors.

Based on their economic valuation, Naidoo et al. conclude that reducing trophy hunting would lead to “substantial reductions in overall benefit generation and incentives for wildlife conservation throughout Namibia.” We counter that any decision to reduce trophy hunting (or to allow it) may be supported not only by these

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straightforward economic considerations but also by sociopolitical ones. Broader social values explain why exploitation may persist even when it generates very little value (e.g., McCook et al. 2010) and why hunting may be banned even when it is very valuable (as it was in Botswana), just as other potentially high-value products and services have been prohibited (e.g., organs, child labor, and horsemeat [Roth 2007]).

Their failure to incorporate these additional social values means the framing of the study as a “utilitarian approach to conservation” is misleading. An ethical utilitarian approach would have to consider many additional factors (e.g., social views on trophy hunting, the belief of some conservationists that the lives of individual animals matter, many other possible values of wildlife, and the costs to animals themselves) and all interests impartially. The best outcome would depend on whose interests were taken into account, as well as how those interests are weighted. Instead, Naidoo et al. apply a market-based neoliberal definition of *utilitarian*.

We question the dollar amounts they assign to trophy hunting, but even if their amounts are valid, we question Naidoo et al.’s conclusion that these economic benefits (and the conservation that stems from them) necessarily justify the market. A calculation that incorporated broader social values might also lead to deeper analysis about trophy hunting’s value to society.

Literature Cited

- Lindsey P. 2011. An analysis of game meat production and wildlife-based land uses on freehold land in Namibia: links with food security. TRAFFIC East/Southern Africa, Harare, Zimbabwe.
- McCook LJ, et al. 2010. Adaptive management of the Great Barrier Reef: a globally significant demonstration of the benefits of networks of marine reserves. *Proceedings of the National Academy of Sciences of the United States of America* **107**:18278–18285.
- Naidoo R, Weaver CL, Diggle RW, Matongo G, Stuart-Hill G, Thouless C. 2016. Complementary benefits of tourism and hunting to communal conservancies in Namibia. *Conservation Biology* **30**:628–638.
- Roth AE. 2007. Repugnance as a constraint on markets. *Journal of Economic Perspectives* **21**:37–58.