Biological Conservation 314 (2026) 111681

Contents lists available at ScienceDirect

Biological Conservation

journal homepage: www.elsevier.com/locate/biocon

Context matters: German public perceptions of trophy hunting in sub-Saharan Africa

Emu-Felicitas Ostermann-Miyashita [a,b,c,*], Sophia Hibler [d], Lovemore Sibanda [a,e], Darragh Hare [a,f]

[a] Wildlife Conservation Research Unit, Department of Biology, University of Oxford, Abingdon Road, Tubney, Oxfordshire, UK
[b] Leibniz Centre for Agricultural Landscape Research (ZALF), Eberswalder Str. 84, 15374, Müncheberg, Germany
[c] Faculty of Life Sciences, Thaer-Institute of Agricultural and Horticultural Sciences, Humboldt- Universität zu Berlin, Invalidenstraße 42, 10099, Berlin, Germany
[d] IRTA, Marine and Continental Waters, Centre de La Ràpita, La Ràpita, Catalonia, Spain
[e] Cheetah Conservation Project Zimbabwe, Dete, Zimbabwe
[f] Department of Natural Resources and the Environment, Cornell University, Fernow Hall, 226 Mann Dr, Ithaca, NY, 14853, USA

ARTICLE INFO

Keywords:
Wildlife conservation
Conservation conflicts
Telecoupling
Environmental justice

ABSTRACT

Proposed bans on the import of hunting trophies from African countries to Europe continue to spark international political tensions and public debate. Despite heated debates in Germany, Europe's largest and the world's second largest importer, empirical evidence on public perceptions is limited. Using an experimental vignette approach, we administered an online questionnaire to 882 rural and urban German participants and used ordinal regression to assess the acceptability of trophy hunting of African elephants and zebras. Overall acceptability was low, with 59.7–90.8 % of participants rating the hunting scenarios as unacceptable to a certain extent, but varied by context: while hunting a zebra was more acceptable than an elephant, participants showed consistency in whether they prioritised the need of people or that of wildlife, both in the usage of the hunted meat and the allocation of the revenue of the hunt. We did not find evidence for a rural-urban divide, while acceptability between zebra and elephant hunts was more pronounced among rural participants. Acceptability was higher among male participants, those who prioritised the interests of people over the interests of wild animals, and those who identified as hunters. Our findings emphasise the international complexities of public opinion on contentious issues in conservation and illuminate challenges decision-makers face when balancing the interests and perspectives of multiple publics.

1. Introduction

International debates rage over the acceptability of trophy hunting as a component of wildlife management. There are strong advocates both for and against trophy hunting, often portrayed by media as a clear 'black-and-white' issue (Mkono, 2023), often featuring high-profile cases of hunters from wealthier countries in the Global North hunting well-known species in the Global South (Yeomans et al., 2022). As trophy hunting is sometimes conflated with illegal hunting practices such as poaching (Challender et al., 2024), we follow the International Union for the Conservation of Nature (IUCN) definition: the legal hunting of wildlife where licensed hunters typically pay a fee to hunt an animal with desirable characteristics and keep body parts as souvenirs (IUCN, 2012).

Public debate and media coverage often focus on the perceived cruelty and moral unacceptability of trophy hunting (Batavia et al., 2018), while its broader complexity – balancing wildlife conservation, wild animal welfare, human safety, and local livelihoods – receives less attention (Yeomans et al., 2022; Hare et al., 2023; Ghasemi, 2021). Unregulated trophy hunting may have contributed to localised declines of some species (Rosenblatt et al., 2014; Packer et al., 2011). However, there are examples in which trophy hunting can generate revenue that could support local economic development and sustains populations of wild animals (Naidoo et al., 2016; Parker et al., 2020; Lindsey et al., 2007; 't Sas-Rolfes, 2022; Snyman et al., 2021). Some argue that banning trophy hunting could lead to the conversion of hunting areas into farmland or other more profitable land uses (Challender, 2024; Parker et al., 2020), thereby risking the reduction of wildlife habitat and

* Corresponding author at: Leibniz Centre for Agricultural Landscape Research (ZALF), Eberswalder Str. 84, 15374, Müncheberg, Germany.
E-mail address: emu-felicitas.ostermann@zalf.de (E.-F. Ostermann-Miyashita).

https://doi.org/10.1016/j.biocon.2025.111681
Received 29 May 2025; Received in revised form 18 December 2025; Accepted 19 December 2025
Available online 25 December 2025

affecting rural livelihoods (Dickman et al., 2019; Di Minin et al., 2016; Hart et al., 2020).

The trophy hunting debate is very politicised in Europe, where proposed bans on trophy imports have illuminated questions of social justice between importing and exporting countries (Masole et al., 2025; Challender and Dickman, 2025). Some argue that such bans undermine sub-Saharan African nations' sovereign rights over wildlife management, imposing Global North values at their expense and a form of neocolonialism (Madzwamuse et al., 2020; Mutinhima et al., 2025; Mbaiwa and Hambira, 2023). Others argue that, while hunting was a part of wildlife conservation and management before European influence (DeGeorges and Reilly, 2009), contemporary commercialised trophy hunting and related exclusive structures are remnants and continuations of colonialism, maintaining economic dependencies, reinforcing external control over land use, and straining international relations (Munro, 2021; Mkono, 2023; Mkono, 2019). Germany is at the centre of this debate as Europe's largest and the world's second-largest importer of hunting trophies, following the USA (Humane Society International Europe, 2021b; CITES, 2025; Masole et al., 2025). Germany's hunting connections are particularly relevant to Namibia and Tanzania, which are former German colonies (Federal Foreign Office, 2020).

While the German government's intentions to restrict trophy hunting imports were welcomed by animal protection organisations (Humane World for Animals, 2022), they were met with criticism from some African nations, who viewed this as a neocolonial imposition on their ability to sustainably manage wildlife (Parlamentsnachrichten, 2024). A notable example was when the then President of Botswana, Mokgweetsi Masisi, offered to send 20,000 elephants to Germany in April 2024 to protest against proposed restrictions on importing elephant trophies (POLITICO, 2024; Parlamentsnachrichten, 2024). President Masisi suggested that German people should "live together with the animals, the way you are trying to tell us to" (BBC, 2024).

Like other countries in Europe, the German government has been discussing potential restrictions on hunting trophy imports. In 2022, the then minister of environment, Steffi Lemke, publicly affirmed the government's commitment to introduce tighter trophy import regulations (Humane World for Animals, 2022a). The country has a long-established hunting tradition, represented by associations such as the German Hunting Association (Deutscher Jagdverband: DJV), the Ecological Hunting Association (Ökologischer Jagdverband: ÖJV) and some international associations such as the European Federation of Hunting and Conservation (FACE). Many of these hunting associations oppose any trophy import ban or restrictions (FACE, 2024; DJV, 2022). At the same time, Germany has a vocal anti-trophy-hunting movement, led by animal protection organisations (Pro Wildlife, 2023). Public opinion surveys show highly variable levels of opposition to trophy hunting in Germany, ranging from 21 % to 85 % (FACE, 2024; Humane Society International Europe, 2021a), likely influenced by the framing of survey questions. For example, public support for trophy hunting is low (21 %) when it is framed as an "inhumane practice which kills tens of thousands of wild animals, including endangered or threatened species" (Humane Society International Europe, 2021a), but high (85 %) when it is framed as making a "vital contribution to species population control, habitat conservation, biodiversity support, and significant benefits to local communities" (FACE, 2024). A more detailed understanding of German public perceptions of trophy hunting is crucial, because public perceptions influence domestic and international wildlife policies and funding priorities. These in turn influence the long-term viability of hunting-based conservation programmes in rural African locations where hunting takes place (Bombieri et al., 2018; Challender, 2024; Madzwamuse et al., 2020).

In this study, we adapted the experimental vignette method used by Hare et al. (2024) to study perceptions of trophy hunting among samples of people living in urban areas of the United Kingdom (UK), the United States of America (USA) and South Africa to the German context. A novel aspect in this study is that we compare perceptions of rural and urban populations in Germany. Prior research indicates that residential status affects public perceptions of conservation issues, with people living in urban areas tending to be more supportive of wildlife presence (Tan et al., 2020; Klich et al., 2021; Ostermann-Miyashita et al., 2023). In turn, rural residents tend to show a higher acceptance of hunting (Wilkins et al., 2019), possibly because hunting is more commonly practised in rural areas and is closely linked to some rural identities (von Essen et al., 2019). We therefore tested whether perceptions of trophy hunting in sub-Saharan Africa differ between residents in rural and urban areas of Germany.

Our main objective was to examine German perceptions of trophy hunting African elephants and zebras, two well-known African herbivores that are hunted in several sub-Saharan countries. We experimentally varied three key conditions of the hunt: which animal would be hunted (elephant or zebra); how the hunted meat would be used (left for wild animals or provided to local people); and how the revenue would be used (help support conservation locally, help support economic development locally or help support hunting enterprises locally) (Hare et al., 2024).

We tested the following hypothesis:

H1. Participants would perceive zebra hunting to be more acceptable than elephant hunting, perhaps related to elephants having higher perceived charisma (Albert et al., 2018; Colléony et al., 2017).

H2. Participants would perceive hunts to be more acceptable when meat would be provided to local people rather than left for wildlife, consistent with studies showing that human consumption increases acceptance of hunting (Krokowska-Paluszak et al., 2020; Raftogianni et al., 2022).

H3. Participants would perceive hunts to be more acceptable when revenue would support local conservation or economic development, compared to local hunting enterprises, aligning with previous studies highlighting the relevance of conservation and community benefits to perceptions of hunting (Angula et al., 2018; Hare et al., 2024).

In addition to hypotheses related to our experimental factors, we tested whether sociodemographic factors, social identities and conservation priorities shaped perceptions of trophy hunting. The novelty of our study lies in comparing rural and urban participants, with the expectation that rural residents would show higher acceptance, due to their greater familiarity with hunting and exposure to human- wildlife interactions (Wilkins et al., 2019; Klich et al., 2021). A priori predictions for all experimental conditions, sociodemographic factors, social identities and conservation priorities are detailed in the supplements (Table S1).

2. Methods

2.1. Experimental design

We adapted the experimental design developed by Hare et al. (2024) to quantify German public perceptions of trophy hunting elephants and zebras. This design recognises that trophy hunting is not a uniform practice (Hare et al., 2023), but differs in key aspects such as the species hunted, how the meat from the hunt would be used, and the allocation of hunting revenue. To ensure translation accuracy, we performed forward–backwards translation (Lee et al., 2019) of Hare et al.'s (2024) instrument from English to German. Final versions of both languages are available in the supplement (Tables S5 and S6).

We selected elephants and zebras as the hunted animals because they are widely known to the Germany public (Albert et al., 2018). We did not specify particular elephant or zebra species, expecting that this level of detail would be too specific for most participants. Information on elephant and zebra species and their respective conservation status is provided in the supplementary material (S8).

Wild meat is a vital protein source in many rural communities in southern Africa, including those near protected and conserved areas (Mgawe et al., 2012; Cawthorn and Hoffman, 2015; Ordaz-Németh et al., 2017). It is also common that meat from hunting is provided to local communities (White and Belant, 2015). We tested whether meat utilisation influences acceptance of trophy hunting by including two options: (1) providing it to local communities or (2) leaving it for wildlife.

Trophy hunting revenue often funds conservation or local economic development ('t Sas-Rolfes, 2022; Mbaiwa, 2018; Snyman et al., 2021; Saayman et al., 2018). Studies have shown that the justification for trophy hunting, especially what it supports with its revenue, is a crucial factor influencing people's acceptance of it (Ghasemi et al., 2023; Traill et al., 2024; Hare et al., 2024). Therefore, we included three revenue allocation options: (1) conservation, (2) local economic development, or (3) local hunting enterprises.

A full-factorial design combining these three experimental factors: animal hunted (elephant or zebra; two levels), meat distribution (wild animals or local people; two levels), and revenue allocation (wildlife conservation, local economic development, or local hunting enterprise;

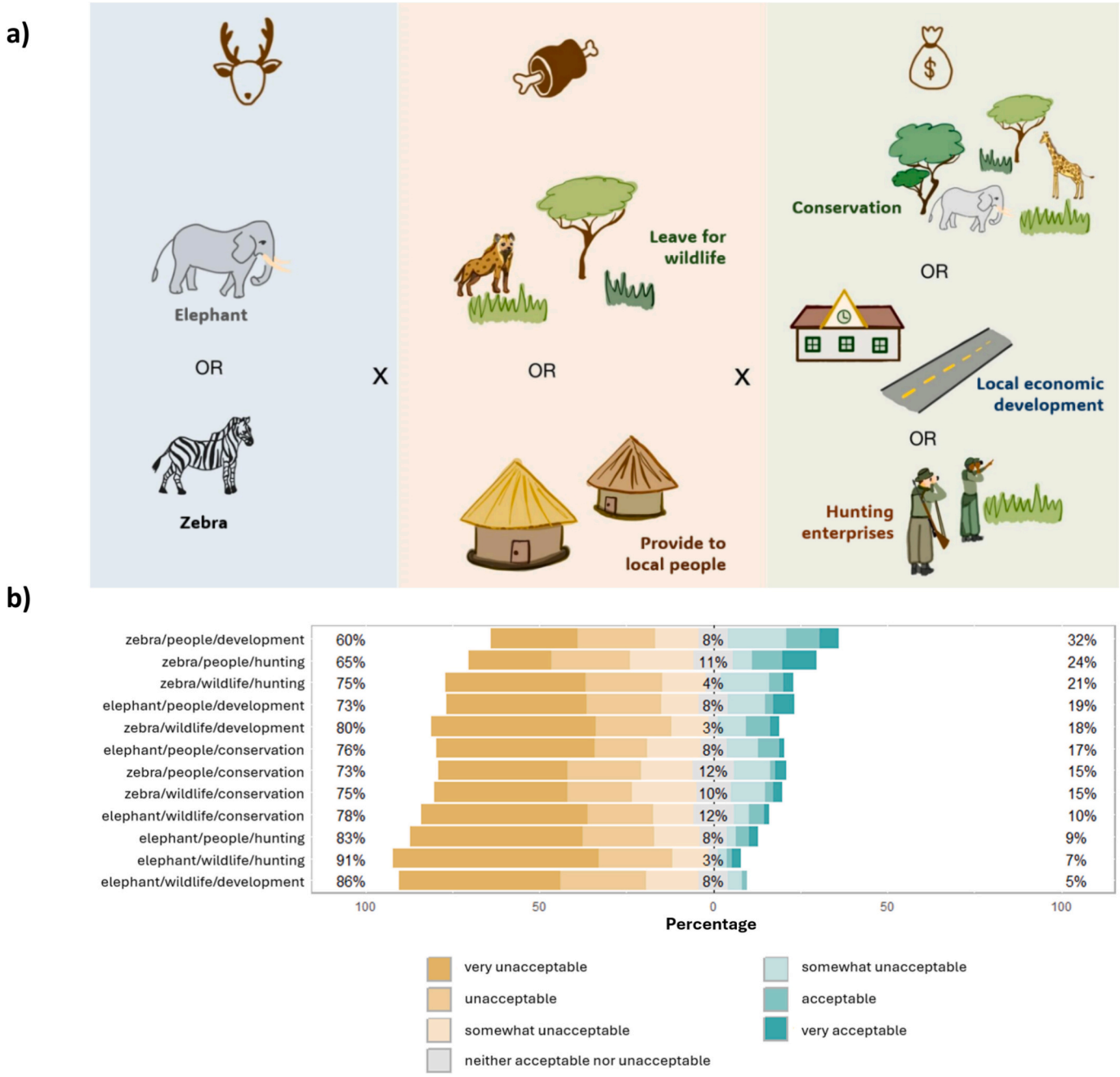

Fig. 1. a) Experimental design. We manipulated three experimental factors: animal (two levels, elephant or zebra), how meat would be used (two levels, left for wild animals or provided to local people), and how revenue would be used (three levels, help support conservation locally, help support economic development locally, or help support hunting enterprises locally), resulting in a full-factorial (2 × 2 × 3) design with 12 experimental conditions. b) Acceptability of hunting across 12 experimental scenarios. Each bar represents a unique hypothetical hunt corresponding to one of the 12 experimental conditions. Colours show the distribution of responses from *very unacceptable* to *very acceptable*. Percentages show the combined proportion of the participants rating the described hunt to be *very unacceptable, unacceptable,* and *somewhat unacceptable* (left)*, very acceptable, acceptable,* and *somewhat acceptable* (right), or *neither acceptable nor unacceptable* (middle). *I don't know* responses removed from visualization.

three levels) resulted in 12 experimental conditions, for which we created a unique vignette. All vignettes were identical except for the three manipulated factors (animal, meat and revenue). Each vignette began with an introductory text explaining that wildlife tourism supports rural economies in Africa, where poverty and food insecurity are common. This was followed by a description of a hypothetical scenario in which a German tourist would pay a fee to legally hunt an elephant or zebra and keeps part of the animal as a memento, concluding with details on how the meat and revenue would be distributed (Fig. 1a).

2.2. Procedure

We commissioned Qualtrics (http://www.qualtrics.com) to recruit a sample stratified by gender, age, and residential status (rural or urban) to reflect German population statistics from 2022 (Statistisches Bundesamt, 2022). Descriptive statistics and a comparison of the final dataset with population benchmarks are presented in Table S2. We administered the questionnaire in German via the Qualtrics online platform.

After providing informed consent, participants answered screening questions on country of residence (multiple choice from a list of European countries), self-assessed residential status (on a four-level scale: *very urban*, *somewhat urban*, *somewhat rural*, and *very rural*), gender, and age. Participants were then randomly assigned one of the 12 experimental vignettes and asked to rate the acceptability of the hunt on a 7-point Likert scale (*very unacceptable, unacceptable, somewhat unacceptable, neither acceptable nor unacceptable, somewhat acceptable, acceptable* and *very acceptable*). An *I don't know* option was also available for participants unable to decide whether they found the described hunt to be acceptable or unacceptable.

Participants then completed additional sociodemographic questions, including highest degree of formal education (four levels: *primary school*, *secondary school*, *college or university degree*, *postgraduate degree*), past residential status (four levels: *very urban*, *somewhat urban*, *somewhat rural*, *very rural*), and self-identification as a hunter, conservationist, animal protectionist, or human rights supporter (eight levels: *strongly agree, agree, somewhat agree, neither agree nor disagree, somewhat disagree, disagree, strongly disagree, do not know*). They also answered two conservation priority questions: whether they would prioritise the interests of people or wild animals (six levels: *strongly prioritise wild animals, prioritise wild animals, prioritise neither wild animals nor people, prioritise people, strongly prioritise people, do not know*) and whether they would prioritise the interests of individual animals or groups of animals when interests clash (six levels: *strongly prioritise individual animals, prioritise individual animals, prioritise neither individuals nor groups of animals, prioritise groups of animals, strongly prioritise groups of animals, do not know*).

We conducted a soft launch ($n = 151$) to verify instrument functionality and ensure a balanced distribution of responses across the 12 vignettes. After confirming the instrument performed as expected, we proceeded until we reached 901 responses. The survey ran from September 2nd to September 11th, 2024.

We conducted data screening to improve the quality of the final dataset (Belliveau and Yakovenko, 2022); details are provided in S9. We removed 16 responses from participants who selected *I don't know* when rating the acceptability of the hunt, to obtain only responses on the scale from *very acceptable* to *very unacceptable*. We also regrettably excluded three responses from participants who identified as gender non-binary or diverse, as this sample size was too small for statistical analysis. The final dataset comprised 882 responses: 673 from urban and 209 from rural participants. Prior to statistical analysis, we combined *very urban* and *somewhat urban* into the category *urban*, and *very rural* and *somewhat rural* into *rural*, reducing both residential status variables to two levels. As only 10 participants chose *primary school* as their highest education level, we combined *primary* and *secondary school* into a single category *primary or secondary school*, resulting in three education levels. The median number of responses per condition was 72.5 (range: 66–84).

The study received ethics clearance from a subcommittee of the University of Oxford Central University Research Ethics Committee (R76472/RE003).

2.3. Data analysis

We conducted all statistical analyses in R statistical software (Core Team, version 4.3.3). Prior to model fitting, we assessed multicollinearity among explanatory variables by calculating variance inflation factors (VIF) using the car package (Fox and Weisberg, 2019). We removed childhood residential status due to its high correlation with current residential status (VIF > 5). For social identity variables, *conservationists*, *animal protectionists,* and *human rights supporters* showed high multicollinearity (all VIFs >10). As animal protectionist identity predicts acceptability of trophy hunting and other forms of lethal wildlife management (Hare et al., 2024; Blossey et al., 2025; Bruskotter and Wilson, 2014), we kept *animal protectionist* and removed the other two.

We used ordinal logistic regression [ordinal package (Christensen, 2023)] to examine relationships between the acceptability of trophy hunting and:

- the three experimental factors (animal hunted, meat distribution and revenue allocation);
- sociodemographic variables (age, gender, highest degree of education and current residential status);
- social identity variables (hunter, animal protectionist); and
- conservation priorities (whether to prioritise the interests of people vs. wild animals, and individual animals vs. groups of animals).

We fitted a global model that included main effects of all explanatory variables, as well as two-way interactions among the three experimental factors (animal, meat, and revenue) and current residential status (Table S3). We compared all models nested within the global model using the corrected Akaike Information Criterion [AICc; MuMIn package (Barton, 2024)], and selected the top-supported model as the one with the lowest AIC_c value. We computed the AIC_c values for eight models within $\Delta 2$ AIC_c of the top-supported model, after removing models with uninformative or redundant parameters (Sutherland et al., 2023) (Table S5). We then calculated relative weights (AIC_w) for all remaining models within $\Delta 2$ AIC_c. All results reported below are from the top-supported model.

To assess categorical variables in the top-supported model with more than two levels, we conducted post hoc Tukey tests [emmeans package (Lenth et al., 2025)]. To determine the relative acceptability of the 12 scenarios, we calculated estimated marginal means from the top-supported model for all experimental factor combinations (*animal*, *meat*, *revenue*) and current residential status, while accounting for all other variables [emmeans package (Lenth et al., 2025)].

We used the Likert package (Bryer and Speerschneider, 2016) to visualise participants' responses and ggplot2 (Wickham et al., 2016) to visualise estimates and predictions from the top-supported model. Consistent with best practices for models selected with AIC_c (Sutherland et al., 2023), we calculated and visualised model estimates and predictions with 85 % and 95 % confidence intervals [ggeffects package (Lüdecke et al., 2018)].

3. Results

Overall, the acceptability of trophy hunting of elephants and zebras was low across all hypothetical scenarios, with 59.7–90.8 % of participants rating the hunts as *very unacceptable*, *unacceptable*, or *somewhat unacceptable* (Fig. 1b). The least acceptable scenario was hunting an elephant when the meat would be left for wildlife, and revenue would help support hunting enterprises (90.8 % *very unacceptable*, *unacceptable*, or *somewhat unacceptable*). The most acceptable scenario was hunting a zebra when the meat would be provided to local people, and the revenue

would help support local economic development (31.9 % *very acceptable*, *acceptable*, or *somewhat acceptable*, Fig. 1b).

The top-supported model (AIC_w = 0.18) included interactions between animal and residential status, and between meat and revenue, as well as participants' level of formal education, gender, hunter social identity, animal protectionist social identity, and beliefs about whether conservation should prioritise the interests of people or the interests of wild animals (Table S4).

All else equal, participants were more likely to perceive zebra hunting to be more acceptable than elephant hunting. This difference was more pronounced among rural than urban participants (*rural*: difference in log odds ratio = 0.99, SE = 0.26, *urban*: difference in log odds ratio = 0.41; SE = 0.21, Fig. 2).

The effect of meat usage depended on revenue allocation of the hunt. When revenue would support conservation, there was limited difference in acceptability between whether the meat would be provided to local people or left for wildlife (difference in log odds ratio = 0.09, SE = 0.25). However, hunts were more acceptable when the meat would be provided to local people compared to being left for wildlife, if the revenue would support local economic development (difference in log odds ratio = 0.70, SE = 0.24) or local hunting enterprises (difference in log odds ratio = 0.77, SE = 0.24; Fig. 2) compared to when the revenue would support local wildlife conservation.

Acceptability was higher among men than women (difference in log odds ratio = 0.23, SE = 0.13, Fig. 3. Compared to participants with a primary or secondary school education, acceptability was higher among participants with a college or university degree (Tukey test: estimate = 0.46, SE = 0.18) or a postgraduate degree (Tukey test: estimate = 0.35, SE = 0.18). Acceptability was lower among participants with a postgraduate degree compared to participants with a college or university degree (Tukey test: estimate = 0.11, SE = 0.23, Fig. 3).

Acceptance generally increased among participants who more strongly identified as hunters and decreased among participants who more strongly identified as animal protectionists. Participants who would more strongly prioritise the interests of people over the interests of wild animals were more likely to perceive hunting to be more acceptable (Fig. 3).

4. Discussion

Using an experimental vignette approach, we examined the acceptability of trophy hunting well-known African wild herbivores among participants residing in rural and urban areas of Germany. Across 12 hypothetical hunts, acceptability was generally low, but context-dependent, indicating that the particular characteristics of the hunt, such as which animal would be hunted, how the hunted meat would be used, and how the revenue would be allocated, helped explain the differences in acceptability. Participants' socio-demographic characteristics and conservation preferences also predicted acceptability.

Our overall findings are consistent with other studies, which have shown that one of the most important factors influencing the acceptance of trophy hunting is perceived tangible benefits for local communities, such as infrastructure development funded by hunting revenues (Ghasemi et al., 2023; Angula et al., 2018; Hare et al., 2024). This was also reflected in the usage of the hunted meat, combined with the revenue allocation: when the revenue would support local economic development or hunting enterprises, participants found it more acceptable if the meat was provided to local people, while there was little difference when the revenue would support conservation. Previous studies have shown that the consumption of hunted meat or providing it to local communities increases acceptability of hunting (Krokowska-Paluszak et al., 2020; Raftogianni et al., 2022).

The importance of benefits to people was also reflected in our finding that participants who would prioritise people's interests over those of wild animals were more likely to find hunting acceptable.

This could be linked to the ethical contrast between biocentric, which recognises intrinsic value of nature and wild animals as part of it, and anthropocentrism, which emphasis human interest and benefits (Ghasemi, 2021; Kaltenborn and Linnell, 2022). While ethical reasoning was not the focus of this study, future research that specifically investigates how individuals reason about the ethics of trophy hunting (Ghasemi et al., 2023) could help understand why it can be so controversial (Hare et al., 2023; Rozing et al., 2024).

Our study did not find strong evidence for the often-described rural-urban polarisation in attitudes towards conservation issues (Tan et al.,

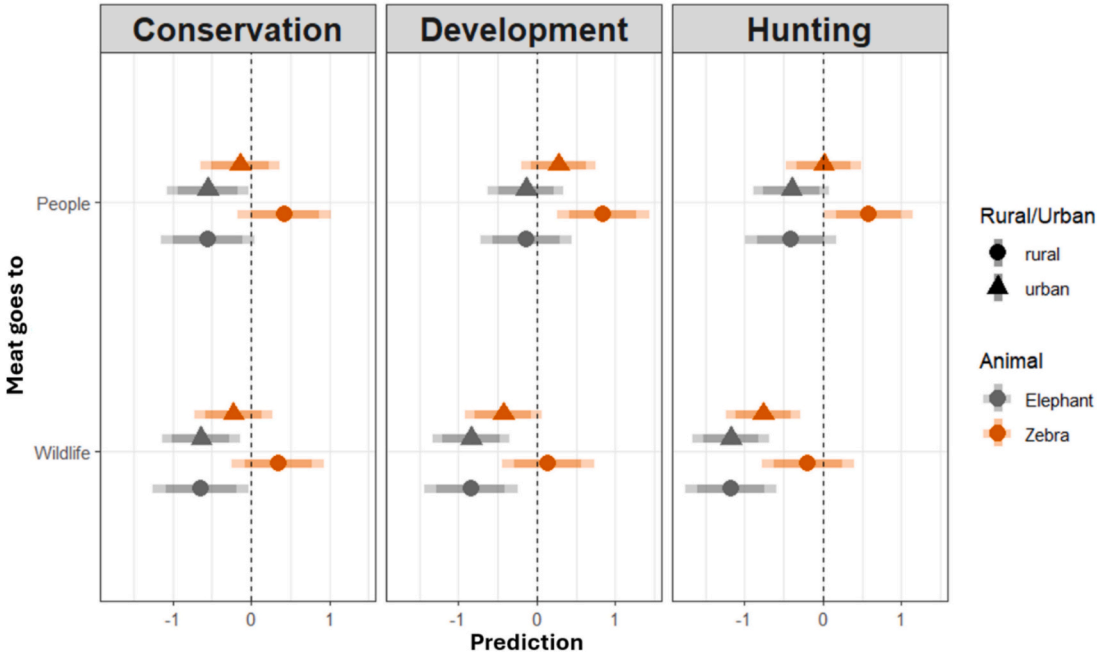

Fig. 2. Predicted relative acceptability of hunting for the 12 hypothetical scenarios, separated by participants residential status, based on the top-supported model. Colours indicate the animal that would be hunted, and panels represent revenue use. Darker error bars show the 85 % confidence intervals, and lighter error bars show 95 % confidence intervals. Higher values indicate greater acceptability of the hunt, controlling for other predictors in the model.

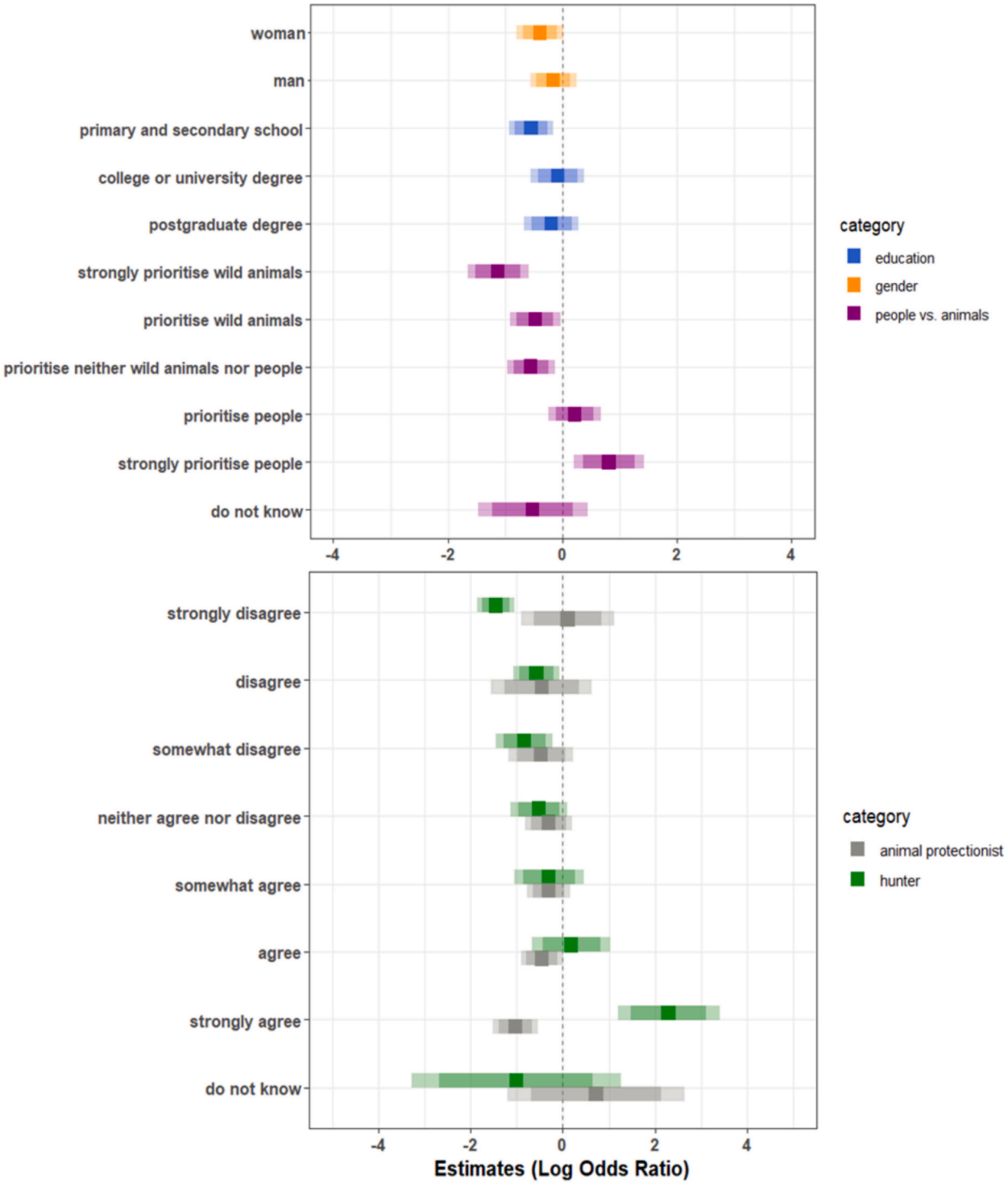

Fig. 3. Association between acceptability of trophy hunting and predictor variables (without interaction effects) in the top supported model. Squares represent estimated marginal means, with darker error bars showing 85 % confidence intervals, and lighter bars showing 95 % confidence intervals. Predictors are grouped by demographic and conservation priority variables (top) and social identity variables (bottom). Positive values indicate higher acceptability, and negative values indicate lower acceptability.

2020; Klich et al., 2021). The one exception was zebra hunting, which rural participants perceived as slightly more acceptable, possibly reflecting greater familiarity with hunting practices in rural areas or perceptions of zebras as a more 'huntable' species than elephants (Wilkins et al., 2019). It is difficult to determine whether the species' protection status affected responses, as we did not provide detailed information on the protection status to participants. Perceived species charisma may also have an effect, as elephants are generally perceived as more charismatic than zebras, which might lead to lower acceptability of hunting them (Albert et al., 2018; Macdonald et al., 2015; Colléony et al., 2017).

The overall small rural-urban effect may also reflect recent societal structural changes in Germany, such as urban residents' migration to rural areas accelerated by the COVID-19 pandemic, which has led to a

greater overlap in rural and urban attitudes (Kapitsinis, 2025; Knuepling et al., 2025). In addition to these structural changes, other studies on the acceptability of hunting have produced similar results, challenging the assumption that rural and urban residents hold fundamentally different views on wildlife management (Blossey et al., 2025; Hare et al., 2021; Martínez-Jauregui et al., 2023). However, one difference in the conditions of our study was that the subject of wildlife management was based in a different place (sub-Saharan Africa) than where the survey was conducted (Germany). Although rural residents are often more directly affected by conflicts in national-level wildlife management (Ceauşu et al., 2019), trophy hunting in sub-Saharan Africa – the specific case examined in our study – may have been a similarly distant issue for rural and urban residents of Germany. This is consistent with the findings of Mutinhima et al. (2025), who suggest that perceptions of wildlife management issues differ less among publics that are more distant from the issue, both within countries (rural residents vs. local residents) as well as on a global scale (Global North vs. Global South).

Other demographic factors also predicted perceptions. Men were more likely than women to find hunting acceptable, possibly due to the male-dominated nature of hunting both as a profession and as an activity (Rodriguez et al., 2016; Stedman and Heberlein, 2009). Studies show that men tend to be more supportive of hunting, while women often prioritise animal welfare (Herzog, 2007). Formal education was positively but weakly associated with acceptability, potentially reflecting greater access to the economic means needed for participating in wildlife tourism, including trophy hunting (Saayman et al., 2018).

Social identity further predicted perceptions: the stronger participants identified as a hunter, the more likely they were to accept hunting, consistent with previous studies showing that hunters view hunting as an important part of wildlife and land management (Campbell and Mackay, 2010; Raftogianni et al., 2022). Conversely, participants who more strongly identified as animal protectionists were less likely to accept trophy hunting, reflecting concerns about animal welfare (Humane Society International Europe, 2021b) and exploitation (Garrido et al., 2017). These results reflect broader patterns in how sociodemographic characteristics and identity politics can explain perceptions of trophy hunting (Hare et al., 2024) and other complex and controversial issues in wildlife management (Lute et al., 2014; van Houdt et al., 2021; Hurst et al., 2020; Blossey et al., 2025).

As the sample demographics as well as the data sampling period differed, a direct and detailed comparison of the results of this survey to those of Hare et al. (2024) is not possible. However, putting the overall results into context with the study, is helpful in identifying overall differences between the countries. Acceptability of trophy hunting in Germany appears lower than in urban areas of the UK, USA, and South Africa (Hare et al., 2024). While legal hunting is in principle available to the general public in Germany, only 0.5 % of the population held a hunting license in 2023 (Statista, 2025) compared to approximately 4.3 % of the US population and 0.5–0.7 % of the South African population (U.S. Fish and Wildlife Service, 2023; Department of Forestry Fisheries and the Environment, 2016). It should be noted that trophy hunting by international hunters has a significant economic impact in South Africa (Saayman et al., 2018). Comparatively lower acceptability in Germany than the in USA or South Africa may therefore reflect lower hunting participation and less social presence of hunting in terms of its role in conservation or the local economy (Heffelfinger et al., 2013; Lindsey et al., 2007). However, acceptability in Germany was also lower than in the UK, where hunting is even less common, which challenges Hare et al.'s (2024) suggestion that acceptability of trophy hunting in Sub-Saharan Africa is related to the respective national hunting culture. When grouping Germany and the UK together as European contexts, our results align with van Houdt et al. (2021), who found higher support among respondent from Africa and the USA compared to Europe, likely showing differences in proximity to conservation, direct local impact, and ethical frameworks.

Despite national differences, some patterns were consistent: across Germany, the UK, USA and South Africa, such as zebra hunts being more acceptable than elephant hunts (Hare et al., 2024). Consistencies were not limited to characteristics of hypothetical hunts, but also socio-demographic variables and social identities such as self-identifying as a hunter or an animal protectionist. We therefore contribute additional evidence to Hare et al.'s (2024) observation that there are consistencies across countries in how members of the public evaluate acceptability of trophy hunting under different hypothetical scenarios.

One novel contribution of this study is that we found limited difference in the acceptability of trophy hunting rural and urban populations in Germany, indicating that the often observed rural-urban divide on wildlife related issues, did not apply for the acceptability of trophy hunting well-known herbivores in Sub-Saharan Africa. Another contribution is that the acceptability of trophy hunting depends on the specifics of the hunt. This emphasises the importance of avoiding generalizations when discussing public attitudes. Rather than measuring acceptability based on the general term 'trophy hunting' (Hare et al., 2023), we advocate for a more nuanced approach that considers the details of the hunting, such as the species, use of meat, and revenue allocation. These distinctions are crucial for informing policies that balance wildlife conservation, ethical concerns, and socio-economic benefits (Hart et al., 2020).

The colonial legacy of conservation and trophy hunting in sub-Saharan Africa continues to feature in debates over wildlife management. Many protected areas and hunting regulations were established through (post-)colonial governance structures that excluded people living in or near high-biodiversity areas from decision-making and land use (Rudd et al., 2021; Munro, 2021). While community-based natural resource management (CBNRM) programmes have been implemented in countries such as Zimbabwe (i.e., the CAMPFIRE programme) and Botswana for several decades and are addressing this topic (Child and Barnes, 2010; Ntuli, 2018), this legacy continues to shape international discussions, particularly when countries from the Global North impact conservation in the Global South. This applies to both processes, promoting and inhibiting trophy hunting. While some argue that financial dependency and uneven distributions of hunting rights (between wealthy hunters from the Global North and local people) foster colonial relationships, others suggest that Western countries imposing restrictions on the trade of trophy hunting goods is a neocolonial attitude (Angula et al., 2018; Mkono, 2019; Mbaiwa and Hambira, 2023; Mkono, 2023).

These debates reflect broader socio-ecological interdependencies. In the contemporary international conservation landscape, distant regions are connected through flows of goods, services, and values (Liu et al., 2013) – a process defined as 'telecoupling' (Kuemmerle et al., 2019). Trophy hunting in sub-Saharan Africa illustrates multiple aspects of telecoupling: hunters, primarily from countries in the Global North, benefit from hunting opportunities in sub-Saharan Africa. While well-regulated trophy hunting can generate local economic benefits (Di Minin et al., 2021; Naidoo et al., 2016), they may experience restricted access to hunting areas (Mkono, 2023). Equally, trophy import restrictions in Global North countries can reduce the economic and non-economic benefits that well-regulated trophy hunting can generate in sub-Saharan Africa risk reducing incentives for local people to tolerate dangerous wild animals and manage their land for wildlife (Parker et al., 2020; Challender, 2024). They could also undermine local autonomy (Madzwamuse et al., 2020; Mbaiwa and Hambira, 2023). Addressing these structural injustices requires acknowledging diverse knowledge systems and plurality of values in conservation (Pascual et al., 2023).

Yet, not all conservation activities in formerly colonised countries constitute (post-)colonial continuity (Washington et al., 2024). Land-sparing strategies remain globally important for species protection (Lenda and Skorka, 2023; Wolff et al., 2023; Convention on Biological Diversity, 2022), and viable alternatives to game reserves funded by trophy hunting remain limited (Dickman et al., 2019; Di Minin et al., 2016). More nuanced strategies are needed that combine ecological protection with fair, locally inclusive governance (Mpakairi et al., 2025)

and integrate the rights and knowledge of Indigenous and local communities (Sibanda et al., 2025; Montgomery et al., 2024; Rudd et al., 2021).

There are several limitations to this study. While stratified to match the German demographic benchmarks, we recruited a non-probability (convenience) sample available, which limits generalisability to the broader German public. Our questionnaire did not include detailed information on the conservation status of zebra or African elephant species, the inclusion of which might have influenced perceptions. We did not measure participants' travel experience in sub-Saharan African or hunting abroad – factors likely to shape perceptions of trophy hunting (van Houdt et al., 2021). Future studies could explore whether perceptions differ depending on whether trophy hunting occurs domestically (Germany, Global North) or abroad (sub-Saharan Africa, Global South), as proximity to the conservation issue or wildlife management approach may impact people's perception of it.

5. Conclusion

We found that public acceptability of trophy hunting in sub-Saharan Africa was generally low among a sample of the German public but varied depending on the specifics of each hunt and participant characteristics. Overall, our study contributes to the growing research on public perspectives on trophy hunting, adding a comparison of rural and urban residents and finding surprisingly small differences. Our findings highlight the need for conservation policy debates — especially those involving contested conservation topics like trophy hunting — to move beyond generalizations and incorporate socio-cultural, ethical, and ecological complexity. In a telecoupled world shaped by historical and ongoing asymmetries in power and resource use, research can help ensure that conservation strategies are justice-oriented, informed by diverse perspectives, and sensitive to both biodiversity conservation and the needs, interests, and concerns of people directly affected by those strategies (Sibanda et al., 2025; Mutinhima et al., 2025; Rudd et al., 2021; Mpakairi et al., 2025).

CRediT authorship contribution statement

Emu-Felicitas Ostermann-Miyashita: Visualization, Methodology, Investigation, Formal analysis, Data curation, Conceptualization, Writing – original draft. **Sophia Hibler:** Investigation, Writing – review & editing. **Darragh Hare:** Methodology, Funding acquisition, Conceptualization, Writing – review & editing, Writing – original draft. **Lovemore Sibanda:** Writing – review & editing.

Declaration of Generative AI and AI-assisted technologies in the writing process

We used AI (ChatGPT and DeepL) to help generate R code and to suggest ways to improve clarity of text initially drafted by authors whose first language is not English.

Funding

This study was funded by a grant from WWF Germany to the University of Oxford (CBR00900). DH receives funding from Jamma International, Oppenheimer Generations Research and Conservation, and the BAND Foundation.

Declaration of competing interest

DH has consulted for WWF Germany on human-wildlife conflict.

Acknowledgments

We are grateful for the financial support of WWF Germany to enable this research. We would also like to express our thanks to the participants, who have dedicated their time and effort for the survey. Special thanks to Siyu Huang and Jannis Till Feigs for checking final versions of the survey and pretesting the survey instrument.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.biocon.2025.111681.

Data availability

Data will be made available on request.

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