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Community-based conservation surveillance: an ethnographic analysis of the drivers and obstacles of local reporting on rhino and plains game poaching in Namibia

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ABSTRACT

Conservation surveillance, or the monitoring of people for conservation purposes, is a core component of coercive conservation governance. Over the last decade, in response to the social injustice attributed to top-down applications of surveillance technologies associated with militarised conservation, policies have increasingly prescribed an integration of local populations into conservation law enforcement. The problem with 'inclusive' or 'community-based' forms of conservation surveillance is that little is empirically known about reporting behaviours within rural communities. While reporting rates tend to be low, practitioners have limited understanding of how to engage local people. This knowledge gap significantly undermines conservation's capacity to integrate local people into conservation surveillance and enhance community-based interventions for combating illegal-hunting and illegal wildlife trade (IWT). Drawing on fieldwork among communities in north-west Namibia, where local people are recruited as informants of conservation authorities, we contribute a deeper, qualitative understanding of what motivates local people to report or withhold information on illegal-hunting of rhino and plains game. We show that communal area residents primarily report because they feel morally compelled to do so and/or because they seek to bolster their claims to status, privilege and entitlement. They fail to report due to the pervasiveness of communal disciplinary power, including locally-divergent social rules and sanctions. In contrast to dominant perceptions among policymakers and practitioners, our analysis demonstrates that incentive-based informant networks and reward systems have limited effectiveness, while carrying high risks. Our analysis supports five recommendations for integrating local people into conservation surveillance in more locally acceptable and sustainable ways.

1. Introduction

Over several decades, conservation surveillance, or the monitoring of people for conservation purposes (Sandbrook et al., 2018), has been a core component of coercive conservation governance (Brockington, 2002; Duffy, 2000, 2014; Neumann, 1998, 2001, 2004; Peluso, 1993). Over the past decade, there have been at least two fundamental shifts in how conservation surveillance operates and, by extension, how it affects the people it targets and the wildlife it seeks to protect.

First, the use of surveillance technologies (e.g., drones, camera traps, algorithms) now radically extends conservation's ability to police spaces and discipline people into environmentally-friendly behaviours (Adams, 2019; Duffy, 2016; Sandbrook et al., 2018; Simlai and Sandbrook, 2021). Intensive surveillance regimes, both traditional (i.e. human-human) and technological, are closely intertwined with processes of militarised conservation, such as 'green militarisation' (Lunstrum, 2014), 'green security' (Kelly and Ybarra, 2016), and 'green violence' (Büscher and Ramutsindela, 2016). Despite militarised applications of these technologies for human-focused surveillance, their utility for species conservation is significant, e.g. for providing data concerning the

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movements of key animal species, such as desert-adapted lions on communal land in north-west Namibia (Brassine 2024; Heydinger, 2024; Muzuma, 2024).

Second, in response to the limited effectiveness and social injustice attributed to militarised conservation and the more top-down applications of surveillance technologies (Duffy et al., 2019), there has been a significant push for more bottom-up engagement and integration of local populations into conservation law enforcement, e.g. IUCN's 'Beyond Enforcement' or 'Communities as a First Line of Defence' framework (Biggs et al., 2017; Cooney et al., 2017). Approaches that combine top-down and bottom-up actions to combating illegal-hunting and the illegal wildlife trade (IWT) have also been discussed as 'inclusive anti-poaching' (Massé et al., 2017), 'inclusive policing' (Sjöstedt et al., 2022), 'intelligence-led conservation' (Moreto, 2015), and community-supported wildlife crime law enforcement (Anagnostou et al., 2020).

The problem with 'inclusive' or 'community-based' forms of conservation surveillance is that little is empirically known about people's reporting behaviours (Anagnostou et al., 2020), apart from the fact that there is often a lack of information-sharing with authorities (Sjöstedt et al., 2022). Local people, the most critical change agents in wildlife crime (Hübschle and Shearing, 2018), rarely report information about illegal-hunting, while policymakers, practitioners, and law enforcement have a limited understanding of "whether and how to engage local people in providing actionable information" (Anagnostou et al., 2020: 2). This knowledge gap significantly undermines conservation's capacity to integrate local people into conservation surveillance and enhance community-focused interventions for combating illegal-hunting and IWT.

An emerging literature across conservation biology, conservation social science, green criminology, political ecology, and development studies has recently begun to fill this gap by informing our understanding of drivers and obstacles to reporting illegal-hunting on the ground. To the extent that the drivers of reporting behaviours might partly overlap with the drivers of illegal-hunting, the latter is regarded to be informed by subsistence needs (Bassett, 2005; Leader-Williams and Milner-Gulland, 1993), local cultural norms, opportunism (t' Sas-Rolfes et al., 2019), human-wildlife conflict (Hill, 2004; Naughton-treves, 1997), perceptions of illegal-hunting as a form of social protest (Hübschle, 2017), and a counter-reaction to militarised conservation (Cooney et al., 2017; Duffy et al., 2015; Massé, 2020; Massé and Lunstrum, 2016). Regarding reporting more specifically, based on a survey (n = 2300) of local communities living within the Great Limpopo Transfrontier Park, Sjöstedt et al. (2022) argue that key drivers of reporting illegal-hunting for subsistence are strong conservation-community relations (Moreto et al., 2018), where authorities are perceived as trustworthy, impartial, and uncorrupted, as well as local norms around the immorality of illegal-hunting. Their findings further suggest that economic benefits and financial incentives do not affect people's propensity to share information, which contradicts the often-assumed causal relationships between incentives and stewardship, e.g. identified in a global theory of change for combatting IWT (Biggs et al., 2017; Cooney et al., 2017). Community members' personal environmental beliefs about how threatened wildlife is, are also not found to be related to their propensity to report. Interviews conducted by Anagnostou et al. (2020) with conservation practitioners and rangers in Uganda further corroborate the argument that local communities are most likely to report wildlife crime when they have regular, positive interactions with conservation authorities who are perceived as trustworthy and respectful. Yet, in contrast to Sjöstedt et al. (2022), Anagnostou et al. (2020) contend that the provision of benefits is still a key driver of reporting, and that relationships with rangers might be regarded strategically as contributing towards securing access to resources.

Building on these insights, we draw on fieldwork among communities bordering the core black rhino (*Diceros bicornis bicornis*) range in north-west Namibia where local people are key change agents who can either disrupt or intensify illegal-hunting and IWT (Muntifering et al., 2017; Naro et al., 2020). Our aim is to contribute a deeper, qualitative and sociological understanding of what motivates local people to report or withhold information on illegal-hunting of rhino and plains game.[1] Our analysis supports five recommendations for integrating local people into conservation surveillance in more locally acceptable and sustainable ways.

2. Background and methods

2.1. Research context and study area

In late 2012, the first illegal-hunting of rhino in 18 years was reported on the border of the Palmwag Concession at the heart of our study area in Namibia's Kunene Region (see Fig. 1). Across the country, illegal-hunting escalated quickly: from nine rhinos killed in 2013, to heights of 97 in 2015, 84 in 2018, 87 in 2022[2] and 81 in 2024 (MET and MSS 2020: 18; MEFT, 2023; Smit, 2025). The new wave of illegal-hunting caught some Namibian conservationists by surprise (interviews with NGO staff and trustees); they had remained cautiously hopeful that their carefully cultivated Community-Based Natural Resource Management (CBNRM) approach would provide an element of resilience against the criminal syndicates responsible for IWT (Muntifering, 2019). The relatively low numbers of illegally hunted rhinos in Kunene suggest that IWT seems to be less severe in the context of CBNRM than elsewhere with less than 10 rhinos killed since 2020 (Muntifering et al., 2025). At the same time as the sense of a 'poaching crisis' has largely focused on rhino, the population trends for most plains game species in Kunene have shown a steady decline since 2013. The current status of gemsbok and kudu is considered 'critical', while springbok and Hartmann's zebra require 'careful monitoring' (MEFT/NACSO, 2024). While the downward trend in these populations is likely primarily due to drought, competition with livestock for the decreasing biomass cover, and growing predator numbers, the impact of illegal-hunting for meat is less clear, though it is considered a major challenge throughout Namibia, representing 46 % of all registered wildlife crime cases (MEFT/NACSO, 2023).

Nevertheless, the new wave of illegal-hunting of rhino demonstrated that even Namibian CBNRM was not entirely immune. Particularly the lowest tiers of poaching syndicates, trackers, shooters, and their local recruiters, are often community members who might feel disenfranchised from their conservancy, while being caught up in cycles of debt, dependency, and coercion (Naro et al. 2020). Conservation found itself propelled into a state of crisis as the north-west black rhino population had plummeted by 25 %, going into decline for the first time in over two decades, due to the combined effects of illegal-hunting and drought (SRT, 2016). IWT produces a range of conservation, security, and development, as well as tourism and business challenges that pose a threat to Namibia's biodiversity, economy, and local livelihoods (MET and MSS 2020). In response, the Namibian Government and NGOs have adapted their *modus operandi* by reviving past processes of militarised conservation and, in part, intensifying them.

At the national level, this entailed the following actions: 1) the deployment of the Namibian Defence Force (NDF) and the Namibian Police (NAMPOL) to Etosha and Bwabwata national parks; 2) the establishment of a new anti-poaching unit and a specialised Intelligence and Investigation Unit (IIU); 3) the introduction of the Blue Rhino Task Team (BRTT), a special operations team to crack down on wildlife crime syndicates (Smit, 2018); 4) an updated penal code, the Nature

[1] Plains game refers to various species of antelope and smaller game. In our study area in north-west Namibia, illegally-hunted plains game species are predominantly kudu, gemsbok (oryx), eland, mountain zebra, and springbok.

[2] Of the 87 rhinos illegally hunted in 2022, 61 were southern black rhinos (*Diceros bicornis bicornis*) (MEFT, 2023).

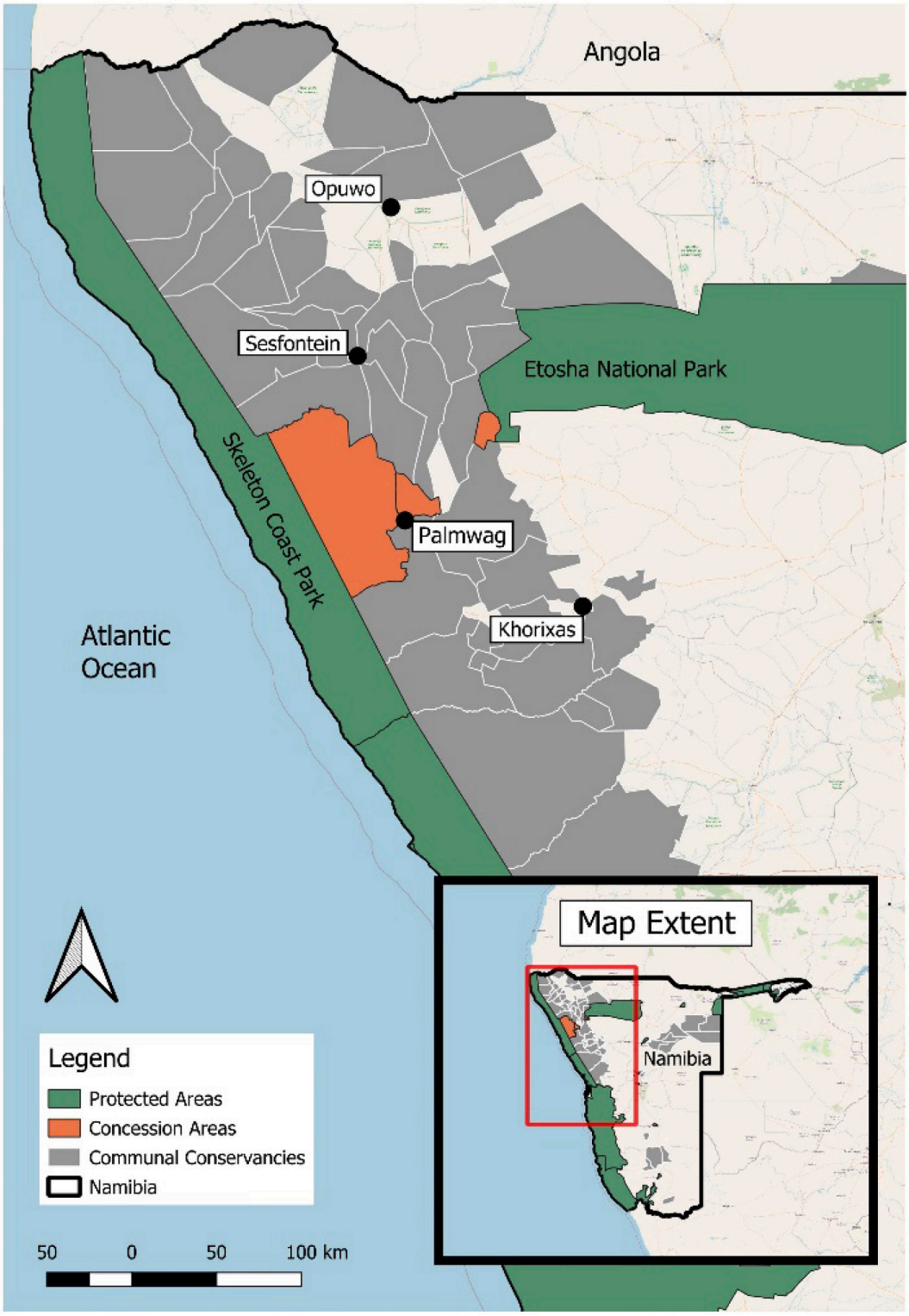

Fig. 1. Map of study area in Namibia's Kunene region (Source: J. Muntifering 2024).

Conservation Amendment Act (3 of 2017), significantly increasing the penalties for involvement in illegal-hunting of rhino with maximum fines up to U$3 million and imprisonment of up to 40 years for repeat offenders (LAC, 2017).

In the north-west, conservation NGOs began to collaborate with NAMPOL for joint anti-poaching patrols. In addition, two NGOs and several communal-area conservancies established the Community Rhino Ranger (CRR) programme which effectively tripled the field force dedicated to anti-poaching and contributed to a dramatic *1200 %* increase in patrol effort (Muntifering, 2019). The CRR programme incentivises conservancies to employ their 'own' rhino rangers, but as the NGOs train, support, deploy, and ultimately manage the rangers' patrols, they are effectively a force-multiplier for NGO-based anti-poaching, rather than an example of a completely autonomous, community-owned alternative (Dawson et al., 2024). The integration of local communities into conservation law enforcement was a cost-

effective opportunity for NGOs to achieve their goal of "24/7/365 [anti-poaching] coverage" (SRT, 2018). At the same time, the programme is also an important step in the right direction of "inclusive anti-poaching" (Massé et al., 2017) that empowers local communities and prepares them for future ownership.

Furthermore, to stop illegal-hunting *before* it happens, conservation strategies increasingly came to include more anticipatory and pre-emptive measures which require intimate knowledge about illegal-hunters and the local communities suspected of harbouring them (cf. Büscher, 2018). The "insatiable quest for knowledge" (Aradau and van Munster 2012: 91) associated with these types of anticipatory actions could only be met through surveillance intelligence. Therefore, one of the NGOs hired a seasoned wildlife crime investigator with a background in both nature conservation and military intelligence to head a new intelligence team[3] which quickly built a network of informants across the Kunene region and beyond. The newly appointed Community Rhino Rangers were also trained,[4] deployed, and incentivised to contribute to the NGOs' proliferation of surveillance and intelligence capacities by monitoring their own communities. NGO responses to illegal-hunting that integrate local people into conservation law enforcement through approaches like inclusive anti-poaching and informant networks are a text-book application of global conservation policies, such as the *Local Communities: First Line of Defence Against Illegal Wildlife Trade (FLoD)* framework (Skinner et al., 2018; Roe et al., 2018).

The recent processes of 'green surveillance' in north-west Namibia must be understood both in their local and regional context. There is no doubt that the scale of green militarisation in north-west Namibia is dramatically *limited* in comparison to the wider region and even in comparison to the area's own history (Schneider, 2022). However, the proliferation of military and criminal surveillance regimes are remarkable precisely because they are unfolding in a conservation context that is expressly *community-based* and relatively *less militarised* than many other southern African contexts. The combination of a long-standing community conservation approach with a more recent, limited but nevertheless top-down green surveillance makes Namibia such a unique and interesting case study.

2.2. Methods

Building on prior IWT scholarship (von Von Essen et al., 2018; Rogan et al., 2018; Solomon et al., 2015), Lunstrum and Givá (2020) recently discussed the challenges involved in gaining trustworthy data on illegal-hunting of rhino in Mozambique and South Africa. In our case, sensitivities around the illicit nature of illegal-hunting are further compounded by the clandestine character of conservation surveillance, making it even more difficult to examine reporting behaviours. Scholarship on community-based conservation surveillance (CBCS) has used survey instruments focused on illegal-hunting for subsistence (Sjöstedt et al., 2022), rather than illegal-hunting for profit, and surveys and interviews solely with rangers and practitioners (Anagnostou et al., 2020), rather than community members. A recent study exploring "the societal drivers and personal motivations behind individuals' involvement in poaching syndicates in Namibia" (Naro et al. 2020) conducted only 12 out of 79 interviews with community members not directly linked to rhino conservation and law enforcement initiatives. The focus on those conducting interventions rather than those subjected to them might partly reflect the difficulty of carrying out the kind of long-term fieldwork required to meaningfully engage with local communities, especially in difficult environments and in the context of sensitive topics (Hübschle, 2016; Massé, 2017; Verweijen, 2015). In addition to this top-down bias, existing scholarship reinforces a problematic disciplinary preference for more standardised, quantitative approaches (Infield, 2001; Stern, 2008).[5] Here, we offer a genuinely *qualitative* and, specifically, *ethnographic* investigation which focuses on the often-marginalised communities who are subjected to conservation surveillance on the ground. While there are myriad ways in which community members can articulate cooperation, compliance, adaptation, co-optation, or resistance to conservation surveillance (Björkdahl et al. 2016), we focus on one of the most contentious issues within communities, which is whether and why members should report to authorities any wildlife crime they witness in communal areas.

By offering an analysis of the first author's ethnographic materials collected during fieldwork in north-west Namibia between April 2018 and March 2019, this article offers unique insights into local people's understandings and responses to CBCS that remain systematically underexplored. These insights are enabled by an ethnographic approach which aims to uncover people's *experiences* of conservation surveillance (Millar, 2014; Van Manen 1997). The first author used a combination of participant observation and 'observant participation' (Seim, 2024) to get as close as possible to participants, immersing himself both among the rangers and police officers doing anti-poaching and the communal-area residents subjected to interventions. Further detail about what participant observation entailed is available in the supplementary information section. In addition, the study's experiential focus is informed by the second author's deep experiential participation as a conservation practitioner in the area for over 25 years, as well as the third author's own ethnographic immersion among local communities and ecology research as part of her extensive fieldwork over the past 30 years. Research has been supported throughout by university ethical approvals and Namibia research permits, as detailed in the supplementary information section.

The first author's fieldwork was concentrated on several small villages across Welwitschia, Mopane, Witgat, and Camelthorn[6] conservancies. The selected villages are all key targets of CBCS as they are within the core of the north-west rhino range. The first author conducted 81 semi-structured interviews, including 48 with communal area residents not affiliated with or employed by conservation NGOs, 22 with rangers (who are also members of their local communities), and 11 with senior conservationists (4 senior NGO staff are also communal area residents). Before conducting interviews, the first author invested several days, sometimes even months, for relationship building. Thanks to the support of a local field assistant, interviews were conducted in whatever language participants felt most comfortable; mostly otjiHerero, Khoekhoegowab, Afrikaans, and English. Interviews lasted one and a half hours on average. Questions were primarily broad and open-ended to elicit participants' own ideas, rather than imposing concepts: e.g. "Tell me what you think about reporting" (cf. Millar, 2014: 61). Based on what participants felt was pertinent, we returned to *their* ideas, asking follow-up questions and probing for the deeper, experiential meanings of the accounts given.[7]

[3] It is unclear to what extent the intelligence team was institutionally formalised and to what extent its operations were authorised by the NGO Board or carried out in a more informal, clandestine manner, sanctioned only by individual Board members and partly supported through external funding. The team was withdrawn in 2023.

[4] In 2019, a group of CRRs received a two-week intelligence training by a former member of the 'GSG 9' elite special forces unit of the German Federal Police in which communal rangers were reportedly trained "how to be a spy" and "how to see without being seen", according to a senior project officer of the Namibian NGO which organised and paid (around USD 8000) for the training.

[5] Despite this critique, quantitative assessments of people's attitudes towards conservation and wildlife can be extremely valuable for decision making (e.g. Carroll et al., 2024; Vasudev and Goswami, 2019; Vogel et al., 2023).

[6] Conservancy names are pseudonyms.

[7] Additional details about the interview and sampling process are available in the supplementary information section, including full interview protocols, a discussion about indirect questioning techniques, response bias, and sampling in conflict environments.

All interviews were transcribed manually by the first author and field assistant. We would listen to the recordings together, with the latter translating verbally, while the former typed up the transcripts and probed revised translations for linguistic nuances and meaning. It took on average one hour to transcribe 15 min of interview material. The first author coded and analysed all interview transcripts in NVivo. This allowed us to identify themes that speak most powerfully to what motivates local people to report or withhold information on illegal-hunting. Finally, our analysis draws on evidence about illegal-hunting of rhino and plains game as this reflects the conceptual entanglement of both types of illegal-hunting within local people's understandings and imaginings of anti-poaching and conservation surveillance, as our interview materials will show.

3. Results and discussion

The analysis generated a preliminary overview of the main drivers and obstacles to reporting and how frequently they were referenced. Out of the interviews, there were 905 references about CBCS more broadly, 300 of which spoke directly to what motivated local people to report or withhold information about illegal-hunting of rhino and plains game. 125 of those references (= 41.7 %) pointed to 'cooperation by reporting' and 175 (= 58.3 %) suggested 'resistance by non-reporting'. We list the preliminarily identified drivers and obstacles below in Table 1.

3.1. Cooperation by reporting

There are three overarching themes that help explain why people in north-west Namibia choose to cooperate with conservation by reporting information to MEFT, NAMPOL, NGOs, or conservancies: 1) Financial incentives; 2) the CBNRM social contract; 3) brokered autonomy. We elaborate each theme in turn.

3.1.1. Financial incentives

The primary means to incentivise local people to report information about illegal-hunting are promises of money and employment, combined with subtle threats of violence: essentially the logic of the carrot and the stick. In north-west Namibia, conservation authorities established formal (and informal) reward payment systems that are articulated (or not) as part of wider communication and outreach activities, such as farm visits, concerts, football tournaments, posters, and public speaking events. The reward systems are extremely opaque, even to senior conservation practitioners (as confirmed in interviews), not least because conditions and processes differ by organisation and initiative, or even by individual. One initiative by a Namibian NGO and the environment ministry communicated on a poster (see Fig. 2) suggests in large, bold writing that there is a NAD 1,000,000[8] reward for reporting on illegal-hunting for rhino. The small print clarifies that only a report that "leads to prosecution and conviction" will earn people "a share" of that money.

Through conservation's various channels, the message that reporting may provide financial and employment benefits has trickled down to local communities. For example, an informant was rewarded with employment by a local NGO after he had found and reported the first rhino carcass in 2012. Despite their infrequency, such success stories are powerful; they travel far, and survive long into the future, as one herder confirmed:

> *"The other incident was when a young man reported a dead rhino to the [NGO] and then he got employed by them as a rhino protector. When I see a dead rhino, I will report, and I will also get employed."*
>
> (Interview 2018)

Table 1
Community-level drivers and obstacles of reporting illegal-hunting of rhino and plains game to conservation officials.

Driver of reporting referenced by study participants; cooperation by reporting	Number of times referenced across the interviews
Reporting is seen as morally right (e.g. CBNRM social contract)	55
Financial incentives and benefits	38
Reporting improves security	12
Coercion	10
Reporting serves self-interest to secure scarce resources (livestock, water, grazing) relative to others	7
Trust relationships with officials	3
Total	125

Driver of non-reporting referenced by study participants; resistance by non-reporting	Number of times referenced across the interviews
Community cohesion	49
Reporting is seen as immoral and illegitimate local behaviour	40
Reporting leads to breakdown of trust in community	19
Acceptability of reporting depends on type of wildlife illegally hunted	18
Fear of community retribution	17
Lack of trust in conservation officials; fear of investigations	14
Local priorities (poverty, hunger)	14
Conservation not seen as interested in local needs	4
Total	175

Fig. 2. Poster advertising reward for information on illegal-hunting of rhino, Welwitschia conservancy, March 2018 (Source: R. Schneider).

[8] NAD 1,000,000 equals approximately USD 55,000.

Other community members, like this local teacher, are more sceptical of the reward systems:

> "*Some of the people heard that when you report someone, you will get NAD 50,000 from the Government [laughs mockingly]. […] but now some of the people think even if you report someone who killed a springbok or a zebra, they think they get a share of that 50,000. So, they are doing that for them to earn at least something. Maybe they are campaigning themselves also to be employed, to be a game guard.*"
>
> (Interview 2018)

The fact that local people often do not understand or trust reward systems points to the unpredictability of the relationship between instrumental (e.g. financial incentives and benefits) and relational drivers (e.g. trust between conservation and communities). Speaking directly to the contrasting findings by Sjöstedt et al. (2022) and Anagnostou et al. (2020) regarding the relevance of the costs and benefits of reporting, our findings suggest that financial incentives cannot be predictably used to foster positive interactions and build trust between conservation and communities. Even if reward systems were communicated clearly, there is always a risk that they are received differently or that they are transformed into something else as they are passed from one person to another, especially given the remoteness of the communities in question and the importance of oral information dissemination as well as storytelling. Financial incentives are further controversial as they might encourage people to report fabricated crimes for their own benefit (Boydell, 2017; Dunnighan and Norris, 1999; Harfield, 2012; Turcotte, 2008), potentially motivated by revenge or conflict and competition over access to communal resources (e.g. Dabney and Tewksbury, 2016). As a result, there is a severe risk of unfulfilled promises and frustrated expectations that can reinforce conservation-community cleavages. Moreover, communal relations may deteriorate as informants conflate rewards advertised for reporting illegal-hunting of rhino with illegal-hunting of plains game. Although these two types of illegal-hunting exist in different economic and value systems, with the rhino killed for its horn to be traded commercially in external markets, and smaller game killed for meat to be used as part of (communal) subsistence or for sale in local markets, both clearly entangle conceptually for communal-area residents in north-west Namibia. As a result, local hunters may be disproportionally criminalised and targeted by individuals within their own communities, thus, further increasing the potential of social conflict.

3.1.2. The CBNRM social contract

To justify and further legitimise reporting within the community, local informants present it as a righteous act rooted in a national spirit of post-apartheid freedom and responsibility. Invoking independence is supposed to remind 'good Namibians' that liberation brought an opportunity to break with the past and right its wrongs. Applied to conservation, this means that local people should stop illegal-hunting because wildlife is now supposedly community-owned and ought to be communally-managed and protected. The decentralisation of natural resource management to conservancies was a key governmental technique to reconcile a deeply divided nation in the 1990s, but it remains central today as many of the apartheid-era inequalities and grievances prevail, above all, regarding the (re)distribution of land between black and white farmers (Bollig, 2016; MET 1995; Sullivan, 2002). The strength of the independence metaphor must, therefore, not be underestimated. It provides informants with a narrative and conviction of acting from a morally elevated position when they report fellow community members:

> *"Look, I am working in truth and we are living in our independent country and if some people decide to unnecessarily kill gemsbok and so on, I won't just stand by and watch those things happen. Although people know it is not allowed to kill rhinos and police officers are all-over in the bush, people still go and do it. So, I am not afraid to report these things, whatever might come. If the people want to kill me, they can kill me."*
>
> (Interview 2018)

This understanding of the new Namibia has been encoded through a CBNRM social contract (Schneider 2024). In short, members of communal area conservancies are expected to support the conservation of wildlife in exchange for 'benefits.' After 30 years of CBNRM, many conservancy members have internalised its rules and regulations. They regard the CBNRM social contract as fair and justified. If that is the case, conservation laws correspond with local norms and beliefs. Compliance becomes a moral duty; a normative driver of reporting illegal-hunting (Sjöstedt et al., 2022). Despite a potentially powerful normative dimension, the primary logic underlying this social contract remains a rational choice framework of costs and benefits. Everyone wants benefits.[9] But social contracts between communities and conservation authorities are also often highly unequal, contested, and subject to continuous renegotiation (Titeca et al., 2020; West, 2006). They are ultimately ideals that may serve as tentative and "symbolic reference points for poaching and anti-poaching (Titeca et al., 2020: 2). As a result, local people have internalised at least the *rhetoric* of CBNRM. They have become experts in presenting themselves as environmental stewards in order to please conservation agencies and secure benefits (Schneider 2024). In fact, for people who receive benefits, fear of losing them has been identified as a key driver of reporting wildlife crime (Anagnostou et al., 2020). During a small group interview at an ova-Herero homestead, participants' expressed dedication to wildlife protection took a theatrical turn:

> *"Emma: Yes, he [poacher] will just be reported. It is not allowed to kill wild animals. […] Even the beetles are not supposed to be killed.*
> *Markus: Not even the flies.*
> *Emma: Even the ground squirrels or the rock dassies are not supposed to be killed.*
> *Markus: [on all fours, he crawls on the ground and points at ants running around] These ones, not even these ones! If you kill this one you will be reported! The Police will put you in chains!*
> *Emma: [laughing]*
> *Markus: That is why you are not allowed to touch a springbok, not even for the pot! […] You will be arrested [he crosses his wrists and imitates being hand-cuffed and put away]!"*
>
> (Interview 2018)

This exaggerated, theatrical performance is testament to the superficial, instrumental nature of environmental subjectification in Namibia. Yet, conservation practitioners tend to believe that local articulations of support for conservation law enforcement are genuine: "*Yeah, they do [report]. And we regard that every member here is like a community game guard*", asserts a senior NGO officer (Interview 2019). No doubt, many people are genuinely supportive of wildlife conservation. The two community members, cited above, also explained how they view the conservancy paternalistically as their "mother and father", as well as their "cow," which provides them with a secure livelihood. But the conservancy and conservation tend to be merely a means to an end. The end is often money and survival, not a normative ideal of wildlife protection based on some intrinsic valuation of nature. A key point here is that support for surveillance interventions is partly determined by the extent to which local people benefit from conservation and tourism, that is, to what extent it positively impacts their lives and livelihoods, as is framed in much CBNRM literature articulating varied benefits to local people, particularly from tourism infrastructure (Boudreaux and Nelson, 2011; NACSO 2023; Naidoo et al. 2016). It seems that the current state of conservancies, with some described as dysfunctional and 'captured' by neopatrimonial kinship networks (Schneider 2024), can alter people's

[9] See discussion of the 'maximization postulate' by Clark (2002).

interpretation of the CBNRM social contract, undermining their support for conservation and reducing reporting behaviours. This finding is not surprising. Naro et al. (2020) also identified unequal benefit distribution as a major driver of illegal-hunting for rhino, along with distrust of conservancies and high unemployment rates.

3.1.3. Brokered autonomy: the blurry boundary between cooperation and resistance

No matter how strong a lip service paid to conservation or how authentically enacted, we often witnessed people saying one thing but doing another. Communal area residents might say they report wildlife crime but not actually do so; or they might say they do not report but actually do so. They might collaborate simultaneously with law enforcement *and* syndicates, capitalising twice, provided they play it right (Interviews 2019). That is the problem with the difference of means and ends between conservation and communities, especially when social benefits are realised without any clear link to conservation outcomes. A dominant assumption within policy and practice is that when conservation delivers dividends for people's lives and livelihoods, they are more likely to comply and cooperate; when conservation limits their possibilities for improvement, they are more likely to resist (Biggs et al., 2017; Cooney et al., 2017; Holmes, 2007). However, the picture is more complex. Local people may switch between cooperation and resistance, depending on opportunity and need. For example, farmers often argued that those reporting wildlife crime were "doing a good job" because it upholds the CBNRM social contract which they claim to respect:

> *Jan*: "*We came together and agreed that the wildlife should not be killed. That is why we recruited people responsible for protection. I must also accept that if I am the one who stole the wildlife that we agreed not to touch…*".
> *Nangolo: "Then I have broken this agreement."*

But, later, Jan admitted the following:

> *"The way we live together here, this gentleman knows that the springbok is like a goat. Neither of us is protecting these animals. We are just watching out for them not to be wasted. I will tell you honestly: If I go and kill a springbok and tell my friend here, we will just put it into the pot, eat it, and keep quiet about it."*
>
> (Interview 2018)

While people often responded at first that they would honour the CBNRM social contract and report wildlife crime in general, when specifying the question and asking whether they would also report members of their village community for illegally hunting antelopes, such as springbok, kudu, or oryx, they often started smirking or laughing, telling us that they would never report their neighbours. This points to the existence of an informal, communal contract, which emphasises local togetherness and cohesion and supersedes, or at least overrules, the more formalised CBNRM contract, further illuminating differences between hunting plains game for subsistence and poaching rhino for its horn. We will return to this in the subsequent section on resistance.

Moreover, the disconnect between rhetoric and action reinforces our representation of local people who might *appear to* cooperate (by claiming to report) and resist (by not reporting) depending on context and opportunity, e.g.: "Ah, it [claiming to report] is not serious. […] The guys will tell you, what and bla bla, nice things, very nice things. You wait and see, […] but, eh eh, nothing" (Interview 2018). This is in line with arguments made by Lombard (2016) in relation to a case study in the Central African Republic, where all actors along the conservation-community continuum are said to engage in practices that bolster their "brokered autonomy" (Tilly, 2004: 14), that is, to strengthen their claims to status, privilege, and entitlement (Lombard, 2016). Importantly, such 'brokering' is informed by economic inequality which has been identified as "the most central driver of poaching" (Naro et al. 2020: 4) in Namibia, characterised by material deprivation and lack of jobs, as well as personal motivations like greed, desperation, opportunity, and status (Lunstrum and Givá, 2020; Naro et al. 2020). A local wildlife crime investigator described the discrepancy between rhetoric and practices as local people wearing "masks," which they put on when attending meetings and events to "get things for free," like food or clothes, and take off as soon as they return home to their everyday activities. Over decades, he argued, local people had perfected the art of putting on and taking off their masks (Fieldnotes 15/07/2018). Similar to Scott's (1985) notion of 'everyday resistance', such 'brokered' forms of resistance are not automatically an active or conscious provocation, a rebellious act, but should perhaps rather be understood as an opportune, pragmatic, and pre-political behaviour underlining local creativity, adaptability, and agency in terms of responding to conservation by blurring the boundaries between cooperation and resistance.

Similarly, people's reporting of wildlife crime is not necessarily an expression of 'cooperation,' but may simply serve to bolster their brokered autonomy. For example, reporting can be a highly effective means to incriminate people and displace them from a communal area in which scarce resources, such as water and grazing, are shared. While no farmer openly admitted to having reported other community members for these reasons, they often expressed zero-sum attitudes that one member's loss of access to common-pool resources would be another one's gain, implicitly pointing to what is possible when people struggle for survival under conditions of extreme drought and scarcity:

> *Look [smiles cheekily], we are farming with goats and when there are many people with lots of livestock at one place the grazing becomes scarce. […] there is not enough water […] I don't want them [other people] here."*
>
> (Interview 2018)

Living in a harsh, arid environment puts additional strains on rural social relations which means that reporting may be used as part of a strategy to improve one's gains relative to others, as a goat farmer explained:

> "*I will report him [poacher] because he has his own livestock but he is not eating from it.*
>
> (Interview 2018)

Farmers who hunt illegally are seen to have an unfair, relative advantage vis-á-vis their law-abiding neighbours. Livestock are people's bank accounts and an important status symbol. People who ostensibly live in austere material poverty may own hundreds of goats and cattle. Yet, they are often highly reluctant to reduce the size of their herds. If an opportunity arises that offers a choice between (illegally) harvesting game or killing one's livestock to provide the family with meat, some farmers will opt for the former. Farmers who obey the law may feel cheated and report out of perceived economic injustice and jealousy.

3.2. Resistance by non-reporting

Building on the notion of reporting wildlife crime to improve one's brokered autonomy (Tilly, 2004: 14), in this section we frame non-reporting as a form of everyday, 'brokered' resistance to conservation surveillance that is fundamentally rooted in rural social relations. Conceptualised as part of "the weapons of the weak" (Scott, 1985: xvi), we argue that non-reporting of illegal-hunting should be understood as a local brokering act that "blur[s] the contours between subsistence and 'improvement', or between economic opportunism and political grievance" (Cavanagh and Benjaminsen, 2015: 735; Holmes, 2007). This means that non-reporting does not necessarily represent a moral opposition to conservation, but an everyday practice that forms part of local people's efforts to "wor[k] the system […] to their minimum disadvantage" (Hobsbawm, 1973, cited in Cavanagh and Benjaminsen, 2015: 728).

Nevertheless, the rejection of community surveillance and reporting

creates a serious challenge for conservation law enforcement as the "increased local poaching" (MET/NACSO 2016: 7) is further complicated by "a lack of local intelligence provided to authorities to deter and catch poachers" (Muntifering, 2019: 37). In its 2016–2021 strategic plan, one of the NGOs concerned with rhino protection in Kunene acknowledges that: "it remains worrisome that very few if any local people are reporting suspicious behaviour before poaching occurs. This is a major constraint." A senior NGO manager confirmed that, between 2012 and 2018, the only arrests made in relation to illegal-hunting of rhino in the area were when illegal-hunters had been caught red-handed in the field (Interview 2019). Contrary to the popular CBNRM narrative of successful environmental subjectification propagated by conservation *and* communities, reporting of wildlife crime by local farmers remains an exception. We now examine rural social relations to understand why this is the case.

3.2.1. Community cohesion

In this section, we show that some of the drivers of reporting discussed above, especially financial incentives and local responsibilities associated with CBRNM, are largely overridden by an underlying, unwritten *communal contract* emphasising social cohesion. Locally, community cohesion is referred to as 'togetherness', 'Namibian togetherness', or 'harambee', which is borrowed from Swahili and literally means 'all pull together'. Reporting threatens the integrity of this togetherness, as communities risk being ripped apart by law enforcement. An NGO coordinator described the outcome of his intelligence work as follows: "[I]f we manage to arrest one person in [this village], hey, a lot of ladies there are going to be left without husbands and boyfriends" (Interview 2019). Massé et al. (2021) demonstrate a similar case of how policing approaches can disrupt social relations, especially for women, as men are arrested or killed. Unsurprisingly, in the spirit of togetherness, reporting members of one's close-knit village community is culturally unacceptable. Deviance is likely to be sanctioned, as we will show in Section 3.2.2. Even if we assume that farmers are, in principle, sympathetic towards conservation, positive attitudes may not necessarily translate into desired reporting behaviours due to cultural and communal principles that override individual attitudes. As a herder explains: "It [reporting] is not good for our community because if my elders became aware that I reported someone they will not tolerate it" (Interview 2019).

Despite often severe intra-community conflicts over access to natural resources, family feuds over inheritance, or livestock thievery, local people stick together when outsiders threaten them (see Rohde, 1997; Pellis, 2011; Pellis et al., 2015). The combination of *communal cohesion* and *fragmentation* is a classic feature of the pastoral social relations of production and accumulation (Kinahan, 1991: 11; Lefébure, 1979: 3), which are still relevant today due to the continued dependence on animal husbandry. Climate change, market pressures, and growing human and livestock populations (Inman et al., 2020) likely make the careful brokering of cohesive and fragmented social relations, e.g. through competing local alliances, more important than ever.

As long as the centre of life remains the village community, people remain bound by its informal rules and obligations. Even formal subjectification to conservation laws in the form of employment in the Government, NGO, or conservancy does not necessarily translate into positive reporting behaviours. Many of the rangers acknowledged that they would "turn a blind eye" when they find fellow community members who hunt illegally. Here a ranger illustrates the importance of local togetherness and explains that there is an ethic of sharing which can function to legitimate illegal activity:

> *"If the community self-reports to the rangers or maybe the field officer, then there is something not good between them [community members], because maybe he wants the meat alone. If you killed the Zebra and come back, then, it is your neighbour, then you give him a piece and tell him be quiet.*
>
> (Interview 2018)

The acceptability of illegal hunting and reporting is determined by a moral compass informed by shared norms and culturally mediated value judgements. Hunger is widely accepted as a reason for illegal hunting, provided it is done in moderation and with respect for the needs of other community members, i.e. the ethic of sharing. Reporting such an act would be regarded as inhumane and anti-community. Local needs trump conservation. Everyone understands this; all pull together. The shield of community cohesion has clear boundaries, though: "Someone who comes from elsewhere and steals can be reported" (Interview 2018), an elderly woman confirms. This is consistent with the accounts of a local wildlife crime expert who lamented that informants may provide information about individuals on the periphery, but never in the core of a community (Interview 2019). A key reason why local people do not report individuals from within their own communities is the vigorous combination of kinship and (neo-)patrimonialism that seeps from State- and NGO-level through to conservancies and communities. The 'politics of the belly' (Bayart, 2009), a local "moral economy" (2009: xlix-l) or hybrid governmentality that shapes regimes of economic accumulation, e.g. 'law of eating', is the pervasive manifestation of this reality (Schneider 2024). As a result of the perceived near-universal participation in (neo-)patrimonial kinship networks based on principles of reciprocity and partial redistribution of wealth, community members outside the most powerful local networks often express their suspicion and distrust of local authorities:

> *"I never went to the rhino rangers to say that a gemsbok was shot. If you go and report that your goat has been bitten, the man doesn't give you attention because he is too busy with his private business. I don't even know who to report to. I could have involved myself, but I don't know to whom I should report the chairperson. Because the people that we have to report to are related to one another and are protecting each other."*
>
> (Interview 2018)

Such statements demonstrate deep-rooted cleavages between conservation and communities that can lead to withdrawal and further cultivate non-reporting. To the extent that these cleavages also exist within communities, for example, between conservancy staff and ordinary members, they point to the wider inequalities within CBRNM which many perceive as marginalising (Schnegg and Kiaka, 2018; Sullivan, 2003; Sullivan and Ganuses, 2020). People feel that their needs and everyday concerns are acknowledged neither by Government and NGOs, nor by their 'fellow' community members who might have captured the conservancy and reap its benefit flows.

3.2.2. Communal coercion, retribution, and violence

The combination of community cohesion and fragmentation creates an interesting paradox. Why do people honour social cohesion by non-reporting despite experiencing severe intra-community injustices and inequalities? While several factors influence this 'conflict-yet-cohesion' dynamic, such as the strength of communitarian values and a pious hope of a better future, one of the most powerful barriers to reporting wildlife crime is the fear of community retribution, social ostracism, violence, and conflict (cf. Anagnostou et al., 2020; Sjöstedt et al., 2022). In Uganda, informants suspected of having reported information to authorities have been subjected to beatings, witchcraft, arson, torture, and even killings. Retaliation is most severe for high-value crimes like illegal-hunting of rhino, where reporting rates tend to be lower as a result (Anagnostou et al., 2020). In north-west Namibia, local people are acutely aware of the risks reporting poses to rural social relations:

> *"It is good to report but there is the potential that it creates a hate relationship between me and the person I have reported."*
>
> (Interview 2018)

> *"If I report a Herero, then all the Hereros paint their eyes red. Then we start killing each other."*

(Interview 2018)

With social conflict comes a risk to be socially excluded and to lose access to communally owned resources, such as water and grazing land. In addition to the potential loss of community support and livelihood, there is an ever-present threat to life itself: "Some people will go and kill you with witchcraft if you report them" (Interview 2018). Among the communities, people widely believe in the power of witchcraft; it is common knowledge that illegal-hunters often build intimate relationships with shamans or witchdoctors to help ensure successful hunts. A witchdoctor's reputation and income are directly related to the success of 'his poachers'. Therefore, witchdoctors may have a keen interest in promoting non-reporting behaviours among the local community through discipline and an occasional show of force (Interview 2019).

4. Conclusion and policy relevance

In this article, we have shown why local people in north-west Namibia both report and withhold information about illegal-hunting of rhino and plains game. We analysed local perspectives and experiences of reporting through the prism of rural social relations, framing (non-)reporting as a 'brokered' act of cooperation and/or resistance which can be best understood in the context of rural village life and related cultural norms and communal obligations. In contrast to the dominant CBNRM narrative of community support to conservation, the extent of cooperation in terms of reporting wildlife crime is smaller than expected. Although there is encouraging anecdotal evidence suggesting an upward trend in local intelligence provision since 2019/20, the trustworthiness and usefulness of individual reports is unclear. While CBCS in north-west Namibia merges green militarisation with CBNRM to strive towards an illusion of universal knowledge and control over illegal-hunting, communities, and life in general, its 'insatiable quest for knowledge' fails to take account of the rural social relations that ultimately determine whether local people provide information or not. To meaningfully analyse, interpret and understand rural social relations is a challenge, for law enforcement, conservationists and anthropologists alike. An underlying, unwritten communal contract which emphasises social cohesion, particularly vis-à-vis outsiders, mostly overrides financial incentives and newer responsibilities introduced through CBNRM. The communal contract and its social power must not be romanticised though, for the cohesion it demands is maintained in part through violence just like top-down, environmental power. But bottom-up, communal power is more intimate, the threat to life and livelihood through violence, witchcraft and social exclusion more immediate, than conservation's threat of incarceration.

The resulting illegibility and impenetrability of complex, cohesive communities presents a dilemma for conservation in Namibia which – premised on the CBNRM paradigm and in line with global conservation policy – ought to find solutions to the illegal-hunting of rhinos and other herbivores that are inclusive of local communities. However, conservation appears to partly obscure this problem through a win-win-win narrative of empowered, cooperating communities, improved conservation, and a thriving tourism industry. While many conservation practitioners in Namibia are both extremely willing and strongly committed to engage more deeply with local social contexts, people's priorities, and their constraints, others might be less interested or struggle to better understand heterogeneous communities, as is also the case in other southern African contexts. Genuine openness and commitment to better understanding communities can be incredibly difficult, time-intensive, costly, and challenge dominant narratives that perpetuate the 'conservation-security-development-tourism nexus' (cf. Massé et al., 2018); the 'common-sense' of CBNRM. Rethinking the paradigm might pose a threat to conservation identities and industries that have been nurtured over decades. The constraints imposed by the neoliberal state and the dependency on major international donors further shape practices at the NGO level; radical alternatives can be silenced and suppressed (Koot et al., 2023a, 2023b).

Our analysis supports five recommendations for integrating local communities into conservation surveillance in more locally acceptable and sustainable ways: First, reinforcing recommendations made by Sandbrook et al. (2021), there needs to be a recognition and acknowledgement among policymakers, practitioners, and donors that CBCS can have negative social impacts. These impacts need to be carefully evaluated in each specific context, with input from local communities themselves, which requires the commitment of significant resources to better understand local social contexts. We appreciate that resources are always scarce but minimising negative social impacts must be a conservation priority, not mere rhetoric. Second, building on the social evaluations, the cost-benefit ratio of CBCS needs to be reconsidered, including its necessity and proportionality. If reporting is locally regarded as an immoral and illegitimate behaviour that can lead to social conflict, it is likely unethical to incentivise communities to engage in such behaviour. If the purpose of CBCS is to prevent every rhino killed, how necessary and proportionate is that in relation to the viability of the respective sub-population? If local people report, how valuable does information tend to be (see Anagnostou et al., 2020)? Third, improving local acceptability requires an embedding of local cultural norms, values, and social practices in CBCS. This might entail uncomfortable compromises, such as permitting or at least turning a blind eye to subsistence-type hunting of small game and ensuring that any surveillance activities are conducted with professionalism and fairness, as well as with the safety and security of local communities at heart. Fourth, given the inherent unpredictability, limited effectiveness and significant risks associated with CBCS, a change in focus might be needed from financial incentives, reward systems, and informant networks to a focus on organic, self-determined supply of information that is informed by positive relationships and interactions. Such conservation-community relations can be fostered through genuine engagement and support with local priorities and needs, such as empowerment, governance, human-wildlife conflict, and climate change adaptation. Fifth, the goal of any CBCS programme worthy of the prefix ('community-based') must be the transfer of real ownership and control to communities. Operational plans and priorities should reflect this, including clear aims and objectives towards achieving this goal.

CRediT authorship contribution statement

Ruben Schneider: Writing – review & editing, Writing – original draft, Validation, Software, Resources, Project administration, Methodology, Investigation, Funding acquisition, Formal analysis, Data curation, Conceptualization. **Jeff Muntifering:** Writing – review & editing, Conceptualization. **Sian Sullivan:** Writing – review & editing, Conceptualization.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

The following references are cited in the supplementary materials: Cohen and Arieli, 2011; Ibbett et al., 2021, 2023; Milner-Gulland et al., 2020; Norman, 2009. Supplementary data to this article can be found online at https://doi.org/10.1016/j.biocon.2025.111396.

Data availability

The data that has been used is confidential.

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