



VIEWPOINT

The need for a more inclusive science of elephant conservation

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Abstract

Largely absent from the current scientific dialog is recognition of which voices should contribute to decisions on the future of Africa's elephants, particularly those living in the Kavango-Zambezi Transfrontier Conservation Area. We argue that elephant conservation policy must take into account the voices of the people bearing the cost of living with wildlife, as well as the nations with the responsibility of hosting elephant populations. Southern African elephant conservation is a 'wicked problem', which is best addressed through small wins approaches. Specifically, research on changes in local political and governance dynamics resulting from community conservation programs is needed, to identify new modalities for community level engagement. Additionally, research into policy implications, as well as seasonal resource needs of humans and wildlife, from zoning and corridor development to facilitate landscape level movement is needed. A modular approach to research for ensuring functional social-ecological landscapes within the KAZA context could help sustain both wildlife and communities in the region.

KEYWORDS

conservation policy, KAZA TFCA, political voice, savannah elephants, southern Africa

1 | THE NEED FOR A MORE INCLUSIVE DISCOURSE ON ELEPHANT CONSERVATION

Recent wildlife policy and management developments have focused already heightened public, media, and policy attention on elephant conservation challenges. In 2019, Botswana lifted a 5-year hunting moratorium, thereby reinstating elephant trophy hunting. Months later, Southern African nations threatened to pull out of the Convention on International Trade in Endangered Species (CITES) over issues of trade in ivory. Central to this discourse is the five-nation Kavango-Zambezi Transfrontier Conservation Area (hereafter, KAZA), the world's largest terrestrial transboundary conservation landscape. KAZA protects c. 250,000 savannah elephants

(*Loxodonta africana*), as much as half the world's remaining population. Consequently, wildlife management decisions of KAZA member nations are at the core of the politics of elephant conservation. Current policy debates center on how wildlife should be managed generally, with specific emphasis on trophy hunting and poaching (e.g., Di Minim et al., 2016, Batavia et al., 2019).

While many NGOs, practitioner scientists, and management authorities understand and engage with the complexities at the human-wildlife interface, the recognition of *who* should decide the future of elephants (AU & UNEP, 2019; Nelson, Sulle, & Roe, 2016) is largely absent in the conservation literature (though there are notable exceptions; e.g., Biggs et al., 2016; Cooney et al., 2016). Specifically, the voices and realities of the people bearing the costs of wildlife are under engaged. In this Viewpoint we encourage a more

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inclusive discussion of elephant conservation policy by scientists in the academic community, to acknowledge state and local agency and implications of management. This view considers wildlife conservation as a “wicked problem,” one that is typically policy-related, complex, the product of multiple interacting causal factors, and with unclear solutions that themselves may have unknown consequences (Game, Meijaard, Sheil, & McDonald-Madden, 2014; Manning & Reinecke, 2016). We conclude by offering two concrete ways in which the academic community might more productively engage to support both elephants and people.

In August 2018, an aerial survey identified 87 allegedly poached elephant carcasses in northern Botswana, an area at the heart of KAZA. The reported poaching event was publicized globally, as were initial claims that a poaching frenzy was incited by a government decision to disarm Botswana wildlife rangers of automatic rifles in May, 2018. The report that alleged the mass poaching event has subsequently been refuted. Yet the global media coverage and highly politicized exchanges resembled responses to other policy debates related to KAZA’s elephants, such as Botswana’s abrogated trophy hunting moratorium and threats of a global tourist boycott leveled in response.

The scientific literature has engaged with these developments at a distance; for instance, through exchanges regarding ethics, values, and compassionate motivation for conserving elephants. While in parallel, important additional dimensions have emerged from other outlets, namely southern African media and economic fora (e.g., AU & UNEP, 2019; Potgieter, 2019), questioning the value of wildlife alongside that of rural livelihoods, and who, if anyone, has the authority to make this value judgment. These dimensions are apparent in the contrast of former Botswana president and conservation advocate Ian Khama’s 2013 hunting moratorium, juxtaposed against current President Mokgweetsi Masisi’s decision to reinstate hunting. In response to criticism over his position, Masisi replied, “It bamboozles me when people sit in the comfort of where they come from and lecture us about the management of species they don’t have,” articulating the nature of this wicked problem. Dialogue within the scientific literature has underengaged the issue of who should make such management decisions, along with the local and multidimensional issues that threaten to undermine long-term conservation goals.

The scientific literature can position itself to make inclusive and relevant contributions to elephant conservation by first acknowledging that elephant range states create and implement wildlife policy that must balance national needs with global interests. Recognition must follow that boundary institutions—bridging multiple policy actors and levels of authority—such as KAZA represent unique opportunities among global conservation efforts. Within these institutional contexts, conservation science should

focus on identifying small wins for communities and wildlife.

A small-wins, or modular, approach is argued by policy and management scholars as potentially effective in the face of wicked problems (Manning & Reinecke, 2016). The key to a small-wins approach is that incremental and coordinated efforts can gain traction toward solving otherwise intractable problems. Allowing for local autonomy (i.e., agency) and adaptation of efforts is critical, drawing on similar features of polycentric governance. Importantly, academic discourse and empirical efforts should engage with existing community-level governance institutions, including ongoing community-based conservation programs and traditional authorities, while working in concert with broader conservation and sustainable development goals (Biggs et al., 2016).

For example, as a first potential small-wins goal, academic discourse and empirical research can work within frameworks such as KAZA’s to articulate how existing local governance systems have adapted after local communities are enfolded into wildlife and land-use decision-making processes. Globally, community-based conservation strategies struggle to make lasting gains, while political relations within communities, and between communities and central governments, shift as a result of decades-long conservation policy interventions. Despite their importance, actionable scientific knowledge regarding these power and governance processes remains under developed community-based conservation scholarship generally (Galvin, Beeton, & Luizza, 2018). Understanding modular dynamics would allow for more effective integration of ground-level conservation efforts into national and externally implemented programs, both in KAZA and beyond. Importantly, such efforts could recognize and support emerging local institutions for more equitable and sustained gains (Nelson et al., 2016).

Second, in step with efforts targeting local institutions, work must continue to focus beyond wildlife biology to advance science on human–wildlife coexistence, including wildlife movement corridors, strategies to minimize human–wildlife overlap, and impact mitigation techniques. Research into the seasonal resource needs of both wildlife and people, and implications of policy and zoning changes, would support evidence-based decision-making. Important contributions in these areas are ongoing, including science to inform land-use zoning policies at community, national, and cross-boundary scales. For instance, such science can support KAZA and other boundary-spanning institutions, though communities must secure greater functional authority over land-use decisions.

Critically, approaches to support small wins must be advanced with external conservation interests acknowledging local authority while providing capacity and support (Cooney et al., 2016). Numerous practitioners advance these goals, yet greater acknowledgement of local institutions and contexts

must underlie both research agendas and conservation donor portfolios. We by no means argue that academic debates over critical conservation issues such as trophy hunting, legal sale of ivory, and culling of wildlife are unproductive. Rather, we argue that, to have greater impact, such debates must include explicit consideration of nations holding management authority and the people living with wildlife.

Given that, increasingly, wildlife and humans will interact through shared land use at multiple scales, there will remain the persistent need to balance varying and often opposing interests—defining features of wicked problems. Ensuring functional social–ecological landscapes for humans and elephants should drive the conservation agenda. A modular approach that situates small wins within larger conservation agendas could better-sustain wildlife and human communities into the future.

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REFERENCES

- African Union & United Nations Environment Program. (2019). Africa's Wildlife Economy Summit Declaration: Voices of the Communities—A New Deal for rural communities and wildlife and natural resources. African Union and the United Nations Environment Program, Victoria Falls, Zimbabwe.
- Batavia, C., Nelson, M. P., Darimont, C. T., Paquet, P. C., Ripple, W. J., & Wallach, A. D. (2019). The elephant (head) in the room: A critical look at trophy hunting. *Conservation Letters*, *12*, e12565.
- Biggs, D., Cooney, R., Roe, D., Dublin, H. T., Allan, J. R., Challender, D. W. S., & Skinner, D. (2016). Developing a theory of change for a community-based response to illegal wildlife trade. *Conservation Biology*, *31*, 5–12.
- Cooney, R., Roe, D., Dublin, H., Phelps, J., Wilkie, D., Keane, A., ... Biggs, D. (2016). From poachers to protectors: Engaging local communities in solutions to illegal wildlife trade. *Conservation Letters*, *10*, 367–374.
- Di Minin, E., Leader-Williams, N., & Bradshaw, C. J. A. (2016). Banning trophy hunting will exacerbate biodiversity loss. *Trends in Ecology & Evolution*, *31*, 99–102.
- Galvin, K. A., Beeton, T. A., & Luizza, M. W. (2018). African community-based conservation: A systematic review of social and ecological outcomes. *Ecology and Society*, *23*, 39.
- Game, E. T., Meijaard, E., Sheil, D., & McDonald-Madden, E. (2014). Conservation in a wicked complex world; challenges and solutions. *Conservation Letters*, *7*, 271–277.
- Manning, S., & Reinecke, J. (2016). A modular governance architecture in-the-making: How transnational standard-setters govern sustainability transitions. *Research Policy*, *45*, 618–633.
- Nelson, F., Sulle, E., & Roe, D. (2016). *Saving Africa's vanishing wildlife: How civil society can help turn the tide*. International Institute for Environment and Development.
- Potgieter, G. (2019). Opinion: The untold story behind hunting in Botswana. *Africa Geographic*.

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