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Ivory crisis: Growing no-trade consensus

In their Perspective, "Breaking the deadlock on ivory" (15 December 2017, p. 1378), D. Biggs et al. propose steps to enhance unity around the African elephant poaching crisis. We support their recommendations for dialogue among African elephant range states. However, the Perspective misrepresents the evidencedriven rationale of the no-trade approach to ivory, promotes a counterproductive geographically divided approach to wildlife trade, and understates the growing worldwide policy consensus to end ivory trade.

By asserting that a no-trade approach is motivated by "sacred" values and misidentifying animal rights as central to this position, Biggs *et al.* imply that the no-trade approach is not pragmatic. In fact, the notrade position and the pro-trade position differ not only in core values or objectives, but in interpretations of evidence on the relative usefulness of improved governance, markets, and sociocultural change in addressing poaching. It would be ideal if only ivory from naturally deceased elephants could be used to fund conservation sustainably. However, the evidence suggests that this cannot be practically achieved for elephants. Economic models supporting ivory sales ignore elephants' low population and productivity (1). Thus, new demand for ivory will likely outpace new legal supply, increase black market prices (2), and further incentivize elephant poaching in countries struggling to patrol vast areas (3). Legal trade also makes it more difficult to detect contraband (4) and fails to address the escalating levels of criminality driving

most ivory shipments over the past decade (5). A one-time legal ivory sale to China and Japan permitted by the Convention on International Trade in Endangered Species (CITES) in 2008 corresponded with an abrupt increase in poaching (2). In contrast, the 1989 ban on international ivory trade and decisions to restrict legal domestic trade from 2015 onward were each accompanied by at least a halving of the price of ivory (6, 7).

Elephant conservation would suffer under Biggs et al's proposal for further regional differentiation of ivory trade policies. Any legal trade in ivory undermines efforts to reduce elephant poaching everywhere (2). All 37 African elephant range states have expressed shared conservation objectives in the 2010 African Elephant Action Plan (8) and should be regarded as equal stakeholders. That 76% of African elephants live in transboundary populations (9) necessitates cooperation between neighbors and continent-wide management approaches. These approaches could include identifying revenue sources to replace ivory sales for pro-trade countries, as Biggs et al. suggest. CITES' legitimacy would be undermined by devolving its authority or making decisions "outside of the public's view," as proposed by Biggs et al. Decreasing public scrutiny during negotiations could increase vulnerability to commercial interests or assertive governments focused on short-term benefits (10).

In contrast to the "deadlock" portrayed by Biggs et al., a global consensus is growing for a complete ban on trade in ivory to combat elephant poaching. Biggs et al. themselves recognized current near-total domestic bans on ivory trade (in the United States, China, and the United Kingdom) and the motion to stop all legal domestic sales adopted at the 2016 IUCN World Conservation Congress. Additionally, since

Elephant tusks in Kenya.

2010, Parties to CITES have dismissed proposals for sales of stockpiled ivory and rejected a decision-making mechanism that could reestablish trade (11).

Instead of perpetuating demand for ivory through sales, we suggest that demand be minimized through a combination of regulatory instruments (domestic trade bans) and sociocultural interventions (behavior change campaigns). Other strategies include dismantling supply chains using intelligence-driven law enforcement; strengthening judicial systems; and encouraging cross-border cooperation, human-elephant coexistence projects, and alternative economic opportunities for poachers and traders. Combining naturecompatible livelihoods with strengthened revenue streams from elephant-oriented tourism could if well-governed promote equitable development and participatory conservation across rural Africa (12).

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