

LETTER

Incentivizing pangolin conservation: Decisions at CITES CoP19 may reduce conservation options for pangolins

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Pangolins (Pholidota: Manidae) are threatened with extinction primarily because of overexploitation and habitat loss. These species have a long history in CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora) (Challender & O'Criodain, 2020) and at CoP17 (2016), all eight species of pangolin were included in Appendix I, establishing a ban on commercial international trade. Rather than being a success, this reflects a failure to manage pangolin populations sustainably. CoP17 also adopted Res. Conf. 17.10 on the *Conservation of and trade in pangolins*, which encourages Parties to implement a broader range of measures to conserve the species.

At CoP19 (2022), the Parties amended Res. Conf. 17.10 to include the following recommendation: "*Parties in whose jurisdiction there is a legal domestic market for specimens of pangolins that is contributing to poaching or illegal trade, take all necessary legislative, regulatory and enforcement measures to close their domestic markets for commercial trade in pangolin specimens...*" (CITES 2022a). There are precedents for referring to domestic markets in CITES Resolutions (e.g., Res. Conf. 10.10 [Rev. CoP19] on *Trade in elephant specimens*), but the appropriateness of these references is contested by some Parties, which consider them to be outside the scope of the Convention, that is, CITES should focus on international trade only. While Resolutions are not legally binding on Parties, they can be influential in shaping domestic and international wildlife trade policies and are leveraged by Parties and NGOs in pursuit of particular policy options both within and outside of CITES.

The hunting, consumption, and trade of pangolins are prohibited in most range countries (Challender & Waterman, 2017) and reference to domestic markets in Res. Conf. 17.10 (Rev CoP19) was apparently principally targeted at the legal market for pangolin scales in China. However, the broad definition of "domestic markets" could have perverse impacts on future policy adoption in West and Central Africa. Populations of white-bellied (*Phataginus tricuspis*) and black-bellied pangolins (*P. tetradactyla*)—residing in the genus *Manis* in CITES nomenclature—appear to be more abundant in parts of these regions based on prevailing knowledge, in contrast to pangolin populations in other parts of Africa and Asia (see Challender et al., 2020; CITES, 2022b, 2022c; IUCN, 2023). Critically, pangolins mainly occur in open access conditions, or close to them, throughout tropical Africa. That is, nobody owns them, or they are owned by the state but inadequately protected, meaning people who wish to harvest them are effectively free to do so (Freese, 1997). Indigenous peoples (IPs) and local communities (LCs) have been formally excluded from using pangolins by law, including through colonial-era legislation, but often without adequate consultation (Dominguez & Luoma, 2020; Mavah et al., 2022). However, hunting and consumption continue because these activities are socially legitimate among local people; at least 0.4 million pangolins have been estimated to be hunted for meat annually in Central Africa (Ingram et al., 2018). Pangolins are regarded by many people as a healthy protein source, their parts are used for various purposes and they provide an income source (Mouafo et al., 2021).

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Recommendations to close domestic markets in Res. Conf. 17.10 (Rev. CoP19) may make it more challenging for range countries in West and Central Africa to explore policies that include sustainable use and potentially domestic trade of white- and/or black-bellied pangolins in circumstances where such policies may support conservation by providing formal incentives for IPs and LCs to use the species sustainably. Future attempts to relax domestic measures are likely to be met with opposition from some Parties and NGOs based on concerns that any formal use and/or trade would contribute to poaching and/or illegal trade. Various conservation and animal protection NGOs are known to collaborate with receptive Parties to pursue increasingly protectionist policies in CITES, especially for charismatic species (Challender & MacMillan, 2019; Webb, 2013). However, with structured management options removed, and state-led law enforcement typically chronically under-resourced (CITES, 2022b, 2022c), there is currently little deterrent for would-be offenders, and IPs and LCs have little formal incentive to use the species sustainably. This suggests that the current institutional arrangements for conserving pangolins in West and Central Africa are suboptimal.

There is increasing evidence that conservation gains have been made for diverse taxa where interventions have been tailored to the local context (Fromentin et al., 2022). It is also increasingly recognized by the international community, including in CITES, that IPs and LCs are critical stakeholders in conservation and should be empowered to conserve indigenous species (IUCN, 2022). Further, evidence indicates that where wildlife is owned and/or controlled by interested and affected actors and property rights are appropriately assigned and can be enforced, species are more likely to be harvested sustainably (Freese, 1997; Ojanen et al., 2017; 't Sas-Rolfes et al., 2022). Devolution of property rights to IPs and/or LCs in range countries in West and Central Africa combined with formal rights to use and potentially to trade white- and/or black-bellied pangolins and/or their parts could be the incentives needed to ensure sustainability and therefore conservation of the species. Rather than committing to the closure of domestic markets, which may not be legitimate to key actors (e.g., IPs and LCs), we propose that West and Central African pangolin range countries use consultative governance processes (Mavah et al., 2022) involving all relevant stakeholders to reconfigure institutional arrangements at appropriate scales, including the rights and rules around the use and trade of white- and/or black-bellied pangolins, to ensure that these arrangements are context-specific and legitimate to key actors. Exact institutional arrangements would depend on the outcomes of these processes and may or may not involve formal use and/or trade of these species. Where these activities are important to

IPs and LCs, and therefore key to incentivizing conservation, they may be appropriate policy options. This could involve the harvest of a limited number of individuals of these species annually, restrictions on hunting to designated areas, or similar context specific measures as have been implemented for various taxa globally (Lichtenstein & Ros, 2021; 't Sas-Rolfes et al., 2022).

There are challenges to approaches involving formal use and/or trade of these species that would need to be overcome first. Any harvest would need to be ecologically sustainable, which is currently difficult to demonstrate. The governance conditions to support sustainable offtake where pangolins are hunted and/or traded would need to be established (Ingram et al., 2021; Ostrom, 2007), but pluralist regulatory approaches, including Smart regulation (Gunningham & Sinclair, 2017), could offer promise. Approaches that include formal use and/or trade are not a panacea and where organized crime is involved in illegal harvest and/or trade of pangolins, state-led law enforcement would still be needed to support the enforcement of applicable rights and rules (Cooney et al., 2017). Consultative governance processes and the devolution of land and other rights will also require political will, but such processes and policies are being adopted in tropical Africa, for example, Democratic Republic of the Congo (Hemedi, 2022).

The policy direction for pangolins, including in CITES, is increasingly prohibitionist but may be suboptimal for conserving the species. The principal reliance on law enforcement to prevent overexploitation is demonstrably insufficient in many parts of West and Central Africa and is unlikely to be so in the foreseeable future. The illusion of protection created by strict prohibitionist policies can disincentivize proactive monitoring and management of species, including pangolins in tropical Africa, as evidenced by ongoing high volumes of offtake and illegal trade (Challender et al., 2020; Ingram et al., 2018). Effective pangolin conservation therefore requires critical consideration of diverse and adaptive management approaches, which consider incentives for key actors, potentially including the sustainable use and domestic trade of white- and black-bellied pangolins. We recommend that the CITES Parties recognize that there is no one size fits all solution to pangolin conservation and that sweeping amendments to Res. Conf 17.10, especially when seemingly targeted at specific countries, are unlikely to achieve their intended objectives because of the highly diverse social, cultural, and conservation contexts across pangolin range countries in Africa and Asia. More specifically, we recommend that the CITES Parties amend Res. Conf 17.10 (Rev. CoP19) to recognize that under appropriate governance conditions, formal domestic use and/or trade of pangolins could contribute to their

conservation. Restricting potential policy options for pangolins in CITES may obstruct optimal national policies by removing a potential tool from the toolbox, one that could favor pangolin conservation and not their overexploitation.

AUTHOR CONTRIBUTIONS

All authors wrote and approved the paper.

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DATA AVAILABILITY STATEMENT


No primary data were collected for this manuscript.


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