

1 Consider divergent regional perspectives to enhance wildlife conservation across Africa

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29 Summary

30 In African wildlife conservation literature, southern and south-eastern African voices dominate,
31 giving a false impression of pan-Africanism. We present divergent perspectives from West, Central
32 and the Horn of Africa and argue that empathy towards multiple perspectives will offer increased
33 resilience to COVID-19 and other crises.

35 Sub-Saharan Africa's wildlife conservation science and practice is dominated by experiences from
36 southern Africa and the southern part of eastern Africa (henceforth SSE Africa – countries entirely
37 south of the equator plus Uganda and Kenya but excluding Madagascar, Fig. 1). Stakeholders
38 sometimes forget that the situation on the ground is different in West, Central and the Horn of Africa
39 (henceforth WCH Africa – all other countries and in this case also including the 'interregional' Sudan,
40 Fig 1). In SSE Africa, neoliberal conservation under the slogan 'if it pays it stays' is driven by
41 funding generated through tourism and various forms of wildlife utilisation, underpinned by the
42 private sector, supplemented by philanthropy channelled through civil society organisations, with
43 governments providing an enabling environment, especially in terms of secure ownership or user

rights of land and wildlife [1]. Note that Kenya does not allow consumptive use and generally does not support the commodification of wildlife, but its conservation sector is built on a large tourism industry and in that regard Kenya groups with SSE Africa. There is a lot of variation within SSE and within WCH Africa, but less than there is between them, and the issue is broader than trophy hunting [2].

English language literature on African wildlife is dominated by SSE Africa; often WCH Africa is simply ignored like in a 496-page book with SSE African cases only that has 15 statements about 'Africa' in the synthesis [3]. Some think there is no wildlife left in WCH Africa and consequently the SSE approach must be the only one in Africa [4]. Others presumably extrapolate their SSE African experience, assuming there are no intrinsic differences, or more worryingly, blame media and animal rights and welfare organisations for misrepresenting a supposedly African narrative [5]. SSE African scholars have even portrayed decision makers as gullible, if not corrupt, rather than investigate why the two regions engage with NGO's on opposite ends of the sustainable use spectrum to serve the interest of their wildlife and people [6].

Recently, Lindsey et al looked at conservation of Africa's wildlife and wildlands through the COVID-19 crisis [7]; 16 of these author affiliations were from SSE Africa and 12 from outside Africa. They describe COVID-19 as a 'perfect storm' of reduced funding and restrictions on conservation operations to address elevated human threats, and surmise that this is a passing storm after which the existing approach must be intensified to contribute to greater resilience. Apart from the failure to recognise different health impacts of COVID-19 across Africa [8], they imply that conservation impacts will be similar across the continent. Conservation scientists and practitioners in WCH Africa are less numerous and less vocal [9], but many have a perspective that diverges from the SSE African model.

The SSE African Model

Conservation in SSE Africa is underpinned by the idea that conservation is not zero-sum and should aim for win-win solutions that make wildlife economically self-supporting – the 'nature for people' framing [10] consistent with 'if it pays it stays'. This has been successful in parts of southern Africa [11], but it has also led to excesses in South Africa, like large captive wildlife populations, lion (*Panthera leo*) bone farming, cub petting, canned hunting, trophy hunting of exotic tigers (*P. tigris*), loss of wilderness (i.e. systems with natural processes), landscapes scarred by fences and artificial water points and the classification of a host of wildlife species as domestic animals [12-14]. The win-win model was already showing limited resilience to rising management costs and reduced income leading to its abandonment in many areas [15], accelerated by shifting public opinion on trophy hunting in the countries of origin of the 'clients' that are paying for the 'product' offered by the 'industry' [2, 15, 16]. Public opinion and academic discourse are also changing with reference to the association of wildlife conservation with militarisation ('green wars') and racialised views and needs ('green colonialism'), challenging the sector's socio-political sustainability in the face of a galloping need for land [17-22]. In this context, it is important to be open-minded about resilience to current and future shocks.

WCH African approaches

Conservation in WCH Africa has been less successful overall, with severe population declines and local extirpations, but the only known large mammal extinctions are the northern white rhino (*Ceratotherium simum cottoni*) and western black rhino (*Diceros bicornis longipes*) [23-26]. Importantly, good examples of success exist (See Box 1). Protected areas were often created in areas

that were inaccessible due to disease or lack of infrastructure; many have lost substantial biodiversity and persist as paper parks, but others still protect viable functioning ecosystems through continued laissez faire or remoteness. Others are managed either by wildlife departments with a protectionist model, often supported by institutional donors, or by local communities, motivated by livelihoods or cultural values rather than finance – the ‘people and nature’ framing [10, 27, 28]. Wildlife-related revenues are sometimes of local importance, but overall they are small in comparison to other factors shaping people’s behaviour, such as culture, education, rainfall, security and access to markets and services. Trophy hunting has been an important component in the provision of incentives in many countries in SSE Africa [29]; it has never been equally important across WCH Africa [30] and is presently collapsing with few benefits, at limited spatial scales, at best delaying or slowing down wildlife declines [15, 31-33].

WCH African conservation practice does not have a single alternative model, but is often, by circumstance rather than design, closer to ‘convivial conservation’, a post-capitalist approach to human wildlife coexistence [34, 35]. The WCH models are antithetical to neoliberal commodification, as illustrated by the slogan ‘100% Nature’ used for many years by Pendjari National Park (NP), Benin (one of the most attractive in the region, yet with <10,000 visitors per year). Ecosystem services are emphasised along with existence values; in Ethiopia, Alitash NP was created to halt desertification and Bale Mountains NP is considered a water tower for millions of people [36] but both also host threatened species, including lions. Rural policies, including those on land and wildlife property and user rights, are adapted to different regional priorities, institutions and cultures, not to an inexistent wildlife industry. Civil society and private sector mobilisation around wildlife is marginal, and conservation is low on the political agenda. COVID-19 is currently affecting this situation through a reorientation of government and donor priorities, but much less through a reduction in the already meagre wildlife-related revenues.

With generally smaller wildlife populations, much lower revenues, and often more people to share them with, conservation in WCH Africa is seldom a win-win situation. Growing instability, persistent extreme poverty, endemic disease and a stifled civil society, against a background of lagging economic development make the SSE scenario unlikely in WCH Africa. This is compounded by the relatively low attraction that many of these remote areas offer to overseas visitors or influencers (tourists, philanthropists and celebrities), or their outright inaccessibility – many such areas are almost entirely coloured red and orange on most western countries’ travel advisories. The figure of annual tourist arrivals looks deceptively homogeneous with large countries like Nigeria, Sudan and Ethiopia showing up in blue (fig. 4e in [7]), but these three countries have little wildlife tourism - the number of National Park visitors is highest in Ethiopia where gate fees totalled a paltry 19,000 USD in 2009[37]. A more meaningful metric is the World Bank Doing Business ranking (www.doingbusiness.org accessed 11/9/20), as a proxy for the challenges to the WCH African private sectors that stymie the development of a tourism industry and the capitalisation of wildlife commodities (Fig. 1).

One size does not fit all

‘If it pays it stays’ is rarely applicable for the current generation of practitioners and policy makers in WCH Africa. This is not unique to the region; wildlife conservation throughout the world actually depends to a large degree on public subsidies, seen as a legitimate cost to local and global society [38, 39]. The model embraced by SSE Africa can have undesirable consequences elsewhere in the continent; international wildlife trade policies that aim to increase the value of wildlife with the intention to provide community benefits and to fund law enforcement may have adverse consequences

in WCH Africa, where stakeholders are unable to accrue those values but face increased costs to protect increasingly valuable resources. The extinction of two rhino subspecies in WCH Africa is a regional failure and cannot be blamed on SSE Africa, but it certainly did not help that SSE Africa has always aimed to increase the commercial value of rhino horn [40]. For WCH Africa, legal trade in elephant ivory [41] and lion bone [42] are similarly challenging.

Ultimately, funding is the critical determinant of success in wildlife conservation [43-45]. Lindsey et al. [7] also point this out and do make a set of useful recommendations about international funding, but they focus on improving opportunities for a wildlife-based economy; we doubt the general validity of those recommendations across sub-Saharan Africa especially without an analysis of profitability and risks. We similarly doubt that their recommendations relative to the public sector and civil society are cogent for WCH Africa at present.

Clearly, a single framing for terrestrial conservation does not fit across a vast and diverse continent. Alternative perspectives are important, and certainly for WCH Africa, where funding streams from institutional donors eclipse the importance of all other mechanisms [15, 46]. Considering the global benefits of wildlife conservation in Africa and the widely recognised need for the international community to contribute to the costs, international solidarity is a more substantial, resilient and sustainable source of funding, definitely for WCH Africa. The key to results on the ground lies with management effectiveness and various models of delegated or collaborative management have been successful; with bilateral aid and various other institutional funds channelled through government there will be a continuing role for models that rely on the provision of technical and financial support to wildlife departments as implementing agencies [46, 47].

An African conservation paradox

The COVID-19 pandemic has brought global hardship; it will most certainly have negative impacts on wildlife conservation across Africa, but in WCH Africa, the concurrent but unrelated wave of armed conflict and political instability may have far more impact. Violent histories, insurgents and terrorists have created chaos in several protected areas [48, 49] and jihadists have used them as their base (https://www.washingtonpost.com/world/africa/burkina-fasos-wildlife-reserves-have-become-a-battle-zone-overrun-by-militants-and-poachers/2020/09/12/dae444bc-f1c0-11ea-9279-45d6bdf145f_story.html and <https://www.refworld.org/docid/50ceeed22.html> both accessed 14/9/20). The impacts of insecurity are created partially by mechanisms analogous to COVID-19 (e.g. restrictions on law enforcement activities, further reduction of any residual tourism, redirection of funds), but also by the large-scale burning of wildlands as a military tactic, the use of wildlife for sustenance by fighting parties, and the perceived security risk of having extensive wildlands uninhabited by people and controlled by armed forces under command of wildlife departments rather than the conventional armed forces [48, 50]. The two regions appear to have different ‘perfect storms’ somehow creating a paradox that mires a pan African mitigation strategy.

The differences in the contrasting perspectives presented here have high policy relevance. International debates are often split across Africa, especially at the Convention on International Trade in Endangered Species of wild fauna and flora (CITES) [41], to the point where Southern African Development Community (SADC) countries threatened to withdraw from the Convention at the last Conference of Parties (<https://www.news24.com/news24/africa/news/southern-african-nations-threaten-to-quit-wildlife-trade-monitor-20190901> accessed 24/9/2020). While pursuing the same objective, but with different perspectives, the probability of a shared African conservation strategy is low, as the two halves of Africa are pitted against each other on opposite ends of sustainable use policies. This opens up the debate to strong influence from the Global North where perspectives are

equally divided [51], making for further politisation and escalation [42]. Biggs et al. [41] call for improved debate towards collective action within Africa; in the absence of a pan African consensus we add that empathy towards multiple perspectives, reflecting African diversity, is crucial to reach coherence in wildlife policy across Africa.

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Text box 1: Conservation success in WCH Africa

Across WCH Africa in general, wildlife is naturally less abundant due to lower productivity of ecosystems [52], and population declines have been more severe due to anthropogenic threats [23]. However, there are robust and stable populations of key species and cases of successful conservation in key protected areas; we present some examples (see also Fig. 1).

1. W-Arli-Pendjari (WAP) complex, Benin-Niger-Burkina Faso

The WAP complex is a ~20,000km² transfrontier conservation area (established before these were 'pioneered' in SSE Africa) and a World Heritage Site (<https://whc.unesco.org/en/list/749/> accessed 14/9/2020). Funding from national governments has been generously supplemented through different modalities; projects supported by many donors (esp. European Union and Germany) worth over 50 million USD since 2000, a 28 million USD trust fund, and recently delegation of management of the Benin components to African Parks with a pledge of 25 million USD from different partners. Despite known inefficiencies in spending and short gaps between projects, the complex has effectively had stable populations, with ~10,000 roan antelope (*Hippotragus equinus*) and ~10,000 buffalo (*Syncerus caffer*), and a doubling of the elephant (*Loxodonta africana*) population to 8,911 since 2003 [53].

2. Niger giraffe

Outside formally protected areas but just ~100km from the WAP complex, Niger has the only remaining population of West-African giraffe *Giraffa camelopardalis peralta*) and their numbers grew from 49 in 1996 to 600 in 2000 (<https://giraffeconservation.org/2020/01/24/news-from-niger/> accessed 18/9/20).

3. Zakouma NP, Chad

Part of the ~30,000km² Greater Zakouma Ecosystem, Zakouma NP received substantial international support for over 35 years by a succession of projects mainly funded by the European Union. Wildlife populations show high densities and have been stable but elephants suffered from a short period of intense poaching in the beginning of this century, populations are recovering [46].

4. Sangha Trinational (TNS), Cameroon-Congo-Central African Republic (CAR)

The ~44,000km² TNS in the Congo Basin is a stronghold for forest species (<https://whc.unesco.org/en/list/1380/> accessed 14/9/2020). National Parks within the TNS have had individual funding, but the most robust fund currently is a 60 million USD trust fund [46]. About half the area (Cameroon and CAR components) was surveyed in 2014 and 2016, showing a density of 0,31 elephants and 1,11 weaned great apes per km² (7,100 elephants, 19,000 gorillas (*Gorilla gorilla*) and 6,000 chimpanzees (*Pan troglodytes*) [54].

5. Benoue complex, Cameroon

The ~20,000 km² Benoue complex in Cameroon has had mixed success with severe declines in some parts but stability in others [55], of global importance is the population of ~2,500 giant eland (*Tragelaphus derbianus*) [56].

6. Boma Gambela landscape, South Sudan-Ethiopia

The biggest migration after Serengeti-Mara but little known and witnessed by few, ~800,000 white-eared kob (*Kobus kob leucotis*) migrate every year over ~900km across the vast and remote landscape between Boma NP in South Sudan and Gambela NP in Ethiopia, along with possibly 200,000 tiang (*Damaliscus korrigum tiang*) [57].

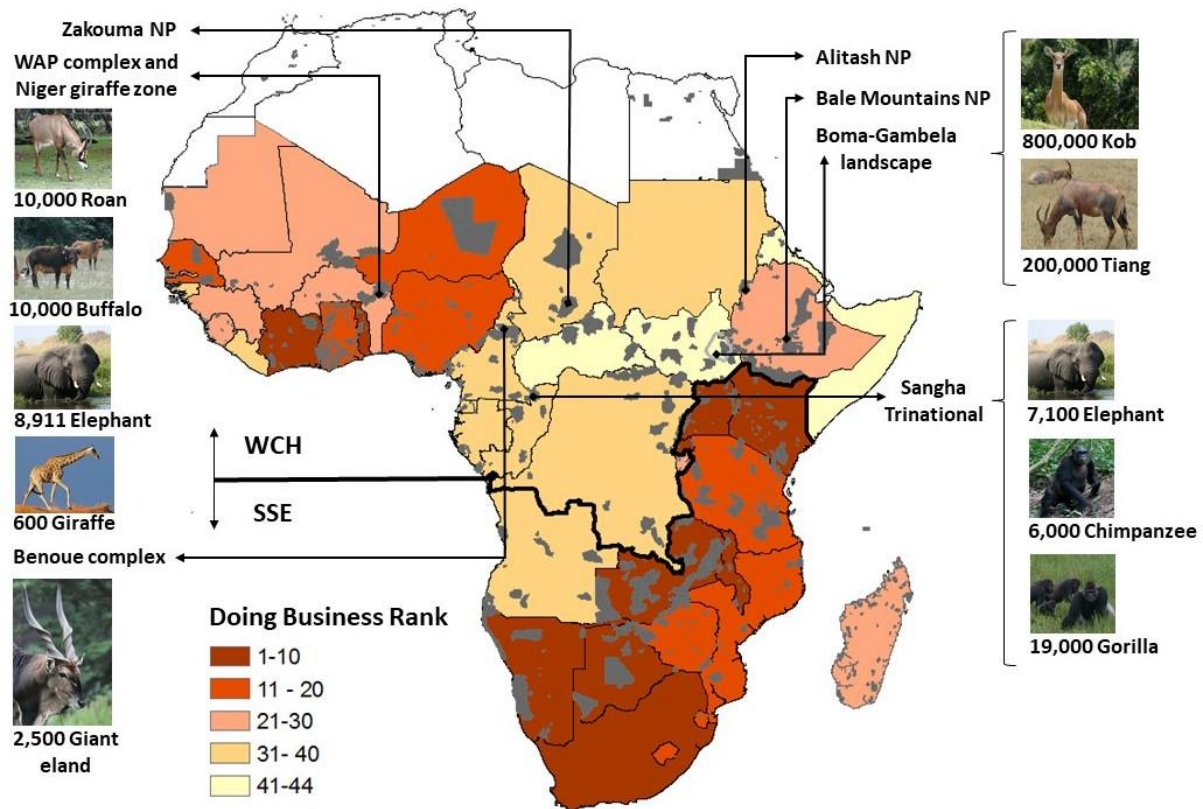


Figure 1: Sub-Saharan Africa with African Union regions divided into southern and southeastern (SSE Africa) and West, Central and Horn (WCH Africa); shading shows World Bank Doing Business indices for sub Sahara Africa ranked from the easiest (dark colour) to the most difficult (light colour) countries to start a business in. Category II-IV Protected Areas in grey, taken from the World Database on Protected Areas (www.protectedplanet.net accessed 25/9/2020) with name labels for areas mentioned in the text. Wildlife pictures taken from the IUCN Red List of Threatened Species (www.iucnredlist.org accessed 25/9/2020), with numbers below indicating significant populations mentioned in Box 1. [NOTE: nature replaced these pictures in the final layout, for reasons related to copyright]