



COVID-19 and Conservation: Crisis Response Strategies that Benefit People and Nature

Summary

The COVID-19 pandemic is a global human health crisis that is deeply intertwined with the global biodiversity crisis. It originated when a zoonotic virus spilled over from wild animals to humans. Viruses can spread easily in disturbed ecosystems, and with increasing contact between humans and wildlife the risk of contagion grows. Conservation is crucial to reduce the risks of future pandemics, but the current pandemic also impacts on conservation in many ways.

In this Briefing Paper we suggest strategies to alleviate the pandemic's adverse effects on conservation in the Global South. Many zoonoses originate there, and livelihoods are strongly dependent on natural resources. The paper considers the pandemic's overarching economic implications for protected and other conserved areas, and specific ramifications for the tourism and wildlife trade sectors, which are closely related to these areas.

As economies shrink, natural resources come under pressure from various sides. Financial resources are reallocated from the conservation to the health sector, countries decrease environmental protection standards to boost economic recovery, and poor people in rural regions resort to protected wild resources as a subsistence strategy. Together, these trends speed up the loss of biodiversity and ecosystem services and create supportive conditions for the emergence of zoonotic disease and the undermining of livelihoods.

Before the COVID-19 pandemic, nature-based tourism was a multi-billion dollar industry, and the temporary

breakdown in tourism is having both positive and negative impacts on sustainable development. On the negative side, many people employed in tourism have lost their jobs and livelihoods, and a key source of funding for management of protected areas has been depleted. On the positive side, a temporary decline in tourism has given nature time to recover, and a drop in international flights has lowered global carbon emissions from air travel. The need for the industry to plan its post-COVID outlook offers a chance to promote more community-driven tourism to support inclusion of local people.

Wildlife trade – a major spreader of zoonotic viruses – has been banned in response to the pandemic in some countries. Yet social safeguards for local communities dependent on protein from wild animals are still largely missing.

Our recommendations to address these challenges are that conservation must remain high on the international agenda, especially in the midst of a global health crisis that could quickly repeat itself if ecosystem destruction continues at the current pace. Environmental legislation must be upheld and funding made available for sustainable livelihoods. The resurgence of nature-based tourism should be supported because of its potential to generate conservation funding and income for local communities. In the meantime, the tourism industry should work on further reducing its environmental footprint and improving community self-determination. Bans on wildlife trade need to be designed in ways that do not undermine communities' need for sources of protein.

Introduction

COVID-19 has caused a global human health crisis that needs an immediate and powerful response. This should not conceal how deeply the COVID-19 pandemic is intertwined with other global challenges, including the global biodiversity crisis. Global environmental change has been identified as a core driver of zoonotic disease emergence, including for COVID-19. Scientists have previously warned that such events are likely to become more frequent due to accelerating global environmental change. In unbalanced ecosystems more robust species that carry dangerous viruses can spread and endure more easily. With increasing contact between humans and wild animals the likelihood of human contagion grows. Such processes are particularly likely in the tropical and sub-tropical countries of the Global South, where levels of wildlife biodiversity are high (IPBES, 2020).

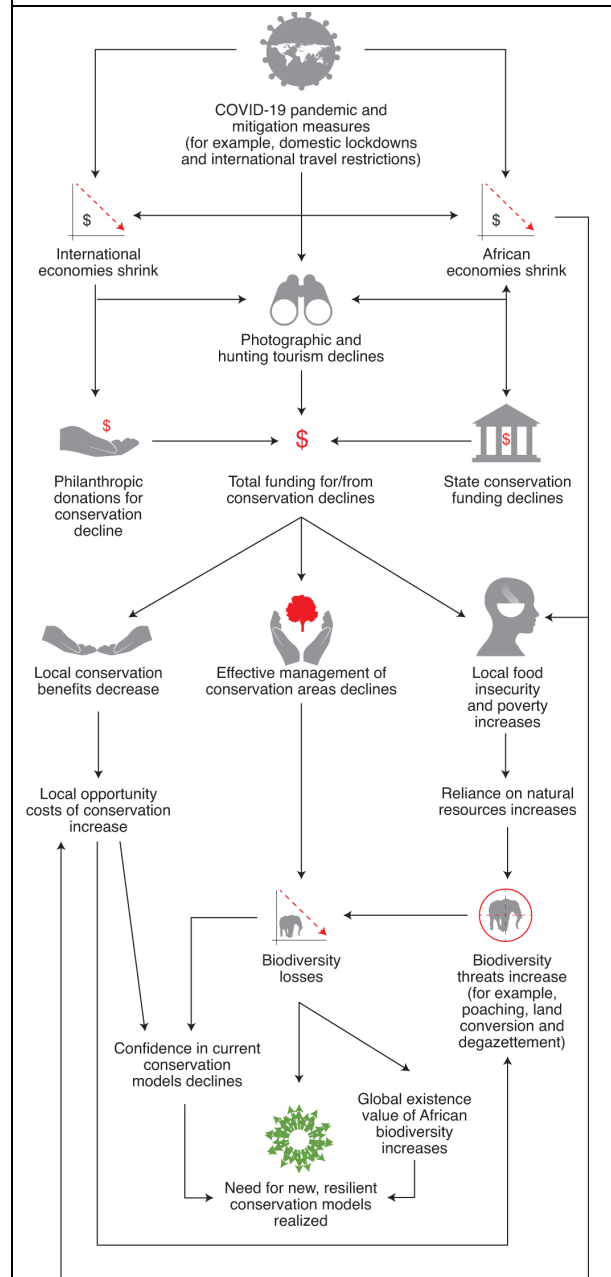
The COVID-19 crisis itself threatens hard-won nature conservation successes in the Global South, notably in protected areas (PAs) and other effective area-based conservation measures (OECMs). PAs are land- and seascapes that are legally declared to chiefly or exclusively serve conservation purposes, whereas OECMs contribute significantly to conservation without this being their legally declared primary objective. PAs and OECMs can play a major role in zoonotic disease prevention as they decrease unsustainable exploitation of natural resources and can reduce human-wildlife interaction. They can also help maintain vital natural resources for human livelihoods (IPBES, 2020). With growing pressure on sensitive natural resources, these functions of protected areas are at stake for a substantial number of poor rural people (Lindsey et al., 2020). Taking Africa as an example, Figure 1 illustrates how the economic decline caused by the pandemic leads to decreased conservation funding and increased pressure on natural resources. Together, these trends underline the need for new conservation models and efforts.

In the following, we first focus on the wider economic turmoil caused by the pandemic and its consequences for conservation and related livelihoods. We then zoom in on tourism and the wildlife trade as two important sub-sectors affected by the COVID-19 pandemic and where the potential for changes in policies and practices might be substantial. While global attention is on strengthening health systems to combat COVID-19, urgent action is also needed to firmly retain conservation on the agenda, as the pandemic's net effect on the conservation sector is likely to be devastating (Lindsey et al., 2020).

Increased pressure on natural resources

The COVID-19 pandemic has caused major economic declines across the world, with world GDP shrinking by 4.3% in 2020 and regional GDP in Africa and South Asia shrinking by 3.4% and 8.6% respectively (UNDESA, 2021). These economic contractions and political reactions to them threaten to further reduce the funding of already heavily underfunded PAs and OECMs in the Global South. Due to shrinking

Figure 1: Schematic of the potential cascading impacts of COVID-19 on conservation in Africa



Source: Lindsey et al. (2020).

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budgets, concentration of domestic funds in the health sector, reduced tourism revenue for parks, and decreasing philanthropic donations, fewer conservation personnel and less equipment can be sustained. The financial losses combined with social distancing requirements and travel restrictions interrupt the management activities of conservation agencies, anti-poaching control, and agencies' collaboration and interaction with local communities (Lindsey et al., 2020, Figure 1).

Direct pressure on natural resources rises as several countries' plans for post-COVID economic recovery include rollbacks in environmental safeguards that would downgrade protection of protected areas, diminish their size or degazette them (Hockings et al., 2020).

Direct pressure also grows with people's unsustainable extraction of the natural resources of PAs and OECMs. Well-managed protected areas fulfil many conservation functions and people's needs (e.g. water and food security, climate change mitigation, cultural fulfilment etc.). Many indigenous peoples and local communities have been sustainably managing natural resources, including around protected areas. Community-based approaches to local natural-resource management through OECMs have emerged over the years and are increasingly recognised by conservation agencies.

However, the sustainable fulfilment of nature-based livelihoods was a challenge in many areas even before the pandemic (Lindsey et al., 2020). Government support for the management of PAs and OECMs and the livelihoods of people living around these is weak in many countries. This is the case especially for remote and marginalised areas, already experiencing environmental change, where traditional practices are no longer sustainable.

With pandemic-induced lockdowns, pressures on PAs and OECMs increased tremendously as people lost jobs and income, food markets closed, and many transnational labourers and urban dwellers returned to their rural communities of origin. This led to many more people harvesting natural resources in order to survive. Among the major effects are increases in bushmeat poaching and consumption, logging for timber and charcoal, and habitat conversion for extractive purposes (Hockings et al., 2020, Lindsey et al., 2020). Wild resources may support subsistence in the short run, but imminent overexploitation may make them unavailable in the medium term, thereby accelerating loss of biodiversity and ecosystem services for human wellbeing. Increasing encroachment into wildlife habitats and their further corrosion also raise the likelihood of future zoonotic diseases.

Decline of nature-based tourism

Due to COVID-19-induced travel restrictions, tourism has declined by 74% in 2020 (UNWTO, 2021) but will likely resurge once the global health situation allows. The current standstill of the industry offers the opportunity to reassess what has worked, and what has not for conservation, livelihoods, and destinations (Spenceley, 2021). For instance, perhaps the interaction of wildlife and tourists needs adjustment to avoid further zoonotic disease transmission, including how close visitors get to animals, and whether they feed or touch wildlife.

An adverse consequence of the decline in tourism for sustainable development is an associated drop in revenue. Nature-based tourism commonly generates economic benefits for protected and other conserved areas, thus

supporting wildlife and habitat conservation and local communities (Lindsey et al., 2020). Before the COVID-19 pandemic, nature-based tourism used to generate more than 10% of GDP for countries such as Tanzania, South Africa and Namibia, and more than 20% for several small island countries (IPBES, 2020). According to a survey among international tourism experts, 80% expect that tourism in Africa will only reach pre-pandemic levels in 2023 or later (UNWTO, 2021). If so, there will be lasting gaps in the industry's financial contributions to local staff, payments for goods and services, contributions to conservation efforts, and philanthropic activities. In South Africa, revenue losses have been compounded by insurers' unwillingness to pay business interruption claims, and overseas agents refusing to pay non-refundable deposits owed (Spenceley, 2021). With the decline of nature-based tourism exacerbating the economic and livelihood challenges, support for the survival of the tourism industry may be an important short- to medium-term crisis-response strategy. On a broader scale, the effects of the pandemic suggest an overreliance of PAs and OECMs on tourism revenue for conservation management and livelihoods that makes them susceptible to economic crises.

Short-term positive social and environmental impacts of the decline in tourism include the recovery of some ecosystems and associated marine and terrestrial wildlife (Spenceley, 2021). Badly managed nature-based tourism that fails to involve local communities, can damage the natural environment (e.g. water pollution, habitat fragmentation) and the socio-cultural environment (e.g. erosion of local traditions) (Fletcher, 2017). The temporary breakdown of the tourism industry and the need for the sector to develop plans for a post-crisis tourism resurgence could be a window of opportunity for NGOs and responsible government agencies to promote commercially viable community-based nature tourism that lays more decision-making authority in the hands of local people.

In terms of another short-term positive effect, the travel bans are undoubtedly reducing carbon emissions from the tourism sector. In the longer-term, options may include innovation in more efficient plane engines and flight routes, coupled with virtual tours to generate revenue without physical visitation. There are already initiatives focusing on climate change and tourism, tackling how tourism can operate without fuelling global warming. (Examples of such initiatives are Tourism Declares a Climate Emergency and SUNx.)

Stricter control of wildlife trade

After the outbreak of the COVID-19 pandemic, several countries have increased efforts to regulate and enforce restrictions in wildlife trade. With many animals sourced from protected areas (Hockings et al., 2020), the wildlife trade is a key driver of species extinction. It also drives pandemic emergence, as wild animal markets facilitate the spillover of viruses to humans and their amplification among market-goers and beyond (IPBES, 2020). The effective and socially

sustainable regulation of the trade remains a challenge, however. While some traders may make huge profits, subsistence consumption and basic incomes may be the primary motivation for poachers to engage in this business. Rural communities in many regions depend on wildlife for traditional medicine and wildlife hunting as part of their cultural heritage. A sweeping prohibition of wildlife trade and markets threatens to undermine their wellbeing and may rather stimulate illegal consumption and trade (IPBES, 2020).

Conclusions and recommendations

Despite some reductions in pressure on PAs and OECMS due to the COVID-19 pandemic, these are outweighed by concurrent increases in threats to ecosystems and related livelihoods (Lindsey et al., 2020). The future of PAs and OECMS is not the only problem in the COVID-crisis. However, they may offer important solutions for a more sustainable future. Restoring and maintaining vulnerable ecosystems is key, both as an insurance against zoonotic diseases and as a livelihood strategy for resource-dependent rural poor. The UN Decade on Ecosystem Restoration started in 2021, and 2021 will still see the seventh IUCN World Conservation Congress and the 15th Conference of the Parties to the Convention on Biological Diversity set to agree on a new Global Biodiversity Framework. Countries should use these opportunities to support PAs and OECMS for the flourishing of people and nature.

Calls for more rigorous conservation and better protection of local people's livelihoods were made well before the outbreak of COVID-19. The pandemic underscores the validity of these warnings. We suggest the following response strategies to challenges that gained traction in the pandemic.

- PAs and OECMs should be maintained for their health and livelihood benefits. Environmental protection laws should not be rolled back for post-crisis economic recovery.
- COVID-19 response measures should not divert resources from conservation. Emergency funding should support subsistence, conservation, and sustainable resource use in and around PAs and OECMs.
- The nature-based tourism sector should re-assess interactions with wildlife to reduce the risk of zoonotic disease emergence and transmission.
- The nature-based tourism industry needs support to continue to generate revenue for conservation. In the longer term, conservation funding needs to diversify and to become less dependent on volatile tourism markets.
- Tourism should use the temporary breakdown of the industry to strengthen approaches that give local people more say in the use of their territories by tourists and to advance less carbon-intensive modes of travel.
- Measures to safeguard local communities' livelihoods and cultural practice should accompany the further regulation and enforcement of wildlife trade bans.

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