The changing face of wildlife tourism during the COVID-19 pandemic: an opportunity to strive towards sustainability?

Abstract

The COVID-19 pandemic constitutes one of the greatest challenges in the history of the tourism industry. Travel restrictions imposed in many countries to manage global spread and community transmission allow to study the environmental effects on tourism destinations. Here we investigate the case of wildlife tourism in Sri Lanka, a country that has experienced unsustainable wildlife tourism practices before COVID-19. Semi-structured interviews of wildlife tourism stakeholders of Sri Lanka's national parks demonstrated how the travel restrictions during COVID-19 provided a temporary relief from environmental impacts. We discuss various measures on how to maintain more sustainable practices of wildlife tourism in Sri Lanka and other countries in the long term seizing this unusual opportunity.

Introduction

The novel coronavirus (COVID-19) outbreak has vastly affected every aspect of living in countries worldwide. Temporary travel restrictions implemented to minimize the global spread of COVID-19 have significantly reduced travel across and within countries. The current situation provides an opportunity to 'reset' the tourism industry particularly in developing countries given the greatly reduced visitation numbers, and profound changes in traveller behavior (Li, Nguyen & Coca-Stefaniak, 2020; Nepal, 2020). Focal areas for future planning were seen in managing visitation, improving tourism infrastructure and services, and diversifying and extending the tourism offer to achieve satisfying experiences (Wolf & Croft, 2014). Environmental impacts of unsustainable tourism practices for instance through overuse of nature-based tourism locations should be critically reviewed and plans devised to strive towards greater sustainability (Sumanapala, 2018).

The main purpose of this *Research Letter* is to discuss the situation of wildlife tourism during the pandemic compared to before, in the context of Sri Lanka's national parks that receive large numbers of visitors resulting in overcrowding and adverse environmental effects. We explain how this crisis can be harnessed as an opportunity to improve wildlife tourism practices.

Method

Semi-structured interviews were chosen as a qualitative method to gather rich insights (Pechlaner et al., 2012). Twenty-nine local key stakeholders in the field of park tourism were interviewed including park managers, field assistants, safari operators, and a variety of other stakeholders such as environmentalists. Interviews were administered either online, face-to-face, or via phone. Information was gathered on perceived conditions of wildlife tourism during the Covid-19 travel restrictions compared to before with a particular focus on overcrowding. Opinions were also solicited on the future management measures and opportunities for park management accruing from the travel restrictions. Interviews lasted on average 20 minutes. Interviews were recorded, and transcripts were analysed in NVivo 9. We analysed the qualitative interview data by coding emergent themes and sub-themes that were refined through

iterative analysis as per Ritchie and Spencer (1994). This entailed an immersion in the data, coupled with organising the material into key themes, and interpreting the data to highlight the significance of different themes. Results were presented with illustrative quotes from the interview data. Two coders were involved, achieving an inter-coder reliability score above the recommended reliability level (Huberman & Miles, 2002).

Results

Over-crowding in national parks in Sri Lanka prior to Covid-19

Sri Lanka has 22 publicly accessible national parks that facilitate viewing opportunities and interaction with wildlife in their natural habitats. Many of these parks have seen increases in annual numbers of visitors in pursuit of wildlife attractions such as the Asian elephant and the Sri Lankan leopard. The increasing numbers of visitors and safari vehicles have created social and environmental impacts affecting flora and fauna, and their habitat. Incidents of hit-and-run collisions between safari vehicles and wildlife along with feeding pose particular problems.

This situation invariably forced the Sri Lankan Wildlife Department to take necessary actions to control safari vehicle usage in national parks. In a recent survey measures to manage visitor traffic in parks were supported by tour guides to reduce traffic and manage overcrowding. For example, safari operators proposed minimum and maximum passenger limits for safari jeeps, and limiting the number of vehicles. However, policies and management actions implemented with the intention to limit vehicle numbers mostly failed. A major safari operator in Yala National Park explained this as follows:

'*I have been in the safari industry for more than 10 years. During this period, the government and wildlife department tried to implement regulations for minimizing overcrowding by jeep traffic but it was pointless due to many conflicting influences especially political ones.*'

This was supported by several other interviewees who elaborated that regional politicians and important stakeholders directly involved in or otherwise influencing business decisions were willing to tolerate unsustainable practices of wildlife tourism for financial gain. According to them this impeded the implementation of policies on limiting the daily number of safari jeeps in various Sri Lankan national parks.

The interviewed stakeholders appeared mindful of the issue of overcrowding and were generally supportive of management actions, at the same time they too raised concerns about possible economic side effects. For example, 22 of the 29 respondents conceded that a system would need to be established, especially in the most popular national parks, to minimize overcrowding inside parks while maintaining livelihoods. A safari operator stated:

'*We strongly believe that we need to minimize jeep traffic inside parks as long as it does not affect our daily income.*'

The situation during the Covid-19 travel restrictions and shortly after the re-opening of national parks

In Sri Lanka, national parks reopened to the public after three months of COVID-19 related travel restrictions. Corlett et al. (2020) explained that due to the absence of human activities in protected areas trampling pressures were alleviated, and stress and aggression reduced in disturbance-sensitive animals. One common observation among respondents was that wild animals were moving freely on major vehicle tracks which they would normally avoid (Figures 1a, 1b). This mirrors similar changes reported in Kruger National Park in South Africa (Smith et al., 2021).

Figure. 1a. A python crossing the deserted main vehicle track at Yala National Park, Sri Lanka, during the Covid-19 lockdown.
(Image by Erich Joseph; Source: MONGABAY-16.04.2020)

Figure. 1b. A leopard crossing the deserted main vehicle track at Wilpattu National park, Sri Lanka, during the Covid-19 lockdown.
(Image by Erich Joseph; Sources: MONGABAY-19.06.2020

Thus if visitor numbers were indeed reduced permanently there is a high chance that wildlife observations near vehicle tracks would increase with positive implications for visitor satisfaction and the visitor experience. To assess the extent to which numbers need to be reduced however requires scientific study to inform future policies. The decline in tourism activities had other positive effects such as staff being able to allocate more time for patrolling of illegal activities in parks and conservation management (Rodrigo, 2020). A park ranger stated:

'*Reducing park visitor numbers had several positive impacts for the sustainable management of our park. Not only was the environment and the fauna freed of hectic traffic along roads but also it gave us time and resources to prioritise management and conservation actions for flora and fauna.*"

Positive changes for wildlife noted during the travel restrictions will however be short-lived if no actions were to be taken to sustain them. Visitation numbers on the first day of the re-opening of parks for example spiked, and feeding of wild elephants re-commenced. This caused aggressive elephant behavior directed at visitors, as per respondent observations ($n = 8$).

How can positive changes in wildlife tourism be maintained after the re-opening of national parks following the Covid-19 travel restrictions

Although both theoretical and empirical information is available about managing overcrowding in parks, the practical implementation of these measures is largely lacking. In our study, the majority of interviewees ($n = 18$) thought that now, following the Covid-19 travel restrictions, was the most opportune time to drive change and implement actions to control visitor traffic. For example, a safari operator and a tour guide supported this notion but also raised awareness that collaborative efforts were needed:

'Most tourism stakeholders understand that controlling the numbers of jeeps entering a park is very important and will greatly benefit the fauna of the park and visitors to the park.'

'While we all know that restricting numbers of visitors in various ways is effective, as a single person, we can't do anything to change this system.'

The Covid-19 crisis offers an unprecedented opportunity to rethink local park management practices, by capitalising on an arsenal of direct and indirect techniques to minimize overcrowding which we identified from the interviews and supporting literature (Figure 2). Direct (hard) management is mainly focused on controlling visitor behavior directly through rules and regulations, while indirect (soft) management aims to influence visitor behavior indirectly by influencing their decision-making (Table 1), with arguments existing for and against the efficiency of both management practices.

Even prior to Covid-19, the Sri Lankan park management adopted management measures such as limiting vehicle usage and others. Some of these failed due to the lack of a strategic approach to implementation, and political and community support while others were thought effective and continue to be in use (as marked in Table 1). For example, instead of limiting the number of safari jeeps altogether, restrictions on the time to enter (e.g., between 12pm to 2pm) and the duration of stay can be made. This has the advantage that the same number of visitors frequent a park but for a limited time period, yielding a similar economic output while reducing negative environmental effects. This has been trialed in a few places but warrants implementation in more parks.
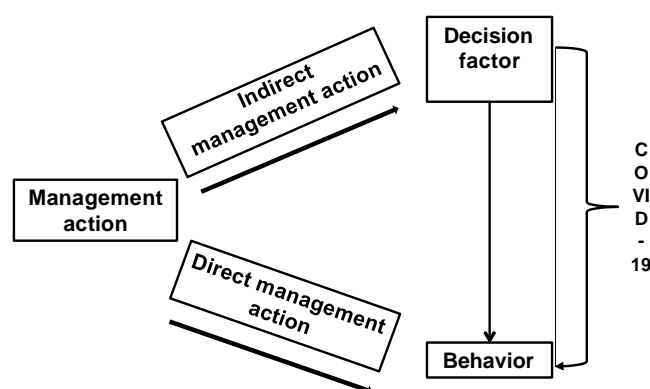

Figure 2. Conceptual model of direct versus indirect park management techniques influencing decision making and behaviour by tourists (adapted from Manning, 2011).

Table 1. Direct and indirect park techniques to manage behavior of participants in wildlife tourism

Direct	Indirect
*†Limit the number of vehicles per hour or day.	†Increase entrance fees for the most popular parks (e.g., Yala, Minneriya)
†Limit group size per vehicle.	†Improve park facilities of less popular parks and increase their marketing efforts, convey benefits to re-direct visitor traffic.
*Limit length of stay inside the park and timing of stay.	*Educate safari operators on appropriate wildlife observation behavior, driving of safari vehicles, and the need to implement direct management measures.
*†Limit vehicle speed.	
†Prescribe a minimum distance between wildlife and vehicle.	*†Educate visitors on appropriate wildlife observation behavior.
†Implement visitor and safari jeep rules in accordance with local and international health guide lines during safari activities inside parks.	*Trial persuasive messaging to achieve visitor compliance with park rules and regulations.
	†Re-think designated road networks and possible closures or redirection to facilitate wildlife observations.
	†Advocate Covid-19 health precautions as a means to advocate for reduced visitation per park.
	*†Introduce online ticketing system to reduce queueing at park entrances and stagger visitation by time of entrance.

* Visitor management techniques that were adopted and found effective in some of the most popular Sri Lankan parks prior to Covid-19. † Techniques that were found less effective. Techniques marked with both *† were found effective in some instances but not in others.

Given the restrictions imposed during the Covid-19 pandemic, the implementation of certain indirect park management measures such as persuasive messaging and online ticketing (Table 1) may seem less 'fatiguing'. However, the positive effects for wildlife mainly accrued due to the reduction in visitor numbers and thus more direct measures might be warranted. The Covid-19 situation is unique in that people globally were exposed to restrictions in social interaction and crowding. While this may cause resentment it also raises awareness and possibly acceptance of such measures if the multiple benefits (environmental and social) are conveyed appropriately. Also, government agencies have gained experience in the production of educational material and signage, along with the promotion and reinforcement of such measures. A park visitor commented:

'*We have enjoyed the safari tour so much more without overcrowding because we had a bad experience last time at the same park. Today the visit was much quieter with COVID-19 still around and less people visiting. They should always keep it that way*'

Conclusions

This review has provided a snapshot of wildlife tourism in national parks before and shortly after the Covid-19 related travel restrictions in Sri Lanka. The study found wide support for re-thinking and transforming operational processes and behaviors, and proposed an arsenal of direct and indirect management techniques to address overuse and impacts. Reducing visitor numbers and encouraging low-impact behavior not only benefits wildlife but also enables park staff to focus on improved services and education of visitors, along with policing and conservation measures. Less disturbance to wildlife will likely increase chances of viewing success and therefore visitor satisfaction (Petty, Haugtvedt & Smith, 1995; Wolf, Croft & Green, 2019). Timely actions are required or else conditions will revert back to previous unsustainable levels of visitor overcrowding. Covid-19 was generally viewed as a unique opportunity to harness the tools and techniques developed to manage social interaction for the purpose of park management.

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