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An analysis of the effect of COVID-19 pandemic on wildlife protection in protected areas of Zimbabwe in 2020

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ABSTRACT

The COVID-19 pandemic brought about unprecedented effects on the conservation and protection of wildlife in protected areas. In response to the COVID-19 pandemic, the government of Zimbabwe imposed lockdown measures to prevent and control the spread of the pandemic. The inability of researchers to conduct field-based research led to office-based research to determine the impacts of the pandemic on conservation. The objective of this study was to find out how the pandemic had affected the security of wildlife in protected areas of Zimbabwe in 2020. The researchers divided 2020 into three periods, 'no' lockdown, 'full' lockdown, and 'partial' lockdown. Data on wildlife protection, illegal activities and tourism performance was collected at the station level using a similar format and submitted to a central place for consolidation and analysis. Parametric and non-parametric tests were conducted based on the normality status of the data variables. The study findings are that (i) The number of rangers conducting law enforcement activities in 2020 remained the same, (ii) Rise in local poaching of wildlife with a peak in the dry season, increase in illegal fishing, and illegal mining activity during the period of 'full' lockdown, (iii) Tourist arrivals and revenue generated from regional and international tourism showed a significant decline during 'full' lockdown and 'partial' lockdown (iv) Domestic arrivals increased as expected during 'partial' lockdown. This study corroborates the potential negative implications of the COVID-19 pandemic on wildlife protection which would continue to worsen with the prolonging pandemic. One lesson from this study is that the Zimbabwe Parks and Wildlife Management Authority (ZPWMA) wildlife protection efforts in 2020 were sustained using financial reserves as a safety net and support from conservation partners. There is a need to ensure conservation safety nets through diversifying funding sources and creating financial reserves for conservation.

Introduction

The Coronavirus (COVID-19) is a novel viral infectious disease whose causes are assumed to be related to human population growth and environmental degradation [24,23,20]. The reasons advanced by researchers to explain this link between

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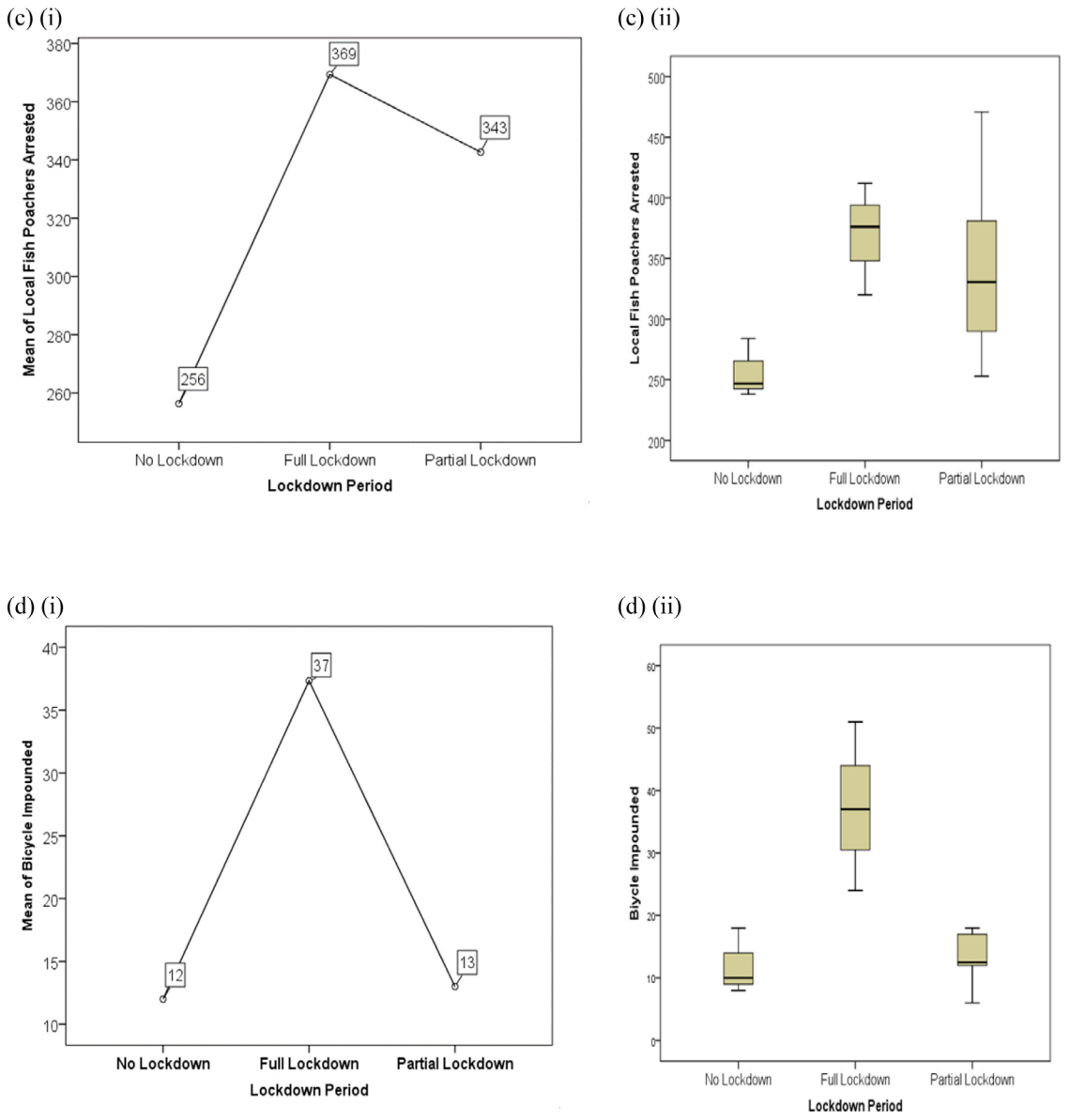

Fig. 4. Continued

tivity. Under COVID-19 conditions, such ranger deployments would be affected due to reduced operational budgets resulting in gaps in the deployment patterns exposing protected areas to more incidences of illegal hunting, mining, and logging [1].

Wildlife protection effectiveness largely depends on resource availability to address multiple threats and conservation issues facing PAs. Logistical resources such as diesel and petrol are critical in driving wildlife protection activities such as ranger deployments, monitoring illegal activities on hot spots, responding to wildlife incursions, carrying out wildlife research, fire management, and game water management. During 2020 resources to conduct wildlife protection such as rangers on the ground, diesel and petrol did not differ significantly despite a fall in tourism arrivals. This availability of resources is because the ZPWMA was still utilizing its financial reserves. During times of adequate funding, one would expect fuel allocations to increase in the early to late dry season (which correspond to full and partial lockdown period) because of increased illegal activities and law enforcement monitoring. The trend in wildlife poaching usually peaks after the crop harvesting season when some people from communities near parks become less occupied. Despite such increased need, inadequate resource allocation is often a challenge in most African parks. For instance, in Tanzania, the annual expenditure is estimated at $6 billion against the ideal $24 billion required for effective protected management [15]. The effects of limited funding in the quest of halting biodiversity loss have been brought forward [30]. The COVID-19 pandemic will further reduce