

Exploring national parks and the Big Nine: A Literature review approach

Janet C. Kimeto ^{1*}, Kezia H. Mkwizu ²

¹ University of Kabianga, Kenya

² Independent Researcher, Tanzania

*Corresponding authors' email: janetkimeto@kabianga.ac.ke



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ABSTRACT

The 'Big Five' are considered to be the Lion, Leopard, Rhino, Buffalo and Elephant which have become synonymous with Africa's safaris in the national parks. Guided by the Butler's TALC model, this paper aims to compare national parks development focusing on the 'Big Nine' in Kenya and Tanzania. Specifically, this paper explores national parks conservation and management in relation to the 'Big Nine'. The method used is the Systematic Literature Review (SLR), whereby 16 journal articles were found to be relevant for the study were analyzed. The finding shows that for the future generations, the 'Big Five' requires protection and conservation in the national parks, other wild animals like Zebras and Warthogs included. The outcome of this paper advocates for other diverse wild animals in Kenya and Tanzania that could fascinate tourists be included in the "Big Five" to have either the 'Big Seven' or 'Big Nine'. Future studies may opt for quantitative and qualitative approaches as mixed methods to further explore national parks and wild animals in Kenya and Tanzania as well as other African countries in the post-colonial era.

1. INTRODUCTION

The conceptualization of the 'Big Five' has become synonymous with Africa's safaris. The 'Big Five' in the wildlife are the Lion, Leopard, Rhino, Buffalo and Elephant. The 'Big Five' name was acquired from the wealthy European Aristocrats who found them to be the most dangerous animals to hunt by foot and the most desired trophies. Tourists are captivated by the 'Big Five' and have led to fixation by those visiting African countries. Globally, loss of wildlife species has been witnessed which may lead to extinction in the coming years (Brondizio et al., 2019; Quesada, 2021). Among mammalian species that have reduced in numbers and concerns have been raised are the African Elephant, black and white rhinoceros (Chanyandura et al., 2021; Emslie, 2020; Gadiye & Koskei, 2016; Emslie et al.,

2016). Other scholars such as Chiaka et al. (2024), Fisher et al. (2024), Leisher et al. (2022) and Ojiija et al. (2024) have cited threats to biodiversity in Africa as well as loss of land cover in protected areas when dealing with conservation and management challenges. Therefore, guided by the Butler's TALC model, this paper aims to compare national parks development focusing on the 'Big Nine' in Kenya and Tanzania. Specifically, this paper explores national parks conservation and management in relation to the 'Big Nine' using a literature review approach.

According to Watson et al. (2014), national parks and protected areas are public resources worldwide meant to conserve flora, fauna and landscapes. The parks have been promoted and taken as national image globally (Yang et al., 2021). Though, some scholars have criticized national parks and reserves for failing to meet the objective of nature protection (Agata, 2019; Lindenmayer et al., 2018). National parks and game reserves are home to the 'Big Five' in Kenya and Tanzania and this is the main reason for most international visits. A study by Eyster et al. (2022) has shown that today's preferences for an ecotourist is on the far side the 'Big Five' to include a wide variety of species like birds, African wild dogs and giraffes. Thus, this paper proposes an extension of the 'Big Five' to 'Big Nine' in order to accommodate other animals. These animals include Giraffe, Zebra, Hippopotamus and Ostrich. Furthermore, the aim of this paper is to compare national parks development by focusing on the 'Big Nine' in Kenya and Tanzania and specifically, to explore national parks conservation and management in relation to the 'Big Nine'. The 'Big Five' being among the top tourism products in Kenya and Tanzania, measures should be put in place by the two states that ensures conservation and management of the national parks with the aim of reducing the loss of wildlife species in their natural habitat.

2. LITERATURE REVIEW

National Parks

National parks have received various definitions over time. Adach et al. (2022) defined national parks as preserved areas with natural state and are designated under legal protection. In addition to the element of protected areas, Mkwizu (2023) described national parks by stating that these attractions contribute significantly in tourism revenues for nations worldwide. Other scholars have defined national parks from a sustainability point of view. For instance, Kimeto and Mkwizu (2023) added that in connecting the concepts of sustainability and national parks then the term sustainability of national parks can be defined as the ability of national parks in coping with changes such as the COVID-19 pandemic.

In addition, according Gichuhi et al. (2023), Kenya has 24 national parks and these include Tsavo East and West National Parks, Amboseli National Park, Lake Nakuru National

Park, and Mt. Kenya National Park. In Tanzania, the Tanzania National Parks (Kiffner et al., 2023; Tanzania National Parks [TANAPA], 2024) which is responsible for conserving the protected national parks shows 22 national parks and these include the Mt. Kilimanjaro National Park, Serengeti National Park, Kitulo National Park, Katavi National Park, Saanane National Park and Arusha National Park.

The 'Big Five' and 'Big Nine'

Although Adach et al. (2022) considers national parks as protected natural resources with outstanding value of preserved nature, this paper is interested on wildlife in national parks from the perspective of the 'Big Five'. Other scholars like Baranczuk (2021) have defined the 'Big Five' from a personal trait view. However, in this paper, it is the wildlife in national parks referred to as the 'Big Five' and these are commonly known as the Lion, Leopard, Rhino, Buffalo and Elephant as indicated in Manrai et al. (2020) and Eyster et al. (2022). In addition, this study considers the extension of the 'Big Five' to 'Big Nine' and therefore, refers to the 'Big Nine' as other wildlife of preference to the national parks other than the Lion, Leopard, Rhino, Buffalo and Elephant.

Theoretical Framework

The Butler's TALC model is adopted for this study. In fact, Butler (2024) stated that the TALC model is frequently used and cited by scholars. Previously, Butler (1980) came up with an evolution model of a destination referred to as the TALC which stands for Tourism Area Life Cycle. The model posits that tourism area undergoes six phases: exploration, involvement, development, consolidation, stagnation and decline or rejuvenation and appears in a S-shaped curve. This study compares national parks development focusing on the 'Big Nine' in Kenya and Tanzania. Therefore, the concept of development as a phase in TALC model is appropriate, suitable and applicable for adoption in this study. Tourists visiting Kenya and Tanzania mainly aim at the 'Big Five' yet the countries have a variety of animals that have potential of undergoing a TALC model. This will counter the animals that are in the verge of extinction.

The TALC theory has been applied by past researchers when investigating national forest parks, national parks and other protected areas (Zhong et al., 2008) but also in terms of qualitative analysis as indicated in Rodrigo et al. (2023). The study by Zhong et al. (2008) focused on internal and external factors affecting tourism development, together with changes concerning the environment, social and economic aspects. Queensland in Australia used Butler's TALC model on tourist arrivals (Nejad & Tularam, 2010). In conclusion, the study found that Australian tourism industry has growth potential since stagnation stage was yet to be

attained. The life cycle of Coastal resorts for Tioman Island in Malaysia was described through historical and data from early 1890s (Omar et al., 2015). The study by Omar et al. (2015) found that the resort has undergone the first four stages of TALC model and were in the consolidation stage. Therefore, this paper is guided by the Butler's TALC model to compare national parks development focusing on the 'Big Nine' in Kenya and Tanzania. Though, the exact time of the life cycle for a destination or a product is not predetermined, thus the point of a decline is unpredicted (Butler, 2011).

National Parks and the 'Big Nine' in Kenya and Tanzania

National parks as protected areas that are found in many countries around the world and this includes Kenya and Tanzania. In Kenya, for example, there is Amboseli National Park with wildlife such as elephants and giraffes whilst in Tanzania there is the Serengeti National Park with wildlife like wildebeests and ostriches. Both Kenya and Tanzania have many national parks. Existing research on national parks as protected areas within Africa is evident in studies such as Eyster et al. (2022), Kimeto & Mkwizu (2023), Mkwizu (2023), Manrai et al. (2020), and Ojijia et al. (2024). The study by Manrai et al. (2020) conducted in Africa, used a quantitative method to examine tourism in Sub-Saharan Africa with the application of the T-ABC model in eight countries. These eight countries are Botswana, Kenya, Namibia, South Africa, Tanzania, Uganda, Zambia, and Zimbabwe of which the 'Big Five' being the Lion, Leopard, Rhino, Buffalo and Elephant can be found. The study discovered that the relationship between economic development and the Tourism-ABC model in terms of tourism attractions, basics, context, and performance is strong (Manrai et al., 2020). This implies that when examining safari tourism for both Kenya and Tanzania, there is a strong relationship between economic development and (tourism attractions, basics, context and performance). National parks are also tourism attractions.

Kimeto and Mkwizu (2023) did a systematic literature review study on the sustainability of national parks during the COVID-19 pandemic in Kenya and commented that the tourism stakeholders need to ensure posterity and fame of parks are sustained in the post pandemic. In Tanzania, the study by Mkwizu (2023) examined national parks using quantitative methods but the findings were confined to the significant relationship between experiences and enjoyment of national parks. In addition, the study did not delve into national parks and the concept of the 'Big Five'.

On the other hand, the study by Eyster et al. (2022) did examine the 'Big Five' in Sub-Saharan Africa focusing on ecotourists preferences in parks. The study applied surveys and observation methods but also included species beyond the 'Big Five' citing the importance of encapsulating other species that are more attractive. Interestingly, Eyster et al. (2022) found

that in ecotourism, the tourist preferences do extend beyond the 'Big Five' to include bird diversity. Further observations revealed that ecotourism is suited to conserving bird diversity, lion, cheetah, black and white rhinoceros, African wild dog and giraffe species. This implies that the addition to the 'Big Five' is the bird, wild dog and giraffe.

Whilst the purpose of the study by Eyster et al. (2022) is to inform tourism stakeholders on the ways to leverage ecotourism to conserve African fauna, this study's aim is to extend the literature on the 'Big Five' with the main objective of comparing national parks development focusing on the 'Big Nine' in Kenya and Tanzania guided by the Butler's TALC model. Furthermore, the specific objective of this paper is to explore national parks conservation and management in relation to the 'Big Nine'.

3. METHODOLOGY

The method used for this study is the Systematic Literature Review (SLR). The SLR is an approach that practitioners and scholars use to review the available literature to carry out research or arrive at a conclusion (Sharif et al., 2019; Xiao & Watson, 2019, Oktavio et al, 2024). The SLR method was used to gather relevant information for this study. The protocol of SLR was followed to provide reliable information for this study, that is from framing the question, identifying relevant work which consists of criteria development and search for articles, appraising the quality of included studies, summarizing the evidence, and interpreting the results as per Khan et al. (2003). The systematic review is meant to answer the two research questions which states that:

- a. *What is the existing national parks conservation and management of then and now in relation to the 'Big Nine'?*
- b. *Is it possible for national parks to extend the 'Big Five' to 'Big Nine'?*

The paper searched literature from the internet using search words "National parks and 'Big Five' in Kenya and Tanzania," and "national parks development and conservation in Kenya and Tanzania" in the identifying stage through google search with a display of 29 million and 1.8 million results respectively. The selected journals for systematic literature review were from Tourism Management, Scientific World, African Historical Studies, African Journal of Ecology and Animal Conservation. The selection of these journal was made based on the searched words for this study and the related articles for Kenya and Tanzania. In the second stage, literature not sourced from the selected journal articles and those without the search words were excluded. The period of selection was from 2008 to 2023. The third stage considered journals that have undergone peer review process. The search articles found were as follows: Tourism Management (158 and 194); Scientific World (104 and 137); African

Historical studies (147 and 167); African Journal of Ecology (144 and 188) and Animal Conservation (191 and 192) totalling to 744 journal articles on National Parks and the 'Big Five' and 878 for national parks development and conservation journals. In the fourth stage, 16 relevant journal articles for this study was obtained from 744 and 878 articles respectively. Summary of the SLR is shown in Table 1 (Kenya) and Table 2 (Tanzania).

4. RESULTS AND DISCUSSION

National Parks Conservation and Management of Then and Now in Relation to the 'Big Nine'

The reviewed literature on national parks conservation and management in Kenya then and now is revealed in Table 1. In this paper, the literature before 2020 is treated as "Then" and any literature after 2020 is termed as the "Now". The articles under "Then" are five in number while for "Now" is four. The findings under "Then" indicate that the major issues of conservation and management for national parks were mainly animals attracting tourists, decline in populations such as roan antelopes, existence of human-wildlife conflicts and management challenges related to issue like fire as confirmed by Kimanzi, (2018), Okello et al. (2008), Nyongesa & Vacik (2019) and Western et al. (2009, 2015). Whereas in the period of "Now", the studies by (Eyster et al., 2022; Gichuhi et al., 2023; Manrai et al., 2020; Mwangi et al., 2022) indicate mainly issues of building strong relationships between the economic development and tourism, focus on ecotourism, management of 24 national parks by considering elements like policies, and preference on community conflict resolution and sharing of resources with conservation areas.

This implies that the national parks conservation and management in the past was characterized mainly with issues of animals attracting tourists including the 'Big Five', population decline for the wildlife, human-wildlife conflicts and management challenges like fire while in the period of now, the focus is on policies, conflict resolutions and sharing resources. The studies by Eyster et al. (2022) and Okello et al. (2008) complement each other by mentioning animals in protected areas while Eyster et al. (2022) focused on ecotourism and suggested the addition to the 'Big Five' to include birds, lion, cheetah, black and white rhinoceros, African wild dog and giraffe.

Table 1. Reviewed Literature on National Parks Conservation and Management in Kenya

Source	Type of source	Topic	Findings (Then)	Findings (Now)
Okello et al. (2008)	Journal article	The relative importance of large mammal species for	Tourists were interested particularly in the big cats and other unique large	

Source	Type of source	Topic	Findings (Then)	Findings (Now)
Western et al. (2009)	Journal article	tourism in Amboseli National Park, Kenya.	mammals. Other animals attracting interest were cheetah, waterbuck, lion, hippopotamus, giraffe, spotted hyena, baboon, warthog and elephant.	
Western et al. (2015)	Journal article	The status of wildlife in protected areas compared to non-protected areas of Kenya	National park and reserve populations have declined sharply over the last 30 years, at a rate similar to non-protected areas and country-wide trends.	
Kimanzi (2018)	Journal article	Findings space for wildlife beyond national parks and reducing conflict through community-based conservation: The Kenya experience	Human and Wildlife Conflict has been largely ignored in policy and tackled mainly through deterrence	
Nyongesa and Vacik (2019)	Journal article	Population viability analysis of the endangered Roan antelope in Ruma National Park, Kenya, and implications for management.	Poaching was identified as the main cause of roan antelope decline in Ruma National Park in Kenya. Suggested anti-poaching and prioritized habitat management as interventions to promote population recovery and sustainable conservation of roans.	
Manrai et al. (2020)	Journal article	Evaluating management strategies for Mount Kenya Forest Reserve and National Park to reduce fire danger and address interests of various stakeholders.	A strategy focusing on community interests provided the best option to address management challenges in forest stations such as fires, education and research.	
Eyster et al. (2022)	Journal article	A study of safari tourism in Sub-Saharan Africa: An empirical test of Tourism A-B-C (T-ABC) model.	Strong relationship between economic development and (tourism attractions, basics, context and performance).	
		Not just the Big Five: African ecotourists prefer parks brimming with bird diversity	Ecotourism is suited to conserve bird diversity, lion, cheetah, black and white rhinoceros,	

Source	Type of source	Topic	Findings (Then)	Findings (Now)
Mwangi et al. (2022)	Journal article	Development challenges and management strategies on the Kenyan National Park System: A case of Nairobi National Park	African wild dog and giraffe species. Nairobi National Park, the oldest one among 24 national parks in Kenya	Management of national park system is where roles are fulfilled, threats are managed and the governing policies are effective, efficient and economic.
Gichuhi et al. (2023)	Journal article	Assessment of conservation management of state parks, community and private conservancies in Kenya.	Preference is on community and private conservancies based on conflict resolution measures, compensation for damages, economic benefits, and community involvement in decision making and sharing of resources within conservation areas.	

Source: Compiled by the Authors (2024)

The reviewed literature on national parks development and management in Tanzania for “Then” and “Now” is displayed in Table 2. The articles under “Then” are two while for “Now” is six in number. The findings show that in terms of conservation and management of national parks in the past (Then) concentrated mainly on land usage, buffer zones, and conservation conflicts as indicated in Brockington et al. (2008) and Muganda (2018). On the other hand, for the period of “Now” shows that the conservation and management of national parks focused on building strong relations between economic development and tourism, increased support for conservation efforts, ecotourism, management of 22 national parks by giving importance of assessing conservation effectively, need for long-term goals and less dependence on external funding. Although the period of now indicates studies by (Kegamba et al., 2023; Kiffner et al., 2023; Manrai et al., 2020; Mkonyi, 2021; Ranke et al., 2023) but the study by Eyster et al. (2022) hinted on the need to have more than the ‘Big Five’ for ecotourism to include other wildlife like birds and giraffes.

Table 2. Reviewed Literature on National Parks Conservation and Management in Tanzania

Source	Type of Source	Topic	Findings /Then	Findings Now
Brockington et al. (2008)	Journal article	Preserving the new Tanzania: Conservation land use change.	Wildlife management is prominent. Tanzania's conservation estate is unrivalled in Africa.	
Muganda (2018)	Journal article	Dynamics of conservation conflicts between Tanzania's National Parks and adjacent communities: A Case Study of Saadani National Park, Tanzania.	There exists conservation conflict between the adjacent communities and Saadani National Park.	
Manrai et al. (2020)	Journal article	A study of safari tourism in Sub-Saharan Africa: An empirical test of Tourism A-B-C (T-ABC) model.		Strong relationship between economic development and (tourism attractions, basics, context and performance).
Mkonyi (2021)	Journal article	Local People's perceptions of benefits and costs of protected areas: The Case of Tarangire National Park and the surrounding ecosystem, Northern Tanzania.		Respondents were willing to support large carnivore conservation despite having problems with them.
Eyster et al. (2022)	Journal article	Not just the Big Five: African ecotourists prefer parks brimming with bird diversity.		Ecotourism is suited to conserve bird diversity, lion, cheetah, black and white rhinoceros, African wild dog and giraffe species.
Kegamba et al. (2023)	Journal article	Conservation benefit-sharing mechanisms and their effectiveness in the Greater Serengeti Ecosystem: Local communities' perspectives.		Local people are willing to support conservation outcomes.
Kiffner et al. (2023)	Journal article	Assessing protected area effectiveness in western Tanzania: Insights from repeated line transect surveys.		There are 22 national parks in Tanzania . Advocate for the importance of considering appropriate temporal baselines and historical contexts when assessing conservation effectiveness in Katavi National Park.

Ranke et al. (2023)	Journal article	The threat of COVID-19 to the conservation of Tanzanian national parks.	The need for long-term goals to ensure sustained conservation that will increase benefits to local communities adjacent to national parks, encouraging local involvement and thereby reducing the dependence on external funding in the future.
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Source: Compiled by the Authors (2024)

Therefore, in reference to the Butler's TALC model, when comparing existing national parks conservation and management of "Then" and "Now" in relation to the 'Big Nine' between Kenya and Tanzania, it is clear that the findings show similarities and differences. The similarities in the period of "Now" are developing towards ecotourism and also the need to add more wildlife to the 'Big Five' to include birds, giraffes and wild dogs. The differences are that in the past ("Then"), the development in terms of showing the record for conservation and management of national parks for Tanzania was considered unrivalled as confirmed by Brockington et al. (2008) while for Kenya there were experiences of decline population of wildlife like roan antelopes due to poaching as outlined by Kimanzi (2018) and Western et al. (2009).

Possible for National Parks to Extend the 'Big Five' to 'Big Nine'

In addition, the reviewed literature revealed that the 'Big Five' can be extended with three other species being the bird, wild dog and giraffe. In summary, the finding shows that for the sake of future generations, the 'Big Five' requires protection and conservation in the protected national parks including other less dangerous wild animals like Zebras and Ostriches. Given the existing literature, it is high time to consider the 'Big Nine' and this study proposes the 'Big Nine' to be the Lion, Leopard, Rhino, Buffalo, Elephant, Giraffe, Zebra, Hippopotamus and Ostrich. The choice of the four additional animals is based on their unique features. According to Chandrakar (2018) wild animals features charm humanity and human spirit; some are simple and beautiful, others magnificent and colorful while others are majestic and powerful. Thus, requires preservation for future generations.

5. CONCLUSION

The purpose of this paper is to compare national parks development focusing on the 'Big Nine' in Kenya and Tanzania. Specifically, this paper explores national parks conservation

and management in relation to the 'Big Nine'. The two countries have diverse animals that could fascinate tourists be included in the "Big Five" such as having the 'Big Seven' or 'Big Nine'. The findings indicate that the existing national parks conservation and management of then and now in relation to the 'Big Nine' are mainly land usage, buffer zones, and conservation conflicts in the past while for now it is building strong relations between economic development and tourism, increased support for conservation efforts, ecotourism, management, assessing conservation effectively, need for long-term goals with less reliance on external funding. Furthermore, the findings show that it is possible for national parks to extend the 'Big Five' to 'Big Nine'.

Implications of the Study

The outcome of this paper has a practical implication to tourism stakeholders and practitioners in advocating for other wild animals in Kenya and Tanzania that could fascinate tourists be included in the "Big Five" such as having the 'Big Seven' or the 'Big Nine' since the two countries are endowed with diverse wild animals that have the potential of attracting both local and international tourists. The wildlife suggested for this study include the following: Giraffe, Zebra, Hippopotamus and Ostrich to make "Big Nine". This will appeal to more tourists in Kenya and Tanzania. Additionally, the implicit implication of the literature review research method particularly the application of SLR by this study is to encourage other studies to explore this method when investigating wildlife in national parks. The academic implication of this study is that the findings can serve as a valuable database for future research focused on wildlife in national parks, particularly in the areas of conservation and management.

Study Contribution

The practical contribution of this study is adding four wildlife species to the famous 'Big Five' to make 'Big Nine' that can be applicable in Kenya and in Tanzania with the aim of conserving and managing national parks. Additional the animals include: Giraffe, Zebra, Hippopotamus and Ostrich. This study also contributes to methodological approach in exploring National Parks and the Big Nine using a literature review approach. The theoretical contribution is the application of Butlers' TALC model in reference to development where this paper found that there are national parks conservation and management in relation to the 'Big Nine' during then and now and this includes land usage and long-term goals respectively.

Limitations of the Study and Direction for Future Studies

This study had limitations in the use of Systematic Literature Review (SLR) as a research methodology. The SLR was used to investigate the existing national parks conservation and

management of then and now in relation to the 'Big Nine' and if it was possible for National Parks to extend the 'Big Five' to 'Big Nine'. Future studies may opt for quantitative and qualitative as mixed methods to further explore national parks and wild animals in Kenya and Tanzania as well as other African countries in the post-colonial era.

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