ECOTOURISM AND WILDLIFE MANAGEMENT AMIDST INSECURITY AND GLOBAL PANDEMIC

Ogunjemite, Babafemi George
Department of Ecotourism and Wildlife Management
Federal University of Technology,
Akure

***Thought**: Ecotourism involves the marketing of wildlife resources, ecological, geomorphological and cultural features of a destination in order to aid sustainable use of these features.*

INTRODUCTION

Tourism in the general perspective is the act of practice of travelling temporarily out of one's place of abode for more than 24 hours to destinations outside the home and workplace to do activities and use facilities at destination visited to meet ones need of leisure and recreation (Geoffrey Alister, 2006; Mathieson and Wall, 2002) Ecotourism in specific terms involves visiting natural sites not grossly altered by human activity or intervention (Newsome, Moore and Dowling, 2002; Reynolds & Braithwaite, 2001).

Wildlife management is the "active manipulation of wild animals and their habitat for the benefit of humankind". It is an art and science (Agbelusi, 2009). It is the management process influencing interaction among and between wildlife, its habitats and people to achieve some pre-defined goals. Wildlife management is an interdisciplinary approach that deals with protecting threatened species, subspecies and their habitats. It applies to some agricultural animals and game animals. The bases of management is often ecological principles such as population and habitat control (Ogunjemite, 2017). These two in one mobile discipline are currently faced with challenges of insecurity and pandemic in Nigeria.

The twin brothers confronting economic activities, including ecotourism all over the world today, are Insecurity and the Corona Virus Pandemic (COVID-19 Both are working to cripple economic activities across the globe, particularly in the third world. These pairs are more impactful on ecotourism, which has now occupied the space of marketing wildlife resources. The third world, the developing country or emerging economies, as it may be referred to, are the hubs of ecotourism development. Although, it appears the more advanced nations are the epicenters of Corona Virus Pandemic, these are the people directly involved as tourists to the ecotourism destinations in the developing nations and without them, it is impossible to generate the much-needed economic activities at the destinations. It is also known that most of the destination are found within the Food-in-secured Regions of the world which most often are prone to conflicts and therefore corresponding with the areas of high risk of insecurity (FAO, 2022).

ECOLOGICAL TOURISM / ECOTOURISM

Ecotourism resources

Ecotourism resources include a variety of plants and animals within the human environment (Conservation International, 2001). The ecological destination of an ecotourism site has ecological values, which are those natural resources that exist in the environment and are relatively undisturbed by man (Ezealor, 2002; Fadipe, 2014). An ecological destination is thus characterized by biodiversity within the various ecosystems. Biodiversity comprises those living things include all habitats, ecosystem and species, the physical environment such as beaches, rivers, oceans, mountains, caves, forests, grassland and wetland among others (Kolawole, 2019). These living components are referred to as the wildlife resources.

The term Ecotourism, had been subjected to some controversy. It is believed to be originally coined by Hector Cellabos Lascurain, an environmentalist from Mexico in 1987 Ceballos-Lascurain (1993). It has now gained a wide usage. Ecotourism is defined as travelling to relatively undisturbed or uncontaminated natural areas with the specific objective of studying, admiring and enjoying the scenery and its wild plants and animals, as well as any existing cultural manifestations. Human society is becoming more ecologically mindful thus, nature-based travel is growing and the term ecotourism attaining wider acceptability. More ecologically minded, responses to nature-based travel opportunities grew and the term ecotourism was evolved strengthened and widely accepted (Diamanlis 1999; Honey, 1999; Weaver, 2005).

At the dawn of this century, ecotourism emerges as a rapidly growing subsector of human endeavor (Cousins, *et al.*, 2009) until diseases at epidemic and pandemic proportions suddenly emerged (Ogunjemite, 2017). Local communities were benefiting through revenue generation and employment opportunities in ecotourism (Ijeomah and Eniang, 2018, Ijeomah, *et al*., 2015). Wildlife resources that are the bedrock of this initiative were receiving increasing attention (Okekedunu *et al*., 2014; Okello and Wishitemi, 2006).

The concepts of ecotourism

Ziffer (1989) is one of the earliest authorities to introduce the idea of benefits and perceived cost to the definition of ecotourism. The concept as proposed could be viewed as placing an economic value on ecological features for the benefits of humanity. It has been observed from many locations in Africa, for example, the Obudu Northern Cross River Area (Ijeomah and Eniang 2018), the Okovango Basin of Namibia, the Swadini Resort of Limpopo Division of South Africa that Ecotourism might not enjoy local support without derivable benefits to the support zone populace. So many of these locations have alternative uses

to which, if financial benefits are not involved, ecotourism might have not thrived. Fennel (2005) brings in the concepts of sustainability. This is the concept that made many of the die-heart preservationist to accept ecotourism as developmental factors in conservation parlance. Ecotourism implies some scientific, esthetic, or philosophical approach. This concept is now exploited by protected area mangers in Park Management across the globe toward their development. It is not only applicable to *In situ* but to an *Ex-situ* management of the Botanical Garden (Adedayo *et al.*, 2021) and Zoological Gardens (Adetola *et al*., 2014). According to the World Travel and Tourism Council (2019), tourism must be environmentally compatible with activities of the tourists, especially in situations where the environment is the attraction and main motive for tourists visit to a destination.

Ecotourism is practiced throughout the world. However, Ecotourism destinations are restricted to some few specific protected natural areas within specific geographical regions thus we have the East Africa Destinations of Kenya, Tanzania and Uganda, The Great Carryon of Colorado valley in USA, the Great Lake of Canada, the Montanes of Nepal in South East Asia as different packages to mention but a few. There are different areas of attraction that serves as local hubs in each of these larger regions. Ecotourism has grown in influence and importance on man's understanding of his environment and the role he plays in its improvement or demise (UNWTO, 2015). Ecotourism is a nature-based travel that involves education on interpreting the natural environment, as it is ecologically sustainable (Mchunu and Hlengwa, 2018; Kiper, 2013). In this definition, we recognize that the natural environment also includes cultural components. Thus, ecological sustainability involves an appropriate return to the local community for long-term conservation of the resources (Adejumo *et al*., 2014; Hughes, and Warin, 2005). Ecotourism is to provide tourists with new knowledge about a certain natural area and the culture that is found within, along a little adventure. It is to help improve the local economy and conservation efforts and to help gain new appreciation for nature and people and to allow more in-depth tours and educational opportunities.

Ecological destination and natural sensitive sites

For any site or location to be designated as an ecotourism destination, the natural landscape must be relatively without interruption for people to study, enjoy, and admire (Olaniyi, 2017). The scenery and its wild animals and plants must be in their natural state. Nature-based tourism considers the natural ecological attraction, their conservation and development (Ogunjemite et al., 2016; Schaller, 2010; Stankov *et al*., 2011). Sustainable nature-based tourism is aimed at safeguarding the main aim is to safeguard the environment, making it beneficial to local people by generating revenue and educating and serving the pleasure of the tourists. Particularly as several communities in developing countries still engage in traditional methods of farming, consequently facing land use constraints (Buba, 2013; Egbe and Vange, 2008). The rising prices of petroleum products, especially cooking gas and kerosene, have encouraged both rural and urban households to rely on fuel wood and charcoal as their main sources of energy (Jayeola *et al*., 2009), leading to further impact on ecotourism sites in Nigeria.
Ecotourism destination, particularly the physical environment, is vulnerable to human pressures caused by the burgeoning population and intensive economic activities (Fabricius *et al*., 2007; Williams and Ponsford, 2009). These resources are often overexploited by men in their search for livelihood and comfort. This is clear in the activities of poachers, hikers and others who destroy the flora and fauna resources of the environment.

WILDLIFE

Wildlife are animals that have not been domesticated or tamed and are living in their natural environment, including game and non-game animals. Most often, they are vertebrate animals hunted by human. Wildlife are living things and especially mammals, birds and fishes that are not human and domesticated. Wildlife management is the harmonization of related knowledge and policies for the conservation of wildlife within and outside protected area.
Although, it appears there is no clear taxonomic or behavioural boundary definition of wildlife. In view of this, it is not surprising that the debate is continuous so long and from different perspectives of the related disciplines and the body of knowledge involved in wildlife management. In their natural habitat, wildlife embraces all vertebrate animals.

WILDLIFE MANAGEMENT

Wildlife management is the "active manipulation of wild animals and their habitat for the benefit of humankind". They are living resource that will die and be replaced by others of their kind. According to Agbelusi (2009), wildlife can be defined simply as "Native plants and animals in their natural environment" or "Wild terrestrial and aquatic vertebrates and plants (i.e., all non-cultivated plants and non-domesticated animals. They are key component of natural resources known as renewable natural resources. They are potentially inexhaustible if properly managed. Examples include forests, rangeland and water sources, unlike the non-renewable resources, which are exhaustible and finite. After use they cannot replenish themselves, e.g. gold, petroleum, diamond, etc.

Based on our discussion in relation to ecotourism, wildlife will be viewed as animals; vertebrates, which include mammals, birds, reptiles, amphibians and fishes that had not been domesticated or are in domestication but attract human curiosity and are hunted by man as game and for their trophy. They may be found in the protected areas or outside them. However, they are commonly encountered in the PAs today. Agbelusi (2009) provided their list of their status as shown in Table 1

Perspectives of Wildlife Management

The East African wildlife perspective sees Wildlife Management as harmonizing of the polices on the different component of wildlife resources for their conservation within and outside the protected area. There are different areas of management; the habitat, which is the range, mammalian composition, the arboreal components; birds and the aquatic and wetland components. It is the wildlife manager that sees how best these components are synergized to achieve the overall goal of conservation and ecotourism.

In America, the North American model of Wildlife Management supports the notion that wildlife is a public trust, an American birthright and that wildlife populations must be sustained forever. Today there are strict prohibition of any form of exploitation of some wildlife resources. Their management of wildlife resources carries some legal implications. In the South America's parlance, wildlife are biological diversities and the profession of wildlife management had largely been overshadowed by biodiversity conservation with much of biological sciences inclination. It should be borne in mind that ecotourism originated from the region in response to safeguarding the resources.

In the West African subregion, wildlife policies started with the inherent consumption tendencies embedded, and consequently domestication had been one key area in wildlife management in the subregion. Nevertheless, this has not mitigated the level of wild exploitation of these resources. Even though these policies are giving way in many of the countries around Nigeria, from across Liberia, Ivory Coast, Ghana, Togo Benin over Nigeria to Cameroon. Here in Nigeria, we have held tenaciously to this and much of our wild sources had been depleted. There had been cases of some of these animals extinct in the wild environment of Nigeria. Examples include Rhino, *Procolobus verus* and many others.

A good number of the large bodied game animals are rare or endangered in their Nigerian range. Most times, some of these species are listed as data deficient in several international criteria. This is clear inditement to wildlife professionals in Nigeria. This is so because many of us are "Jack of All Trades and master of non" With the array of this resource found in Nigeria (limited to the groups call wildlife in our definition) wildlife profile, no single individual could claim overall authority of the groups referred to as wildlife. While it will be acceptable to have clear authorities in such areas as Ornithology, Primatology, Herpetology, Fisheries, Anura species studies, Habitat Management, Domestication, Policy and administration, Wildlife Biometric, Wildlife genetics, etc, it will be impossible to convince the outside world that one is a specialist in all these areas combined. These are the bane of Wildlife Management in Nigeria. It is high time we see wildlife studies as in Education Discipline where the general principles are thought and specific areas are attached, e.g., Education (Geography), Education (Economics) and so on and so forth.

History of Wildlife and ecotourism development in Nigeria

The Wildlife Management as a profession serves as the impetus to Ecotourism Development in Nigeria. The development of Wildlife in Nigeria can be traced back to 1889, the beginning if its parent department, when the colonial government took steps to establish the first forest reserve in the colony of Lagos. Since then, the number of protected areas in Nigeria has increased and expanded to include Forest Reserves, Wildlife Sanctuaries, Game Reserves, Strict Nature Reserves, Communal Forest and National Park. The establishment of these protected areas at any point in time came as a response to an adverse trend, especially within the last 80 years, when environmental degradation set in.

The foremost protected area specifically earmarked and developed for ecotourism in Nigeria is the Yankari Game Reserve, which was later upgraded to National Park status in 1991. Formerly known as the Yankari Forest Reserve, it was converted to a game reserve in 1956. By 1962, Yankari Game Reserve had opened to public visitation and enjoyment. In 1963, this was followed by Borgu Forest Reserve, which was later converted to Game Reserve in 1976, and later to the status of a National Park; Kanji Lake National Park, the first in Nigeria in 1979. In curriculum development, Ecotourism and Wildlife Management was first developed as discipline at the Federal University of Technology, Akure in the year 2008. This is in the quest to find an alternative attractive model for the Wildlife Management to thrive when admission for the course was becoming unpopular and it appears the course might go into extinction. The fisheries component to which the course had been traditionally married to from the Nigeria premier university: University of Ibadan was the next to follow. Wildlife Management still exists in many Nigerian institutions in collaboration with main disciplines, such as Forestry and Environmental Management. The FUTA experiment has brought about a significant growth in students' enrolment now in hundreds and widens job opportunity. It is therefore not out of point to state categorically that ecotourism is assisting in the marketing of Wildlife Resources. It is a welcome initiative that the Forests and Forest Society of Nigeria recognized Ecotourism and Wildlife Management as an important component of their endeavor, and it is hoped that this recognition will remain.

INSECURITY AS IT AFFECTS ECOTOURISM AND WILDLIFE MANAGEMENT IN NIGERIA

Conflicts leading to insecurity had been on the increase all over the world. Conflict resolution is now a well-developed discipline in human endeavor and it is now being incorporated in education curriculum at all levels of learning. In Nigeria, insecurity has assumed a worrisome trend affecting all areas of national life (Odeku, 2020; Okoli and Agada, 2014). Virtually all the protected areas in Nigeria's drier environment had been taken up by insurgency and banditry as their abode.

Causes of Insecurity in Nigeria

Rising poverty, inequality, and inadequacy of employment opportunities, particularly among the youth, had been the fuel to Nigeria's insecurity problem. These has coincided with rising level of poverty among the populace, reaching an estimated 83 million people standing at about 39% of the country population, living in extreme poverty (less than $2 per day) as at April 2022 (Economic Newsletter, 2022). This is a significant 18% increase from 70 million people recorded in 2016. The increasing level of insecurity in Nigeria has reach a crescendo whereby investor confidence is negative and no foreigner is ready to take a risk of coming to our country talk less of making direct investment (FDI) inflows. Ecotourism which is an emerging market to improve Nigeria Economics has therefore, suffered a downward trend. It's ascertained that Nigeria recorded $699 million (*National Bureau of Statistics)* in FDI inflows in 2021, representing the lowest level since 2013.

The country's level of insecurity, and the implication for business activity thus, heightened uncertainty and instability, hindering business operations including ecotourism. In many cases, the country's security situation has resulted in the suspension of commercial operations and expansion plans, thereby increasing unemployment and poverty levels. The Nigerian National Parks and Game Reserves which either to should serve as the hubs of country Ecotourism enterprise are no go areas any longer as a result of this scenario. Taken for instance locations such as Kanji Lake National Park (Table 2 and 4) and Gashaka-Gumti National Parks that have been attracting foreign tourists (Adetola, 2014, Ogunjemite *et al*., 2012 and 2014) are today theater of banditry, insurgencies and kidnapping with serious casualties among the protection staff of the Parks

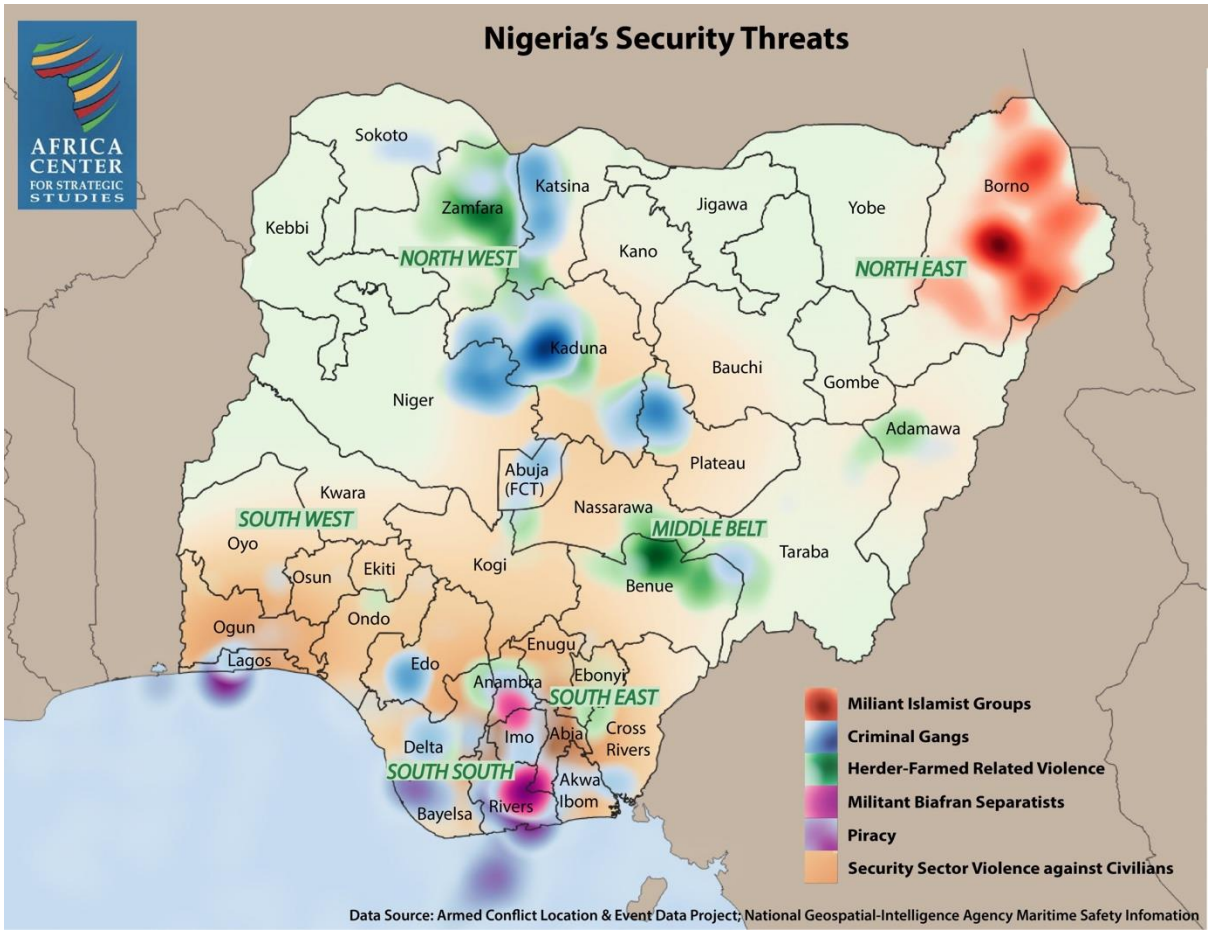

Figure 1: Nigeria's Insecurity Map

Source: Africa Center for Strategic Studies

PANDEMIC

Diseases out brake had always been a serious impediment to economic growth. No wonder it is accepted that health is wealth. Ecotourism has yielded dividends to Conservation and Nigeria when the COVID 19 Pandemic struck. So many designated ecotourism sites particularly the National Parks, Conservation Centre like Lekki, spectacular sites as the Ado Awaye Suspended Lake, Ikogosi Warm Spring, Owu Waterfall and so many others were already making significant contribution to the local economy of their host communities and consequently the Nation at large. Even in *ex-situ* conservation sites such as Zoological Gardens, Wildlife Park and Botanical gardens and Horticultural gardens, ecotourism was already making waves and becoming an acceptable means of recreation. The economic incentive of ecotourism as a non-consumptive use of wildlife

resources was outweighing the consumptive uses, contributing to conservation (Lorimar, 2009 and Bruyere, *et al.,* 2009). Suddenly, ecological in-balance was set in from many fronts across the local to national and global environment. From the local Lasa fever in Nigeria (Olayemi *et al.*, 2016a and b) to Ebola virus on a regional level in the forest zone of African Sub-Saharan Region (Ogunjemite, 2017) and the Corona Virus (COVID 19) pandemic on global scale and most recent the Monkey Pox. These were traceable to improper handling of wildlife resources because of conflicts (Insecurity) and consequently the marketing strategies to these resources which are now referred to as ecotourism plummeted. Although pandemic is not a permanent condition, it is subsiding and once more the sun will shine again. The major cycles of pandemic in the word are presented in Table 4.

Well managed and sustainable ecotourism will contribute directly to conservation needs and provide tangible economic opportunities to the local community (Ogunjemite, 2010; Ogunjemite, 2013; Umah, 2012). However, when this initiative is confronted with the twin brother of insecurity and pandemic, it is sure that a devastating effect will be enacted. This is the current logjam being experienced in this sector in Nigeria.

Despite Insecurity and Pandemic, we are not left without consolations

All said and done, we are not left without some consolations, even with the effects of insecurity and pandemic on Ecotourism and Wildlife Resources in Nigeria. Just as the women of Bethlehem said while rejoicing with Naomi at the birth of Obed by Ruth the Moabitess in the Bible (Ruth Chapter 4, verse 14). Insecurity and COVID 19 had somehow given us some hope of restoration in the management of our Ecotourism and Wildlife Resources. This period has enacted a new wave of development in the intellectual capability of the local scientists and capacity building of our younger academics. Now that the foreign researchers have restricted their patronage of the Nigerian environment, the abilities of the local scientists are becoming known, especially in Wildlife Resource Management. In previous times when these "so-called" foreign expatriates were coming, they go through the back doors of Government and Non-governmental agencies and before we know it, they have entered our protected areas and get their works done without collaboration or even leaving information for the local scientists (Ogunjemite and Ashimi, 2008). Courtesy of the known 'Nigerian factors'. By this many opportunities to develop and adapt our own technology and widen the knowledge base were lost. Most of those foreign partners who explored the Nigerian factors to abuse our intellectual abilities now see Nigerian scientists as worthy partners in training of their students and sourcing for samples in these days of insecurity and pandemic.

There had been an increase in scholarship awards to deserving students and grant opportunities to local scientists since they know a lot of risks are involved in coming to the country. In term of endowment, Nigeria has the resources, in quantity and in diversity and many of these advanced societies could not do without us. Equipment Grants are coming in for our students and field researchers. New laboratories such as the Centre for Emerging and Re-emerging Infectious Diseases at the Ladoke Akintola University of Science and Technology, Ogbomoso, Oyo State and the Malarial Vector Surveillance Laboratory, Taraba State University, Jalingo, Taraba State, under the Global Fund Supported Project are being established with the state-of-earth equipment. Most often, the leading Private Universities are the highest beneficiaries of these opportunities in Nigeria today.

In terms of Project Sites, a good number of such sites are now held in trust for the partners by local scientists. In Biodiversity Conservation and Management and particularly in Primatology, sites are held in trust for them by Nigerian Scientists. Such include:

- The Gashaka Primate Project of the Chester Zoo, Taraba State.
- The Nigerian Montane Forest Project, Yelwa, Mambilla Plateau, Taraba State.
- The Niger Delta Red Colobus Project in Bayelsa State
- The Cross River Gorilla Project of Afi Montane. Cross River State.
- The Chimpanzees Project of Ise Forest Reserve, Ondo State
- The Omo Forest Elephant Project, Ogun State
- The Key Biodiversity Area National Coordination Group (KBA-NCG)

Animals both wild and domestics had been identified to play crucial roles in the spread of diseases and as reservoirs. Zoonotic diseases are becoming issues of critical concern across the globe. Collaborative effort across national and continental barriers had been postulated as panacea to solving their menace and spread. In these, ecotourism and wildlife have to play significant roles.

CONCLUSION

A simple and straight forward information on how insecurity and the pandemic has impacted Ecotourism and Wildlife Management in Nigeria is presented in this write. The dynamism of this impact may have not been presented. The tourists' activities at home and from abroad and their motivation at this period had not been taken into consideration. Even so, the situations at most of the destinations except at *ex-situ* destinations such as Zoological Gardens, Parks and Botanical Garden is difficult to assess. Neither is the vulnerability of the resources in qualitative and quantitative terms had been attempted other than the general information circulated on the social media such as "Elephant was killed, Hippo harked down, Manatees caught in rural folks fishing net, shacks caught" and so and so forth.

This presentation therefore, largely depends on the theoretical perspectives and observed happenings around the industry. Empirical data on how impactful security and pandemic had affected this sector is still awaited. Nevertheless, from available evidences and careful observations of activities within the sector, it is known that things are on the downward trend. Visitations to destinations by local and foreign visitors had reduced drastically. As the demand for recreation services is reducing, the more the reduction in the drivable economic outputs. The visible impetus that has been noticed is in the level of local players

to rescue the sector from total collapse and the assistance of foreign expects to tap as much information to advance their knowledge base are being documented.

REFERENCES

Adedayo, O. L., Ogunjemite, B. G. and Ogunjinmi, A. A. (2021) – Ecotourism and recreational potentials of botanical gardens in Southwestern Nigeria.

Adetola, B. O., Ibidun, T. O. and Agbelusi, E. A. (2014) Characterization of Visitors to Kainji Lake National Park, Nigeria. *Ecophilia 2:*

Afolayan, T. A., Agbelusi, E. A. and Ogunjemite, B. G. (2004). Conservation and your future. *Environmental degradation, reclamation, conservation and pollution control.* In (Eds.) A., Kayode, J., Faluyi, M. A., Mukolu, A. & Afolabi, *Proceeding of the National workshop of The Environment and Development Action Plan for Women (EDAPW) / The Nigerian National Commission for UNESCO (NATCOM).* University of Ado Ekiti.

Agbelusi, E. A. (2009). Wildlife Resources: A National Heritage. Inaugural Lecture Series 55. Federal University of Technology, Akure. Nigeria. 46pp.

Agbelusi, E. A. and Ogunjemite, B. G. (2013). The forest and Wildlife survival: a review of the situation in Nigeria. In Eyo Okon, Deni Bown and Augustine Isichei (Eds), *Nigerian Forests: Protection and Sustainable Development,* (Joseph Ayo Babalola University Environment Symposium Series). Chapter 14: Pp 142 – 153.

Geoffrey, W. and Alister, M. (2006). *Book Review. Tourism: Change, Impacts and Opportunities*. Pearson Education Limited, London.

Adejumo, A. A., Amusa, T. O. and Adamu, H. (2014). Assessment of tourists flow and revenue generation in Kainji Lake National Park, Nigeria. *Journal of Research in Forestry, Wildlife and Environment*, 6(2), 35-47.

Buba, T. (2013). Relationships between stem diameter at breast height (DBH), tree height, crown length, and crown ratio of Vitellaria paradoxa C.F. Gaertn in the Nigerian Guinea Savanna. *African Journal of Biotechnology*, 12(22), 3441-3446.

Bruyere, B. L., Beh, A.W., and Lelengula, G. (2009). Differences in Perceptions of Communication, Tourism Benefits, and Management Issues in a Protected Area of Rural Kenya. *Environmental Management*, 43: 49-59.

Ceballos-Lascurain, H. (1993). *Ecotourism as a worldwide phenomenon'*. In K. Lindberg & D. E. Hawkins (Eds.) 1993. Ecotourism: A Guide for Planners and Managers. North Bennington: The Ecotourism Society.

Conservation International. (2001). *Conservation priority setting workshop: from the forest to the sea*. Available at http://www.biodiversityscience.org/ [Retrieved November 13, 2020].

Cousins, J. A., Evans, J. and Sadler, J. (2009). 'Selling Conservation? Scientific Legitimacy and the Commodification of Conservation Tourism' *Ecology and Society* 14(1): 32.

Diamantis, D. (1999). The concept of ecotourism: Evolution and trends. *Current Issues in Tourism*, 2 (2/3), 93-122.

Egbe, O. M. and Vange, T. (2008). Yield and agronomic characteristics of 30 pigeon pea genotypes at Otobi In Southern Guinea Savanna of Nigeria. *Life Science Journal*, 5(2), 70 – 80.

Ezealor, A. U. (2002). *Critical sites for biodiversity conservation in Nigeria*. Nigerian Conservation Foundation, Lagos. 110pp

Fadipe, A. S. (2014). Tourism destination management – A guide for policy makers and destination managers. Available at https://docplayer.net/21304038-A-practical-guide- to-tourism-destination-management.html [Retrieved 15 August 2021].

FAO. (2001). *Global forest resources assessment 2000. Food & Agriculture Organization of the United Nations, Rome*. Available at http://www.fao.org/forestry/fo/fra/index.jsp [Retrieved November 13 2020].

Fabricius, M., Carter, R. and Standford, D. (2007). *A practical guide to tourism destination management*. World Tourism Organization, Madrid.

Fennell, D. (2001). 'A content analysis of ecotourism definitions'. *Current Issues in Tourism*, 4(5), 403-421.

Geoffrey, W. and Alister, M. (2006). *Book Review. Tourism: Change, Impacts and Opportunities*. Pearson Education Limited, London.

Honey, M. (1999). 'Treading lightly? Ecotourism's impact on the environment'. *Environment*, 41 (5), 4-16.

Hughes, H. and Warin, J. (2005). A new deal for Aborigines and Torres Strait Islanders in remote communities, *Issue Analysis*, 54, 1-20.

Ijeomah, H. M. and Eniang, E. A. (2018). Ecotourism and National Development in Nigeria: Prospects and Challenges. Proceedings of 6th NSCB Biodiversity Conference; University of Uyo (1 - 12pp).

Ijeomah, H. M., Nwanegbo, O. C. and Umokoro, O. (2015). Assessment of Tourist Attractions in Okomu national park and Oguta Lake ecodestinations of Nigeria. *Production Agriculture and Technology*, 11 (2), 219-239.

Jayeola, O. A., Meduna, A. J and Oluokun, S. O. (2009). Impacts of Different Tree species on Quality of Honey produced in a Guinea Savanna Zone of Nigeria. *Forests and Forest Products Journal*, 2, 1 – 10.

Kolawole, O. O. (2019). *Ecological characterization, visitation pattern and socioeconomic impact of beach tourism in Lagos State, Nigeria*. PhD Thesis, Federal University of Technology, Akure, Nigeria.
Kiper, T. (2013). *Role of ecotourism in sustainable development*. Advances in Landscape Architecture, (pp. 773-802), London.
Ladipo, D. O. (2013). *Forest, human nutrition, and food security; strategies for achieving our millennium goals*. In Okon., Bown, and Isichei (Eds). 2013. Nigerian forests; protection and sustainable development. Proceedings of JABU Environment
Lorimer, J. (2009). International conservation volunteering from the UK: what does it contribute? *Oryx*, 43: 352-360.
Mathieson, A. and Wall, G. (2002). *Tourism: Economic, Physical and Social Impacts*, Longman Singapore Publishers (Pte) Ltd, Singapore.

Mchunu, P. J. and Hlengwa, D. C (2018). Field learning the ecotourism way: Perspectives of students at the Durban University of Technology. *African Journal of Hospitality, Tourism and Leisure*, 7(3), 1-14.
Newsome, D., Moore, S. A. and Dowling, R. K. (2002). Natural area tourism: Ecology, impacts and management. Channel View Publications, Sydney.
Odeku K. O. (2020). Kidnappings of international tourists in Nigeria: impact on the Hospitality Sector. African Journal of Hospitality, Tourism and Leisure, Volume 9(2)
Ojo, L. O. (2004). The fate of tropical rainforest in Nigeria: Abeku Sector of Omo Forest Reserve, *Environmental Management Journal*, 1, 1 – 6.
Okekedunu, J. O. Ogunjemite, B. G., Adeyemo A. I. and Olaniyi, O. E. (2014). Daily activity budget of Mona monkey (*Cercopithecus mona*) in Ibodi Monkey Forest, Osun State, Nigeria. *FUTA Journal of Research in Science*: 10(2) 218 – 227.

Okello, M. M., and B. E. Wishitemi (2006). Principles for the Establishment of Community Wildlife Sanctuaries for Ecotourism. Lesson from Maasai Group Ranches, Kenya. *African Journal of Business and Economics* 1 (1): 90 – 109.

Okoli, A.C. and Agada, F. (2014). Kidnapping and national security in Nigeria, *Research on Humanities and Social Sciences*, 4(6), 137-146.
Ogunjemite, B. G. (2017). Monkeys and Apes: Man in its Reminiscence. *Inaugural Lecture,* Series 92. Federal University of Technology, Akure, Nigeria. 91pp.

Ogunjemite, B. G., Ashimi, T.A. and Okeyoyin, O. A. (2010). The chimpanzee community of German-Fort, and the potentials for the development of tourism-based management of Gashaka-Gumti National Park, Nigeria. *Journal of Sustainable Development in Africa*. 12 (4): 107 – 115.

Ogunjemite, B. G., Agbelusi, E. A., Oyeleke, O. O., Okeyoyin, O. A. and Odewumi, (2013). Developing chimpanzee-based tourism potential for Gashaka-Gumti National Park, Nigeria. *International Journal of Ecology and Environmental Studies*. 1(1): 32 -39
Ogunjemite, B. G., Olaniyi, O. E. and Akinwumi, O. O. (2016). Maintenance of ecological integrity of a warm spring site: the role of vegetation composition and cover of Ikogosi Warm Spring, Ekiti State, Nigeria. *Nigeria Journal of Food, Agriculture and Environment*, 12 (4), 174 – 179.
Ogunjemite, B. G., Anunta. R. C., Adediran, O. J., Odewumi, O. S., Apaokagi M. K. and Fapojuwo, O. (2021). Ecological threat of an Ecotourism destination: Owu Waterfall, Kwara State, Nigeria. *African Journal of Hospitality Tourism and Leisure*. 10 (3). 839 – 855. April 2021
Olayemi A., Obadare, A., Oyeyiola, A., Igbokwe J., Fasogbon, A., Igbahenah, F., Ortsega, D., Asogun, D., Umeh, P., Vakkai, I., Abejegah, C., Becker-Ziaja, B., Pahlman, M., Gunther, S. and Fichet-Calvet, E. (2016). Arenavirus diversity and phylogeography of *Mastomys natalensis* rodents, Nigeria. *Emerging Infectious Diseases*. 22 (4): 694-697
Olayemi, A., Cadar, D., Magassouba, N'F., Obadare, A., Kourouma, F., Oyeyiola, A., Fasogbon, S., Igbokwe, J., Rieger, T., Bockholt, S., Jerome, H., Schmidt-Chanasit, J., Garigliany, M., Lorenzen, S., Igbahenah, F., Fichet, J-N., Ortsega, D., Omilabu, S., Günther, S. and Fichet-Calvet, E. (2016). New hosts of the Lassa virus. *Scientific Reports, Nature*. 6: e25280 (UNITED KINGDOM)
Otu, S. E., Nnam, M. U. and Uduka, U. K. (2018). Voices from behind the bars: kidnappers' natural self-accounting views, perceptions, and feelings on kidnapping in the southeastern states of Nigeria, *Journal of forensic psychology Research and Practice*, 18(3), 254-279.
Reynolds, P. C. and Braithwaite, D. (2001). Towards a conceptual framework for wildlife tourism. *Tourism Management*, 22(1), 31-42.
Stankov, U., Stojanovic, V., Dragicevic, V. and Arsenovic, D. (2011). Ecotourism – An alternative to mass tourism in Nature Park "Stara Planina," *Journal of the Geographical Institute, Jovan Cvijic* 61(1), 43-59.
Weaver, D. (2005). Comprehensive and minimalist dimensions of ecotourism. *Annals of Tourism Research*, 32 (2), 439–455.
Williams, P. W., and Ponsford, I. F. (2009). Confronting tourism's environmental paradox: transitioning for sustainable tourism. *Futures, 41*(6), 396-404.

World Tourism Organization (UNWTO) (2015). *Tourism Highlights. Edition 2015*. doi/pdf/10.18111/9789284416899

Ziffer K. A. (1989). Ecotourism: the uneasy alliance. Available at https://books.google.co.za/books/about/Ecotourism.html?id=uCXxGAAACAAJ&rediresc=y [Retrieved 16 August 2021].

Table 1: Wildlife species of Nigeria's National Parks and Yankari Game Reserve

S/N	Name	GGNP	CBNP	KLNP	OONP	CRNP	ONP	KNP	YGR
1.	Red front gazelle (*Gazella rufifrons*)	P		A	A	A	A	A	E
2.	Elephant *(Loxodonta africana)*	?	?	??	?	P	P	??	P
3.	Buffalo (*Syncerus caffer)*	P	P	P	P	P	P	P	P
4.	Roan antelope (*Hippotragus equinus)*	P	P	P	P	A	A	P	P
5.	H/beast (*Alcelaphus baselaphus)*	P		P	P	A	A	P	P
6.	Band (*Tauratragis derbianus)*	P	A	A	A	A	A	A	A
7.	White rump waterbuck (*Kobus ellipsiprymnus)*	P		A	A	A	A	A	P
8.	Common waterbuck (*Kobus sp)*	P		P	A	A	A	P	P
9.	Kob *(Kobus kob kob)*	P		P	P	A	A	P	A
10.	Reedbuck *(Redunca arundinum)*	P		?	?	?	A	A	P
11.	Yellowback duiker *(Cephalophus silvicultor)*	P	A	A	A	P	P	A	A
12.	Maxwell's duiker *(Cephalophus maxwelli)*	P	A	A	P	P	P	A	A
13.	Redflanked duiker (*Cephalophus rufilatus)*	P	A	P	P	P	P	P	P
14.	Bush duiker *(Grimma) Syhioapra ginnia*	P	P	P	P	A	P	P	P
15.	Oribi *(Ourebia Ourebia)*	P	P	P	P	A	A	P	P
16.	Bushbuck *(Tragelaphus scriptus)*	P		P	P	P	P	P	P
17.	Warthog (*Phacochoerus africanus)*	P	P	P	A	A	P	P	P
18.	Bush pig *(Patamochoerus larvatus)*	P		A	P	P	P	A	P
19.	Red river hog *(Patamochoerus porcus)*	P		A	A	P	E	A	A
20.	Hippopotamus (*Hippopotamus amphibius)*	P	?	P	?	P	P	P	P
21.	Giraffe (*Giraffa camelopardalis)*	?	?	A	A	A	A	A	A
22.	Lion (*Panthera leo)*	P	E	P	P	A	A	E	P
23.	Leopard (*Panthera pardus)*	P		P	P	P	?	A	P
24.	Hunting Dog (*Lycaon pictus)*	P		P	P	A	A	E	E
25.	Striped hyena (*Hyaena hyaena)*	E		E		A	A	E	E
26.	Spotted hyena (*Crocuta crocuta*)	P		P	P	A	A	P	P
27.	Jackals (*Canis aureus)*	P		P	P	A	A	P	P
28.	Civet cat (*Viverra civetta)*	P	P	P	P	P	P	P	
29.	Genet cat (*Genetta genetta)*	P	P	P	P	P	P	P	
30.	Mongoose (*Herpestes sp)*	P	P	P	P	P	P	P	
31.	Gorilla (*Gorilla gorilla diehli)*	A	A	A	A	P	A	A	
32.	Chimpanzee (*Pan troglodytes elliotis)*	P	A	A	A	P	A	A	
33.	Drill *(Mandrillus leucophaeus)*	A	A	A	A	P	A	A	
34.	Black and White colobus monkey (*Colobus vellerosus)*	P		P	P	A	A	A	P
35.	Red colobus (C*olobus badius)*	A	A	A	A	P	A	A	A
36.	Grey-cheeked mangabey (*Cercocebus albigenia*)	P	A	A	A	P	A	A	A

37.	Red cap mangabey (*Cercocebus torquatus)*	A	A	A	A	P	P	A	A
38.	White throated monkey *(Cercopithecus erythrogaster)*	A	A	A	A	A	P	A	A
39.	Red-eared guenon *(Cercopithecus erythrotis)*	A	A	A	P	P			
40.	Mona monkey (*Cercopithecus mona)*	P	P	P	P	P	P	P	P
41.	Green monkey (*Cercopithecus aethiops)*	P	P	P	P	P	P	P	
42.	Putty nose monkey (*Cercopithecus nictitans)*	P	P	A	A	A	P	A	A
43.	Preuss's guenon (*Cercopithecus preussi)*	A	A	A	A	A	P	A	A
44.	Potto (*Perodicticus potto)*	P	A	P	P	P	P	P	P
45.	Baboon (*Papio anubis)*	P		P	P	P	A	P	P
46.	Patas monkey *(Erythrocebus patas)*	P	P	P	P	P	A	P	P
47.	Galago (Bush baby) (*Galagoides)*	P	A						
48.	Manatee (*Trichechus senegalensis)*	P	A	?	A	P	?	A	A
49.	Tree hyrax (*Dendrohyrax sp.*	P	A	P	P	P	P	P	P
50.	Rock hyrax (*Procavia sp)*		A		P	P	A	A	P
51.	Brush-tailed porcupine (*Atherurus africanus)*	P	A			P	A	P	A
52.	Tree pangolin (*Muris tricuspis)*		A						
53.	Aardvark (*Oryterropus afer)*	P	A		P	A	P	A	A
54	Water chevrotain (*Hyemochus acuaticus)*	A	A		E	A	P	A	A
55.	Bay duiker (*Cephalophus dorsalis)*	A		A	A	A	P	A	A
56.	Giant pangolin (*Maris sp)*	A	A	A	P	P	A	A	A
57.	Two-spotted palm civet cat (*Nandria biritata)*	A	A		A	P	P	A	A
58.	Blue duiker (*Cephalophus monticola*	A	A	A	A	P	A	A	A
59.	Ogilby's duiker (*Cephalophus ogilbyi)*	A		P					
60.	Bate's dwarf antelope *(Neotragus batesi)*	A	A	A	A	P	A	A	
61	Sitatunga (*Tragelaphus spekei)*	P	A	A	A	P	A	A	A

Source: Agbelusi, E. A. (2009)

Key

GGNP- Gashaka-Gumti National Park
CBNP- Chad Basin National Park
KLNP- Kainji Lake National Park
OONP- Old Oyo National Park
CRNP- Cross River National Park
ONP- Okomu National Park
KNP- Kamuku National Park
YGR- Yankari Game Reserve
P Present
A Absent
? Not sighted in the last 5 years

?? Not sighted over 10 years
E Extinction

Table 2: Categorization of Visitors to KLNP between 2002 -2012 into Local and Foreign .

Year	Total number of visitors	Number of local /domestic (Nigerians)	Number of foreigner (International)
2002	2151	2068	83
2003	1143	1118	25
2004	4734	4656	78
2005	5593	5544	49
2006	4712	4671	41
2007	4837	4794	43
2008	4092	4025	67
2009	4879	4854	25
2010	6103	6054	49
2011	4677	4648	29
2012	3429	3422	07
Total	46,350	45,854	496
Percentage	100%	98.93%	1.07%

Source: Adetola *et al*., 2014

Table 3: Frequency of visits by foreigners to KLNP between 2002-2012.

Countries	Frequency of visitation
USA	4
Britain	12
Germany	7
Spain	5
Finland	1
Ireland	2
Ghana	9
Israel/Lebanon	4
Benin republic	14
Japan	3
South Africa	4
Afghanistan	2
Switzerland	2
Pakistan	2
France	3
India	2
China	1
Togo	2
Cameroon	1
Senegal	1

Source: Kainji Lake National Park Headquarters

Table 4: Twenty of the worst epidemic and pandemics in history

	Epidemic/Pandemic	**Years of occurrence**	**Death toll**
1	The Black Death	1347-1351	Between 75 – 125 Million
2	Smallpox	1520 - 1980	Over 500 Million
3	Spanish Flu	1918 - 1919	Between 17 - 50 Million
4	**Plague of Justinian**	541 - 542	**Between 17 and 100**

5	HIV/AID	1981 - Present	**Between 25 and 35 Million**
6	The Third Plague	1885	Up to 12 Million
7	Antonine Plague	165 - 180	Up to 5 Million
8	17th century Great Plague	1600	Up to 3 Million
9	The Asian Flu	1957 - 1958	Up to 1.1 Million
10	Russian Flu	1889 - 1890	About 1 Million
11	**The Hong Kong Flu.**	1968 - 1970	**1 Million**
12	The 6th Cholera Outbreak	1817 – 1923	1 Million
13	Japanese Smallpox Epidemic	735 - 737	1 Million
14	18th Century Great Plague	1700	600,000
15	Convi-19	2019 - Present	467,000
16	Swine Flu	2009 - 2010	200,000
17	Yellow Fever	Late 1800s	100,000 – 150,000
18	Ebola	2014 - 2016	11,300
19	MERS	2012	850
20	SARS	2002 - 2003	770

Source: Chestnut Hill College's Logue Library Services available at www.library1.chc.edu, retrieved on 30th 7, 2022.