



UNIVERSITI PUTRA MALAYSIA

***ECONOMIC VALUATION FOR IMPROVED CONSERVATION AMONG
COMMUNITIES OF YANKARI GAME RESERVE, NIGERIA***

MUHAMMAD SANUSI IBRAHIM

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**ECONOMIC VALUATION FOR IMPROVED CONSERVATION AMONG
COMMUNITIES OF YANKARI GAME RESERVE, NIGERIA**

By

MUHAMMAD SANUSI IBRAHIM

**Thesis Submitted to the School of Graduate Studies, Universiti Putra Malaysia
in Fulfillment of the Requirements for the Degree of Doctor of Philosophy**

November 2017

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DEDICATION

To my beloved parents

Late Hajiya Salamatu (Yalwa)

And

Alhaji Ibrahim Sule



Abstract of thesis presented to the senate of Universiti Putra Malaysia in fulfillment of the requirement for the degree of Doctor of Philosophy

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By

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November 2017

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Yankari Game Reserve (YGR) is situated at Alkaleri local government area of Bauchi state, Nigeria. The conservation of the reserve is a unique one because of its national and international significance and also the role it plays to both tourist and the surrounding environment of the state. Among the most important functions the reserve plays, the game reserve serve as a biological hotspot to about 50 species of mammals, over 350 bird species and many species of plants. Moreover, it also plays different roles such as ecological, environmental, educational, economic and social role not only to the communities but the country at large. Despite its numerous importance, the reserve is increasingly facing threats and challenges at various degrees of non-sustainable human activities. Such activities range from poaching, deforestation, over grazing, pollution of water bodies and agricultural encroachment. The major reason for this excessive depletion was lack of valuation or underestimation of non-market values of the reserve resources, hence the need for effective valuation of the ecosystem resources. Therefore, estimates the economic values of YGR as an important hotspot for ecosystem and also reveal such values to policy makers and the adjoining communities. Contingent Valuation Method (CVM) and Choice Experiment (CE) were the techniques employed in this study. A total 422 responses were elicited using stratified random sampling technique. The logit regression model was used to estimate the willingness-to-pay based on the specified bid amounts presented based on the hypothetical market to support the improve conservation of YGR. The estimated mean willingness-to-pay base on CVM result was ₦2376.42 and aggregate value of ₦130,000,464, while that of CE was estimated at and ₦2413.39 and compensating surplus ₦132,024,882. The total net benefit was estimated to be ₦262,025,346. The result was positive and highly encouraging as the respondents shows willingness to participate in the improve conservation of the reserve. Therefore, we recommend for a special conservation fund (donation) for sustainable conservation.

Abstrak tesis yang dikemukakan kepada Senat Universiti Putra Malaysia sebagai memenuhi keperluan untuk ijazah Doktor Falsafah

**PENILAIAN EKONOMIK BAGI MENAMBAH BAIK KONSERVASI
DALAM KALANGAN KOMUNITI BERDEKATAN TERHADAP HUTAN
SIMPANAN MERGASTUA YANKARI, NIGERIA**

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Hutan Simpanan Mergastua Yankari (YGR) terletak di kawasan kerajaan tempatan, negeri Bauchi, Nigeria. Konservasi hutan simpan tersebut adalah unik disebabkan kepentingan kebangsaan dan antarabangsanya dan juga peranan yang dimainkannya dalam bidang pelancongan dan alam sekitar sekeliling negeri tersebut. Antara fungsi utama yang dimainkan oleh hutan simpanan tersebut, ia bertindak sebagai kawasan panas biologiikal bagi lebih kurang 50 spesies mamalia, lebih 350 mergastua dan banyak sepsis tumbuhan. Di samping itu, hutan simpanan tersebut memainkan peranan yang berbeza, seperti ekologiikal, alam sekitar, pendidikan, ekonomi dan peranan sosial, bukan hanya pada komuniti tetapi pada negara khususnya. Walaupun kepentingannya banyak, hutan simpanan tersebut mengalami ancaman dan cabaran pada pelbagai tahap akibat aktiviti manusia yang tidak mampan. Aktiviti tersebut mencakupi daripada pemburuan haram, deforestasi, terlebih ragutan, pencemaran bahan air dan pencerobohan pertanian. Sebab utama bagi penyusutan berlebihan tersebut ialah kekurangan penilaian atau kurang anggaran nilai bukan pasaran sumber simpanan, oleh itu, keperluan untuk penilaian yang efektif terhadap sumber ekosistem. Oleh itu, menganggarkan nilai ekonomi YGR sebagai kawasan khas yang penting bagi ekosistem dan juga memperlihatkan nilai tersebut pada penggubal polisi dan komuniti berhampiran. Kaedah Penilaian Kontigen (CVM) dan Eksperimen Pilihan (CE) merupakan teknik yang digunakan dalam kajian ini. Sejumlah 422 respons telah diperoleh menggunakan teknik persampelan rawak berstrata. Model regresi logit telah digunakan untuk menganggar kesanggupan untuk bayar berdasarkan jumlah bida tertentu berdasarkan pasaran hipotetikal bagi menyokong penambahbaikan konservasi YGR. Min anggaran kesanggupan untuk bayar berdasarkan keputusan CVM ialah ₦2376.42 dan nilai agregat ₦130,000,464, manakala bagi CE dianggarkan pada dan ₦2413.39 dan lebihan pampasan ₦132,024,882. Faedah bersih keseluruhan telah dianggarkan sebanyak

RM262,025,346. Dapatan kajian yang positif dan amat menggalakkan disebabkan responden menunjukkan kesanggupan untuk terlibat dalam penambahbaikan konservasi hutan simpanan tersebut. Oleh sebab itu, kajian ini mencadangkan suatu dana konservasi yang khusus (derma) bagi konservasi yang mampan.



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Thank you all.

This thesis was submitted to the Senate of Universiti Putra Malaysia and has been accepted as fulfilment of the requirement for the degree of Doctor of Philosophy. The members of the Supervisory Committee were as follows:

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LIST OF ABBREVIATIONS

ABM	Averting behaviour method
ADB	African development bank
ASC	Alternative specific constant
ATQ	Attitude question
AVE	Average variance extraction
AWQ	Awareness question
AZE	Alliance for zero extinction
CBA	Cost benefit analysis
CBD	Convention of biological diversity
CBNRM	Community base natural resource management
CD	Compensation demand
CE	Choice experiment
CFA	Confirmatory factor analysis
CFUG	Cold fusion users group
CM	Choice modeling
CPB	Centre of plants diversity
CR	Contingent ranking/ Contingent rating/
CR	Construct reliability
CS	Compensating surplus
CV	Compensating variation
CVM	Contingent valuation method
DC-CVM	Dichotomous choice Contingent valuation method
DFID	Department for international development
EV	Equivalent variation
FAO	Food and Agriculture organisation
GEF	Global environmental facility
HWC	Human wildlife conflict
IBA	Important birds' area
ICCA	Indigenous and community conserved area
IUCN	International Union for conservation of nature

KBA	Key biodiversity areas
MDGs	Millennium Development Goals
MSE	Mean square error
NBS	Nigeria bureau for statistics
NGOs	Non-governmental organisations
NNPS	Nigerian National park service
NOAA	National oceanic and atmosphere administration
NPC	National population commission
PA	Protected areas
PC	Paired comparison
PCM	Participation in conservation management
PCQ	Perception question
PFM	Participation in forest management
SEM	Sequential equation modeling
SPM	Stated preferred methods
SPSS	Statistical packaged for social sciences
TCM	Travel cost method
TEV	Total economic valuation
TIOLI	Take-it-or-leave-it
UN	united Nations
USAID	United states agency for international development
USA	United States of America
UNDP	United Nations development program
WCPA	world conservation and protected areas
WTA	Willing-to-accept
WTP	Willing-to-pay
YGR	Yankari game reserve

CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Protected areas, these are places such as national parks, wilderness areas, community conserved areas, nature reserves, game reserve, are the mainstay of biodiversity conservation, and also contributing to per capital earning of livelihoods to adjacent communities. Protected areas are at the centre platform of protecting natural environments and the services they offer to us, example food, clean water, medicines and protection from the effects of natural calamities. Their role in moderating, mitigating and adapting to climate change is gradually recognized; it has been considered that the worldwide network of protected areas stores at least 15% of earthly carbon (Ezebilo et al., 2010). Effective conservation of Floras and Faunas has been recognized as one of the objectives of the Convention on Biological Diversity (CBD) and the Millennium Development Goals (MDGs).

Adora (2014) defined protected areas as geographical sites that have protection because of their acknowledged natural, ecological and cultural values. International Union for Conservation of Nature (IUCN) defines Protected Area as; "A clearly defined geographical locations, recognized, devoted and managed, through lawful or other effective ways, to attain the long-term conservation of nature with associated ecosystem services and cultural values" (IUCN: 2008). There are several classes of protected areas, which differed by level of protection based on the enabling laws of each country or the rules and regulations of the international organisations involved. The 2014 United Nations List of Protected Areas provides figures information on over 209,000 protected areas in the world covering more than 30 million km² (UN List of Protected Areas, 2014).

Due to the rapid growing ecological resources of the present day society which lead to habitat destruction and fragmentation, extinction of species and the general decline or loss of biodiversity (Frikvist and Erika, 2015; Larby and Patricia, 2009). Globally, the rate at which varieties of species of plants and animals were lost supersedes its natural lost (Chanie & Tesfaye, 2015: Meduna, Ogunjinmu and Onadeko, 2009). The daily increase of human activities is destructing natural resources which necessitate the establishment of conserve and protected environmental resources globally (Grigoroudis, Petridis & Arabatzis, 2014).

The establishment of conserve reserves and resources parks was aimed at ensuring that varieties of plants species are conserved and protected (Jia et. al., 2014: An et. al., 2007). The main aim of ecosystem conservation is to maintain and protects ecological process which is proved to have continuously contributed significantly in the productive capacity of the protected ecosystem resources, biodiversity genetical

materials, protection of culture and rural area development as a whole. (Newing, 2010). Conservation of environmental resources serves as ecosystem maintenance system such as the sequestential of carbon, recreational and educational services, erosion and flooding mitigation and control (Jia, Fu et. al., 2014). Such areas are to serve as avenue of poverty reduction and job creation and sustainable community and conservation development (Rogerson, 2012). Therefore, conservation of natural environment resources is a wealth of life which is found on earth plants, animals, microorganisms and the system that exist in (Olaleru, & Egonmwan, 2014).

However, many conserve environment around the world are financially underfunded, and due to it, quit a number of such programs are either not able to achieve their conservation aims and developmental objectives (Whytock et. al., 2016). In Africa for example, many endowed conserve environment find it difficult to manage and conserve this resources due top continues human pressure and in adequate funds for management (Adamu et. al., 2015). There is the prediction that funding of conserve environment by most federation government of African countries may reduce or is reduced because currently most of these resources management are faced with limited funding from government to maintain the conserve natural environment (Cheung et. al.,2014).

This problem of under or poor funding will lead to the failure of many government, policy makers, environmental managers, visitors and peoples of adjoining communities to recognise the market and non-market values of conservation area. These include the internally generated revenue from visitors and the non-monetary services that can contribute to the improvement of life quality (Yacob et. al., 2009; Anderson & Huggins 2008). This unfortunate happening leads to lack financial independence of such rich conserve area in their sustainable survival (Waldron et. al., 2013), and virtually most of the conserve biodiversity will only survive or exist only if people choose and are willing to protect and allocate fund for their sustainable conservation (Klein et. al., 2015). Researchers within the conservation discipline have focused on the way that the financial independence of conserve area could be enhanced or achieved, Emerton, Bishop and Thomas (2006), defined the financially independence of conservation program as the ability to secure a long-term stable and sufficient financial resources, timely and appropriate allocation of funds to cover all cost of the management of the program to ensure its effectiveness and efficiency in line with conservation management.

Therefore, getting enough funding for protecting and enhancement of conserve environment is always a topic of concern for sustainable management of natural resources based conservation (Steckenreuter & Wolf, 2013). Funding is aim towards biodiversity conservation is the major point of conservation to environmentalist and conservationist. The services rendered by conserve resources are one of the major important components for sustainable growth and development of surrounding communities. The recent increase in leisure and recreation demand at various rich

and endowed ecosystem resources environment (Kelley et al., 2016) such as in countries like Tanzania, Kenya and Nigeria (Ezebilo, & Mattsson, 2010).

Such areas are designated with the objective of conserving biodiversity and providing a pointer for that conservation's progress, but the extent to which they protect resources and ecosystem dynamics from degradation are slightly more difficult (Kamins et al., 2011). Protected areas embrace other zones that are important for other conservation uses, such as Centre's of Plant Diversity (CPD), Important Bird Areas (IBA), Alliance for Zero Extinction Sites (AZE) Indigenous and Community Conserved Areas (ICCA), and Key Biodiversity Areas (KBA) among others (IUCN, 2008). Conservation is an interdisciplinary theme in natural science, social sciences and the exercise of natural resource management. It is the studying of the nature of Earth's biodiversity with the aim of protecting the ecosystem and their habitats from excessive extinction and destructions (Sahney and Benton, 2008; Van Dyke, 2008; Meffe, and Martha 2006; Hunter, 1996; Wilcox, *et al.*, 1980; Soule *et al.*, 1986).

Major threats to biodiversity and ecosystem survival include climate change, deforestation, pollution, mass, overgrazing, pesticide use, poaching, slash-and-burn agriculture, urbanization, and wildlife trade (Ezebilo et al., 2010; Sodhi *et al.*, 2008; Delaney *et al.*, 2004 Longcore and Rich, 2004; Thomas *et al.*, 2004; and Landres *et al.*, 1988). Habitat fragmentation poses one of the more tough challenges, because the global protected areas net only covers 30 million km² of the Earth's surface (UN List of Protected Areas, 2014; and Sautner, 2002). The consequence of the said threats leads many protected areas into great loss of ecosystem and causes a great exodus migration of many animals species globally ((Ezebilo et al., 2010); Hance, 2009).

In addition, deforestation, pollution, mass, overgrazing, pesticide use, poaching, slash-and-burn agriculture, urbanization and wildlife trade are the major conservation treats that take place and exhausts conservation due to lack of awareness or sarcasm of their non-market environmental values in our day-to-day activities. Therefore, determining and estimating their associated benefits of conservation of natural resources can be expedient in increase our level of knowledge in relation to importance and associated values of ecosystem and the need for improve conservation management of the associated resources for future generation and sustainability (Kaffashi, 2010; Rusli *et al.*, 2008, and Barbier *et al.*, 1997).

Consequently, IUCN has structured a global group of experts and researchers across the sphere of influence to monitor the decline of nature in an effort to control the elimination predicament. They identify those classes of species in essential need of protection devotion by providing a global key on the status of biodiversity (Al Tanko, 2013; Chan, 2008). Conservation scientists note that the eradication rates of requires urgent action than a priority focus on rare, endemic or endangered species.

Worries over biodiversity loss, tops a broader ecosystem conservation fiat that looks at ecological processes, such as migration, genetic, population and ecosystem diversity (Vié, *et al.*, 2009). The extensive, systematic and rapid rates of biodiversity loss threatens the sustainability and well-being of humankind by restraining the supply of ecosystem services that are otherwise restored by the complex and evolving holistic network of genetic and ecosystem assortment. Although some scientists highlight that it is the common species of floras and faunas that are the primary cause of utilization and habitat alteration by human race. Moreover, common species are often underrated or misjudged despite their role as the prime basis of ecosystem services (Molnar, *et al.*, 2004; Gaston, 2010).

However, to indicate the most logical and rational choices from the various conserved natural resources, one must first recognise, identify and list the benefits historically and currently derived from nature for future upgrade, and also to recognise and quantify the economic value of the attributes. In the former case, ecologist and environmental planners may help us; in the latter, economists do their work, but along the way both experts may work as a team.

The main aim of economic valuation in providing sustainable conservation management is generally to indicate to the policy on makers the overall economic efficiency and importance attached to the various attributes and their associated preference. Hence, conservation goods and services must be given a quantitative value if their conservation is important and has an alternative for improvement. Many conservation attribute such as Plants, animals, rivers have no market price, hence it is not easy to assign them price or estimate the attributes worthiness of conservation and their associated values.

Visitors entrance fee into conserve areas make such areas financially self-sufficient due to the sending good messages about the devoted conservation resource values. The idea of charging high entrance fees to foreigners into such conserve environment will help in boosting the internally generating revenue of the managed area and make it used sustainably (Das, & Chatterjee, 2015; Coria and Enrique, 2012). High entrance fee charges will be suitably change biodiversity rich conserve area with appealing natural resources (Stronza, & Gordillo, 2008). The species are of interest to visitors and are rare endangered. Therefore, the visitors will be willing to pay higher affordable amount to access the conserve area (Samdin, Aziz, Radam, & Yacob, 2010). The uniqueness of some of such endangered species can help in increasing the awareness about the conserve ecosystem and a lot has been done in estimating visitor's willingness to pay for entrance fees (Coria and Enrique, 2012). Therefore, determining the willingness to pay of the people of adjoining communities of conserve resources towards the improve biodiversity conservation will eliminate or minimise all unwanted human activities around the reserve and its resources.

1.2 Problem Statement

Yankari game reserve is an important sanctuary to over 50 species of mammal including African bush elephant, Olive Baboon, Patas Monkey, Tantalus monkey, Roan Antelope, African buffalo, Waterbuck, Bushbuck and Hippopotamus and a Lion and Leopard population which is at the verge of extinction. The reserve also accommodate over 350 species of bird such as, saddle-billed stork, guinea fowl, grey hornbill, and the cattle egret, among those, 130 are permanent residents, 50 are Palearctic migrants and the rest are intra-African migrants that move locally within Nigeria. Yankari is recognized as having one of the largest populations of elephants in West Africa, estimated at more than 300 in 2005. The growth of the elephant population has become a problem for surrounding villages at times as the animals enter local farms during the rainy season (A Handbill of the Yankari National Park, 2000).

Most protected areas lack protection because, illegal encroachment by farmers and cattle rearers, fuel wood gatherers and poaching still consume most of such areas. Widespread of such illegal activities and encroachment has been reported in YGR and other protected areas in Nigeria (USAID/Nigeria 2008).

Poaching in Yankari game reserve is a major threat to the survival and sustainability of biodiversity in the reserve as shown in Table 1.1. The animals and plants in the game reserve are on daily basis been under continuous attack by poachers, which leads to a decline in the population and extinction of many animals particularly the endangered species that were predominance some years ago. These unwanted activities are; hunting of animals for subsistence and commercial drive, overgrazing, encroachment of agricultural land and logging to mention but a few (YGR reports June 2012- September 2017). Poaching is an activity of concern and a major problem for conservation of wildlife populations in many parts of Africa and other developing countries like Nigeria. It is compelled by a number factors including, local demand for bush-meat and as a source of income for those living adjacent to PAs (Knapp *et al.*, 2010). The high demand for bush-meat in West Africa and other parts of Africa is one of the major drives for poaching activities (Wilkie *et al.*, 2005; Brashares *et al.*, 2004). In Nigeria, the demand for bush-meat is on increased because it continues to be an important source of animal protein and over 80% of Nigerian's both rural and urban would consume it if available (Ntiemoa-Baidu, 1998). Poaching not only impacts wildlife with attendant implications for conservation but also affects communities. Although poaching may be carried out by only a small segment of the population, communities associated with poaching are branded and stereotyped. Such communities become the target of park law enforcement units and sometimes innocent people may suffer for the wrongful actions of others.

Destruction of biodiversity through human activities such as agriculture and fuel wood collection poses a serious threat to both the land and the biodiversity. The population of Nigeria is estimated to be about 178,516,904 million (NPC, 2014). These boost in population led to serious farmland hunger in some part of the country and with the current need for high food security production. The management of the reserve is always at loggerheads with adjoining communities' farmers, herdsmen and poachers who want to have access to the vast land for farming, grazing and hunting (Mohammed *et al.*, 2009; Barbour *et al.*, 1982).

Wildlife encroachment of adjacent farmlands and the neighboring communities from the protected area is causing serious damages and destructions to agricultural crops and attack on livestock by some of the dangerous animals from the reserve. This is generating huge economic loss by creating an untold hardship to the residents due to lack of compensation to cushion the effect of the damages caused by the animals, there by provoking a long term social conflict. Attack of villagers by wild animals in and around protected areas is perhaps the most serious aspect of HWC (Akinyemi, 2006; Jhala, 2002; Rajpurohit and Krausman, 2000).

Conserving wildlife that damages crops and livestock, or attacks humans poses special challenges. Increased social conflict over wildlife issues is often born from value systems and perspectives about wildlife (Teel and Manfredo, 2010). Worldwide efforts to balance human needs with those of wildlife have generated much interest, and solutions are required that are scientifically sound and socio-politically acceptable (Treves *et al.*, 2009; Wade *et al.*, 2001).

Table 1.1 : Annual Report on Poaching, Farmland Raiding and Reserve Encroachment in YGR

Years	Pouching, Nuts and fuel wood collections	Farmlands raiding	Grazing animal
June – December 2012	17	Very high	32
January to December 2013	37	Over 27 communities	123
January to December 2014	74	Over 20 communities	41
January to December 2015	76	Very high	68
January to December 2016	63	Over 20 communities	39
January to September 2017	53	Over 16 communities	28

(Source: YGR reports June 2012- September 2017)

The local people's encounter with the management of the protected area has been undermining conservation effort because of the continuous criminalization of the people's livelihood activities perpetrated on the basis of safeguarding natural resources. This has continued to foment hatred, negative attitude and local bitterness

towards conservation policies in the reserve (Emmanuel, 2013). However, many of the species that are attractive to tourists that visit the park can create problems for adjacent communities with implications for sustaining rural livelihoods and impacting on poverty. Although game reserves are very important in conservation of biodiversity resources particularly in developing countries such as Nigeria, the success of game reserves as a conservation strategy depends on the support of the nearby community. If the cost to adjoining communities is excessive, compared to the associate noticed benefits, community support for conservation may decline or be rejected and anti-conservation activities such as poaching may arise. The concerns and benefits unwary, Protected Area governance arrangement, and cultural perspectives based on the traditional areas.

Indiscriminate falling down of trees has continued in virtually every part of the country. For instance, the federal department of forestry (2001) estimated that Nigeria's forests are been depleted at an annual rate of 3.5%. Nigeria use to have about 20% of its area covered by natural forest but this has been reduced to about 10%. About 60% of this natural forest lost due to agricultural encroachment, excessive logging and urbanization between 1960 -2000. The rate of deforestation is very high as we continue to find evidences of serious soil erosion and desert encroachment in many part of the country (Abere, 2011; FAO, 2001).

1.3 Research questions

The issues raised in this study's problem statement, give rise to the following research questions as follow:

- I. What are the awareness, perception and attitude of these people towards the conservation of Yankari Game Reserve?
- II. Are the local peoples willing to participate in the improve conservation of Yankari Game Reserve?
- III. What are the most important attributes of conservation in YGR are been prioritized by the people of the surrounding communities?
- IV. What is the average willingness to pay of the local people for an improve conservation of Yankari Game Reserve?

1.4 Objectives of the Study

The general objective of this study is to evaluate the local community's potentials and prospects for improved and effective conservation of ecosystem of Yankari Game Reserve, Bauchi state, Nigeria. This is in the context of estimating the respondent's willingness to pay for an improved conservation from the attributed most convenience cost. In achieving these, the below outlined specific objectives for the study are;

1. To access the level of awareness, perception and attitude of the local people's on conservation.
2. To determine the local people of the surrounding settlements willingness to participate in the improve conservation of Yankari game reserve.
3. To examine the level of participation of the local people of the surrounding communities in conservation of Yankari game reserve.
4. To estimate the willingness to pay for improve conservation program by people of the surrounding settlements.
5. To determine the most relevant set of respondent choice-influencing attributes for improve conservation.

1.5 Significance of the study

This study will provide a full range of the economic value of YGR and its importance. It is aimed at providing insight knowledge of the various conservation services and goods of which this protected area has and the need for those services and goods to be safeguarded for the future generation. The finding of this research will provide a good and better understanding of the economic value of these services and goods and the role they play in our environmental quality and life. And if policy makers and conservation managers have enough information about the roles and functions of Yankari game reserve, a better policy and management decision can be made.

In economics, price or values are been attached to human wants and needs, and costs is being imposed on goods and services in order to satisfy human needs. Since most environmental goods and services values do not have market prices, the economic value of a protected area is the value at which people places on the goods and services provided by the reserve ecosystem. Therefore, valuation studies on improved conservation of YGR can help to estimate the worth utility from the reserve services and goods. Evaluating the value of conserving YGR will increase social benefit and in some extend maximize social welfare. Social welfare is by the associated changes or improvement in the situation of the reserve goods and services. There is a special need for this research on Yankari game reserve economic value because of the beneficial and diverse goods and services the reserve is providing to the area. These includes regulating of atmospheric chemical composition, regulating global temperature, precipitation and other biological mediated climatic process, regulating of hydrological flows, storage and water retention, retention of soil within an ecosystem, soil formation process, nutrient cycling, pollination, food production and raw material, recreation and providing opportunities for non-commercial uses, and water treatment. When policy and managerial decisions are to be making, a great care must be taken towards providing adequate and proactive measure in protecting Yankari game reserve from any type of unfavorable activity. This research will provide an in-depth knowledge and guide for the policy makers, management of the reserve, and donor agencies on appropriate approaches to encourage community participation in biodiversity conservation.

Finally, this research will make a significant contribution to existing literature, because at present there is lack of information on the non-market values of Yankari game reserve. Only a few market values have been quantified in previous studies. This research will try to fill the information gap by estimating the non-market values of conservation of Yankari game reserve. Secondly, it will estimate the willingness-to-pay for the improvement in conservation of the reserve using Choice experiment model. Thirdly, the Perception, attitude, participation of the respondents on the conservation of Yankari game reserve and their willingness-to-pay for improved conservation will be reported. Also, this study will contribute to the existing knowledge of Choice experiment in developing countries like Nigeria. Because at present, studies on environmental valuation with application of choice experiment are still limited in developing countries. This study is one of the few choice experiment studies to be conducted on conservation of protected area in developing countries. This study can be a platform to many other studies in the same country, region and area.

1.6 Scope and Limitation

Conservation cover a wide range of activities such as soils, water, plants, animals, minerals, timber, fish, game, topsoil, pastureland, and minerals, and also to the safeguarding of forests-forestry, wildlife-wildlife refuge, parkland, wilderness, and watershed areas. This research is centered on safeguarding of forests, wildlife and watershed areas of Yankari game reserve and specifically on the surrounding communities' willingness to pay and willingness to participate in improve conservation of the reserve resources. The study covers the all the conserve areas of Bauchi state such as, Yankari game reserve (2,244 km²), Sumu wildlife park (82km²), Maladumba lake and forest reserve (1,860Ha) and Lame Burra game reserve (2.057.67Km²). These reserves are very wide that is why the research was only limited to Yankari game reserve being the largest. The study also focused on the surrounding communities of the reserve on the improve conservation of Yankari game reserve biodiversity and springs.

1.7 Thesis Organisation

This research was organized into five (5) chapters as follows; chapter one comprises of introduction, background of the study area, problem statements, research questions, and objectives of the study, significance of the study, scope and limitations of the study. Chapter two focuses on reviewed of relevant literetures on conservation and protected areas, conservation in Africa and Nigeria, awareness, perception, attitude, participation, participation on conservation and local community participation on conservation. Chapter three of this thesis focuses on the methodology of the study such as conceptual framework, study area, sampling design, data collection, technique for valuing environmental resources, logit and probit models, use and non use values and welfare mesurements. Chapter four dwells on the analysis of result, discussion and interpretations of findings and finally

chapter five which is on summary of research findings, policy implications of the study, limitations of the study, recommendations for further study and conclusion.



REFERENCES

- Abalaka, J. I., & Manu, S. (2007). Factors affecting forest bird diversity and recent avifaunal changes in the degrading Kagoro-Nindam forest reserves, Kaduna, Nigeria. *Ostrich-Journal of African Ornithology*, 78(2), 233-238.
- Abdulai, A., & Quantson, R. (2008). The changing role of CSOs in public policy making in Ghana. *Institute for Democratic Governance*.
- Abere, S., & Ekeke, B. (2011). The Nigerian mangrove and wildlife development. *Mediterranean Journal of Social Sciences*, 107.
- Abimbola, O., Lawal, M., & Adetola, J. (2011). Biodiversity conservation and community participation in Kainji lake national park. *Advances in Applied Science Research*, 2(2), 218-226.
- Abreu, Mônica Cavalcanti Sá de. (2009). How to define an environmental policy to improve corporate sustainability in developing countries. *Business Strategy and the Environment*, 18(8), 542-556.
- AC03100283, A. (2000). *The American Heritage dictionary of the English language* Houghton Mifflin.
- Adamowicz, W. L. (2004). What's it worth? An examination of historical trends and future directions in environmental valuation. *Australian Journal of Agricultural and Resource Economics*, 48(3), 419-443.
- Adamowicz, W., Louviere, J., & Williams, M. (1994). Combining revealed and stated preference methods for valuing environmental amenities. *Journal of environmental economics and management*, 26(3), 271-292.
- Adamowicz, W., Boxall, P., Williams, M., & Louviere, J. (1998). Stated preference approaches for measuring passive use values: choice experiments and contingent valuation. *American journal of agricultural economics*, 80(1), 64-75.
- Adamowicz, W., Bunch, D., Cameron, T. A., Dellaert, B. G., Hanneman, M., Keane, M., et al. (2008). Behavioral frontiers in choice modeling. *Marketing Letters*, 19(3-4), 215-228.
- Adamu, A., Yacob, M. R., Radam, A., & Hashim, R. (2015). Factors determining visitors' willingness to pay for conservation in Yankari game reserve, Bauchi, Nigeria. *International Journal of Economics and Management*, 9(spec. Dec.), 95-114.
- Adekunle, V. (2007). Ecological and environmental implications of national development: A case study of Obanla natural forest, federal university of technology, Akure, Nigeria. *Research Journal of Environmental Science*, 4, 127-140.

- Adhikari, B., Di Falco, S., & Lovett, J. C. (2004). Household characteristics and forest dependency: Evidence from common property forest management in Nepal. *Ecological Economics*, 48(2), 245-257.
- Adora, C. U. (2010). Managing tourism in Nigeria: The security option. *Management Science and Engineering*, 4(1), 14.
- Aduradola, A. (2004). Impact of farming activities on vegetation in Olokemeji forest reserve, Nigeria. *Global Nest*, 6(2), 131-140.
- Afolayan, T., & Ajayi, S. (1983). Fifty years of Nigerian wildlife resources. *Nigerian Field*, 43(4), 130.
- Agarwal, B. (2000). Conceptualising environmental collective action: Why gender matters. *Cambridge Journal of Economics*, 24(3), 283-310.
- Agrawal, A., & Angelsen, A. (2009). Using community forest management to achieve REDD goals. *Realising REDD : National Strategy and Policy Options*, 1, 201-212.
- Agriculture Organization (FAO). (2007). *State of the World's forests 2007* Food & Agriculture Org.
- Ajzen, I. (2002). Constructing a TPB questionnaire: Conceptual and methodological considerations.
- Ajzen, I. (2005). *Attitudes, personality, and behavior* McGraw-Hill Education (UK).
- Ajzen, I., & Driver, B. L. (1992). Application of the theory of planned behavior to leisure choice. *Journal of Leisure Research*, 24(3), 207.
- Ajzen, I., & Driver, B. (1992). Contingent value measurement: On the nature and meaning of willingness to pay. *Journal of Consumer Psychology*, 1(4), 297-316.
- Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behaviour.
- Ajzen, I., & Fishbein, M. (2005). The influence of attitudes on behavior. *The Handbook of Attitudes*, 173, 221.
- Ajzen, I., & Sheikh, S. (2013). Action versus inaction: Anticipated affect in the theory of planned behavior. *Journal of Applied Social Psychology*, 43(1), 155-162.
- Akhter, S., & Malaviya, P. (2015). Assesment of environmental awareness among rural and urban resident in Bishnah, Jammu and Kashmir, India. *International Journal of Basic and Applied Sciences*, 4(3), 180-182.

- Alberini, A., Boyle, K., & Welsh, M. (2003). Analysis of contingent valuation data with multiple bids and response options allowing respondents to express uncertainty. *Journal of Environmental Economics and Management*, 45(1), 40-62.
- Alpizar, F., Carlsson, F., & Martinsson, P. (2003). Using choice experiments for non-market valuation. *Economic Issues-Stoke on trent-*, 8(1), 83-110.
- Chicago Amirnejad, H., Khalilian, S., Assareh, M. H., & Ahmadian, M. (2006). Estimating the existence value of north forests of Iran by using a contingent valuation method. *Ecological Economics*, 58(4), 665-675.
- An, S., Li, H., Guan, B., Zhou, C., Wang, Z., Deng, Z., et al. (2007). China's natural wetlands: Past problems, current status, and future challenges. *AMBIO: A Journal of the Human Environment*, 36(4), 335-342.
- Anderson, H. V., Shaw, R. E., Brindis, R. G., Hewitt, K., Krone, R. J., Block, P. C., et al. (2002). A contemporary overview of percutaneous coronary interventions: The American college of Cardiology–National cardiovascular data registry (ACC–NCDR). *Journal of the American College of Cardiology*, 39(7), 1096-1103.
- Anderson, L. (1994). *Political ecology of the modern peasant* Johns Hopkins University Press.
- Anderson, T. L., & Huggins, L. E. (2008). *Greener than thou: Are you really an environmentalist?* Hoover Press.
- Antinori, C., & Bray, D. B. (2005). Community forest enterprises as entrepreneurial firms: Economic and institutional perspectives from Mexico. *World Development*, 33(9), 1529-1543.
- Areas, M. C. F. (1984). *People's Republic of China*. CIRDAP Study Series. Dhaka,
- Areola, O. (1989). The political reality of conservation in Nigeria. Anderson, D. & Grove, R. (Eds.), *Conservation in Africa-People, Policies and Practice*, , 277-292.
- Arnberger, A., & Schoissengeier, R. (2012). The other side of the border: Austrian local residents' attitudes towards the neighbouring Czech Šumava national park. *Journal for Nature Conservation*, 20(3), 135-143.
- Aronson, J., Floret, C., Floc'h, E., Ovalle, C., & Pontanier, R. (1993). Restoration and rehabilitation of degraded ecosystems in arid and Semi-Arid lands. I. A view from the south. *Restoration Ecology*, 1(1), 8-17.
- Arrow, K., Solow, R., Portney, P. R., Leamer, E. E., Radner, R., & Schuman, H. (1993). Report of the NOAA panel on contingent valuation. *Federal Register*, 58(10), 4601-4614.

- Ayorinde, K., Oluyemi, J., & Ayeni, J. (1988). Growth performance of four indigenous helmeted guinea fowl varieties (*Numida meleagris galeata pallas*) in Nigeria. *Bulletin of Animal Health and Production in Africa= Bulletin De La Sante Et De La Production Animaux En Afrique*,
- Bandopadhyay, P., Bergthold, G., Nguyen, B., Schubert, S., Gholamin, S., Tang, Y., et al. (2014). BET Bromodomain inhibition of MYC-amplified Medulloblastoma. *Clinical Cancer Research : An Official Journal of the American Association for Cancer Research*, 20(4), 912-925.
- Banerjee, A. V. (1997). A theory of misgovernance. *The Quarterly Journal of Economics*, 1289-1332.
- Baral, N., & Heinen, J. T. (2007). Resources use, conservation attitudes, management intervention and park-people relations in the western Terai landscape of Nepal. *Environmental Conservation*, 34(01), 64-72.
- Baral, N., Stern, M. J., & Bhattarai, R. (2008). Contingent valuation of ecotourism in Annapurna conservation area, Nepal: Implications for sustainable park finance and local development. *Ecological Economics*, 66(2), 218-227.
- Barau, B., Buba, U., Maikeri, T., Tukur, K., Gabuin, T., Kabir, F., et al. (2015). Tree species in Kakulu forest of zing LGA, Taraba state, Nigeria. *Ethiopian Journal of Environmental Studies and Management*, 8, 916-925.
- Barbier, E. B., Acreman, M., & Knowler, D. (1997). *Economic valuation of wetlands: A guide for policy makers and planners*.
- Barbier, E. B., Acreman, M., & Knowler, D. (1997). *Economic valuation of wetlands: A guide for policy makers and planners*.
- Baron, R. A., & Byrne, D. E. (1984). *Social psychology: Understanding human interaction* Allyn & Bacon.
- Baron, R. A., Byrne, D., & Branscombe, N. R. (2006). *Social psychology*, 11/e. Aufl., Boston,
- Barrow, E., & Murphree, M. (2001). *Community conservation from concept to practice*.
- Barry, B., & Stewart, G. L. (1997). Composition, process, and performance in self-managed groups: The role of personality. *Journal of Applied Psychology*, 82(1), 62.
- Bartlett, C. A., & Ghoshal, S. (1999). *Managing across borders: The transnational solution* Taylor & Francis.

- Bateman, I. J., Carson, R. T., Day, B., Hanemann, M., Hanley, N., Hett, T., et al. (2002). Economic valuation with stated preference techniques: A manual. *Economic Valuation with Stated Preference Techniques: A Manual*,
- Bates, F. L., & Peacock, W. G. (1987). Disaster and social change. En (pp. 291-330)
- Beaumont, J., & Nicholls, W. (2008). Plural governance, participation and democracy in cities. *International Journal of Urban and Regional Research*, 32(1), 87-94.
- Bedate, A. M., Herrero, L. C., & Sanz, J. A. (2009). Economic valuation of a contemporary art museum: Correction of hypothetical bias using a certainty question. *Journal of Cultural Economics*, 33(3), 185-199.
- Ben-Akiva, M. E., & Lerman, S. R. (1985). *Discrete choice analysis: theory and application to travel demand* (Vol. 9). MIT press.
- Bennett, J. (2009). *Vibrant matter: A political ecology of things* Duke University Press.
- Bennett, R., Kehlbacher, A., & Balcombe, K. (2012). A method for the economic valuation of animal welfare benefits using a single welfare score. *Animal Welfare*, 21(Supplement 1), 125-130.
- Bhaker, D. S. K. (2015). Defining and classification of Indian non-governmental organisations. *International Journal of Social Science and Interdisciplinary Research*, 3(8)
- Bin, O., Landry, C. E., Ellis, C. L., & Vogelsong, H. (2005). Some consumer surplus estimates for North Carolina beaches. *Marine Resource Economics*, 20(2), 145-161.
- Birol, E., Karousakis, K., & Koundouri, P. (2006). Using a choice experiment to account for preference heterogeneity in wetland attributes: The case of Cheimaditida wetland in Greece. *Ecological Economics*, 60(1), 145-156.
- Bishop, R. C., & Heberlein, T. A. (1979). Measuring values of extramarket goods: Are indirect measures biased? *American Journal of Agricultural Economics*, 61(5), 926-930.
- Black, C., & Gilmore, G. (1957). *The law of admiralty*.
- Bolin, R., & Stanford, L. (1998). The Northridge earthquake: Community-based approaches to unmet recovery needs. *Disasters*, 22(1), 21-38.
- Boxall, P. C., Adamowicz, W. L., Swait, J., Williams, M., & Louviere, J. (1996). A comparison of stated preference methods for environmental valuation. *Ecological Economics*, 18(3), 243-253.

- Boxall, P., Adamowicz, W. L., & Moon, A. (2009). Complexity in choice experiments: Choice of the status quo alternative and implications for welfare measurement. *Australian Journal of Agricultural and Resource Economics*, 53(4), 503-519.
- Boyle, K. J., & Bishop, R. C. (1988). Welfare measurements using contingent valuation: A comparison of techniques. *American Journal of Agricultural Economics*, 70(1), 20-28.
- Bratton, M. (1989). The politics of government-NGO relations in Africa. *World Development*, 17(4), 569-587.
- Braun, F. G. (2010). Determinants of households' space heating type: A discrete choice analysis for German households. *Energy Policy*, 38(10), 5493-5503.
- Brécard, D., Hlaimi, B., Lucas, S., Perraudeau, Y., & Salladarré, F. (2009). Determinants of demand for green products: An application to eco-label demand for fish in Europe. *Ecological Economics*, 69(1), 115-125.
- Brenes Vega, E. (2004). Sustainable finance of protected areas: Tourism based user fees conservation finance guide, conservation finance alliance. Tourism and Protected Areas Publication Series, Conservation Finance Guide, Conservation Finance Alliance (CFA),
- Brook, B. W., Sodhi, N. S., & Bradshaw, C. J. (2008). Synergies among extinction drivers under global change. *Trends in Ecology & Evolution*, 23(8), 453-460.
- Brookshire, D. S., Ives, B. C., & Schulze, W. D. (1976). The valuation of aesthetic preferences. *Journal of Environmental Economics and Management*, 3(4), 325-346.
- Brouwer, R., & Spaninks, F. A. (1999). The validity of environmental benefits transfer: Further empirical testing. *Environmental and Resource Economics*, 14(1), 95-117.
- Brown Jr, G., & Mendelsohn, R. (1984). The hedonic travel cost method. *The Review of Economics and Statistics*, 427-433.
- Buddies, B. Ongoing service opportunities in the Waco community. *Work*, 254, 752-1605.
- Burde, D. (2004). Weak state, strong community? promoting community participation in post-conflict countries. *Current Issues in Comparative Education*, 6(2), 73-87.
- Cameron, T. A., & James, M. D. (1987). Estimating willingness to pay from survey data: An alternative pre-test-market evaluation procedure. *Journal of Marketing Research*, 389-395.

- Cameron, T. A. (1988). A new paradigm for valuing non-market goods using referendum data: Maximum likelihood estimation by censored logistic regression. *Journal of Environmental Economics and Management*, 15(3), 355-379.
- Cameron, T. A. (1991). Interval estimates of non-market resource values from referendum contingent valuation surveys. *Land Economics*, 67(4), 413-421.
- Cameron, T. A., & James, M. D. (1987). Efficient estimation methods for "closed-ended" contingent valuation surveys. *The Review of Economics and Statistics*, 269-276.
- Cameron, T. A., & Quiggin, J. (1994). Estimation using contingent valuation data from a "dichotomous choice with follow-up" questionnaire. *Journal of Environmental Economics and Management*, 27(3), 218-234.
- Cannon, T. (1994). Vulnerability analysis and explanation of 'Natural' disaster. *Journal of Disaster Development and Environment*, pg. 12-30
- Carson, R. T., & Hanemann, W. M. (2005). Contingent valuation. *Handbook of Environmental Economics*, 2, 821-936.
- Carson, R. T., & Mitchell, R. C. (1993). The issue of scope in contingent valuation studies. *American Journal of Agricultural Economics*, 75(5), 1263-1267.
- Carson, R., Hanemann, M., & Steinberg, D. (1990). A discrete choice contingent valuation estimate of the value of Kenai King Salmon. *Journal of Behavioral Economics*, 19(1), 53-68.
- Carson, R. T., Louviere, J. J., Anderson, D. A., Arabie, P., Bunch, D. S., Hensher, D. A., ... & Timmermans, H. (1994). Experimental analysis of choice. *Marketing letters*, 5(4), 351-367.
- Carstensen, L. L., Isaacowitz, D. M., & Charles, S. T. (1999). Taking time seriously: A theory of socioemotional selectivity. *American Psychologist*, 54(3), 165.
- Castells, M. (2007). Communication, power and counter-power in the network society. *International Journal of Communication*, 1(1), 29.
- Chambers, R. (1995). Poverty and livelihoods: Whose reality counts? *Environment and Urbanization*, 7(1), 173-204.
- Champ, P. A. (2003). Collecting survey data for nonmarket valuation. A primer on nonmarket valuation (pp. 59-98) Springer.
- Chang, D. F., Tong, H., Shi, Q., & Zeng, Q. (2005). Letting a hundred flowers bloom: Counseling and psychotherapy in the people's republic of china. *Journal of Mental Health Counseling*, 27(2), 104.

- Chanie, S., & Tesfaye, D. (2015). Threats of biodiversity conservation and ecotourism activities in Nechisar national park, Ethiopia. *International Journal of Biodiversity and Conservation*, 7(3), 130-139.
- Cheung, L. T., Fok, L., & Fang, W. (2014). Understanding Geopark visitors' preferences and willingness to pay for global Geopark management and conservation. *Journal of Ecotourism*, 13(1), 35-51.
- Chown, S. L., & Gaston, K. J. (2010). Body size variation in insects: A macroecological perspective. *Biological Reviews*, 85(1), 139-169.
- Christie, M., Hanley, N., & Hynes, S. (2007). Valuing enhancements to forest recreation using choice experiment and contingent behaviour methods. *Journal of Forest Economics*, 13(2), 75-102.
- Churchill, G. A., Brown, T. J., & Suter, T. A. (2001). Basic marketing research.
- Clark, C. F., Kotchen, M. J., & Moore, M. R. (2003). Internal and external influences on pro-environmental behavior: Participation in a green electricity program. *Journal of Environmental Psychology*, 23(3), 237-246.
- Cohen, J. M., & Uphoff, N. T. (1980). Participation's place in rural development: Seeking clarity through specificity. *World Development*, 8(3), 213-235.
- Cohen, J. M., & Uphoff, N. T. (1977). Rural development participation: Concepts and measures for project design, implementation and evaluation. Monograph Series, Rural Development Committee, Cornell University, (2)
- Collins, H. (2012). Collins thesaurus of the English language.
- Condamine, F. L., Rolland, J., & Morlon, H. (2013). Macroevolutionary perspectives to environmental change. *Ecology Letters*, 16(s1), 72-85.
- Conforti, V. A., & de Azevedo, Fernando Cesar Cascelli. (2003). Local perceptions of Jaguars (*Panthera Onca*) and Pumas (*puma Concolor*) in the Iguacu national park area, South Brazil. *Biological Conservation*, 111(2), 215-221.
- Coombe, C., & Davidson, P. (2015). Constructing questionnaires. *The Cambridge Guide to Research in Language Teaching and Learning*, 217.
- Coombe, C., & Davidson, P. (2015). Constructing questionnaires. *The Cambridge Guide to Research in Language Teaching and Learning*, 217.
- Cooper, J. C. (1993). Optimal bid selection for dichotomous choice contingent valuation surveys. *Journal of Environmental Economics and Management*, 24(1), 25-40.
- Coria, J., & Calfucura, E. (2012). Ecotourism and the development of indigenous communities: The good, the bad, and the ugly. *Ecological Economics*, 73, 47-55.

- Cornwall, A. (2008). Unpacking 'Participation': Models, meanings and practices. *Community Development Journal*, 43(3), 269-283.
- Crain, W. M., & Oakley, L. K. (1995). The politics of infrastructure. *Journal of Law and Economics*, 1-17.
- Cunningham, C. E., Vaillancourt, T., Rimas, H., Deal, K., Cunningham, L., Short, K., et al. (2009). Modeling the bullying prevention program preferences of educators: A discrete choice conjoint experiment. *Journal of Abnormal Child Psychology*, 37(7), 929-943.
- Cushman, S. A., McKelvey, K. S., Hayden, J., & Schwartz, M. K. (2006). Gene flow in complex landscapes: Testing multiple hypotheses with causal modeling. *The American Naturalist*, 168(4), 486-499.
- Czech, B., Krausman, P. R., & Devers, P. K. (2000). Economic associations among causes of species endangerment in the United States reflect the integration of economic sectors, supporting the theory and evidence that economic growth proceeds at the competitive exclusion of nonhuman species in the aggregate. *Bioscience*, 50(7), 593-601.
- Das, M., & Chatterjee, B. (2015). Ecotourism: A panacea or a predicament? *Tourism Management Perspectives*, 14, 3-16.
- Davies, J., & Joglekar, N. (2013). Supply chain integration, product modularity, and market valuation: Evidence from the solar energy industry. *Production and Operations Management*, 22(6), 1494-1508.
- Diaz, H. F., & Pulwarty, R. (2012). *Hurricanes: Climate and socioeconomic impacts* Springer Science & Business Media.
- Dictionary, M. (2013). An Encyclopedia Britannica company. Available Form [Http://www.Merriam-Webster.com/dictionary/pharmacogenomics](http://www.Merriam-Webster.com/dictionary/pharmacogenomics),
- Dourish, P., & Bellotti, V. (1992). Awareness and coordination in shared workspaces. *Proceedings of the 1992 ACM Conference on Computer-Supported Cooperative Work*, pp. 107-114.
- Drabek, T. E., & McEntire, D. A. (2003). Emergent phenomena and the sociology of disaster: Lessons, trends and opportunities from the research literature. *Disaster Prevention and Management: An International Journal*, 12(2), 97-112.
- Eagly, A. H., & Chaiken, S. (1993). *The psychology of attitudes*. Harcourt Brace Jovanovich College Publishers.
- Eagly, A. H., & Chaiken, S. (2007). The advantages of an inclusive definition of attitude. *Social Cognition*, 25(5), 582.

- Edet, D., Ayodele, I., & Akinyemi, A. (2006). Threats to wildlife and their utilizable products in the Cross River rainforest, Nigeria. *Journal of Agriculture, Forestry and the Social Sciences*, 3(1), 59-68.
- Ejidike, B., & Ajayi, S. (2013). Trends in wildlife conservation practices in Nigeria. *International Journal of Biodiversity and Conservation*, 5(4), 185-191.
- Emanuel, K. A. (2013). Downscaling CMIP5 climate models shows increased tropical cyclone activity over the 21st century. *Proceedings of the National Academy of Sciences of the United States of America*, 110(30), 12219-12224.
- Emerton, L., Bishop, J., & Thomas, L. (2006). Sustainable financing of protected areas: A global review of challenges and options IUCN.
- Emerton, L., & Bos, E. (2004). Value: Counting ecosystems as water infrastructure IUCN.
- Environmental Impact Assessment Decree No. 86 of 1992, Nigeria.
- Endangered Species Act 1985, Nigeria.
- Ervin, J. (2003). Protected area assessments in perspective. *Bioscience*, 53(9), 819-822.
- Ezebilo, E. E., & Mattsson, L. (2010). Socio-economic benefits of protected areas as perceived by local people around Cross River national park, Nigeria. *Forest Policy and Economics*, 12(3), 189-193.
- Federal Republic of Nigeria; National Park Service Act 2006. Official gazette Vol. 78: No. 4. Federal Government Printers, Lagos.
- Federal Environmental Protection Agency (FEPA) Act, 1992, Nigeria.
- Ferrini, S., & Scarpa, R. (2005). Experimental designs for environmental valuation with choice-experiments: A Monte Carlo investigation.
- Few, R. (2003). Flooding, vulnerability and coping strategies: Local responses to a global threat. *Progress in Development Studies*, 3(1), 43-58.
- Fiallo, E. A., & Jacobson, S. K. (1995). Local communities and protected areas: Attitudes of rural residents towards conservation and Machalilla national park, Ecuador. *Environmental Conservation*, 22(03), 241-249.
- Fink, A. (2003). How to sample in surveys Sage.
- Fishbein, M. E. (1967). Readings in attitude theory and measurement.
- Fisher, I. (2006). The purchasing power of money: Its' determination and relation to credit interest and crises Cosimo, Inc.

- Francis, J. J., Eccles, M. P., Johnston, M., Walker, A., Grimshaw, J., Foy, R., et al. (2004). Constructing questionnaires based on the theory of planned behaviour. *A Manual for Health Services Researchers*, 2010, 2-12.
- Frankham, R., Bradshaw, C. J., & Brook, B. W. (2014). Genetics in conservation management: Revised recommendations for the 50/500 rules, red list criteria and population viability analyses. *Biological Conservation*, 170, 56-63.
- Freeman, A. W., & Johnson, K. O. (1982). A model accounting for effects of vibratory amplitude on responses of cutaneous mechanoreceptors in macaque Monkey. *The Journal of Physiology*, 323(1), 43-64.
- Friedman, M. A., & Brownell, K. D. (1995). Psychological correlates of obesity: Moving to the next research generation. *Psychological Bulletin*, 117(1), 3.
- Frikvist, E. (2015). "A right to roam": Perceptions of recreational access to the countryside around Manchester, England.
- Fritjof, C. (1996). *Web of life: A new scientific understanding of living systems*.
- Frontani, H. G. (2015). Adekeye adebajo, ed. 2014. Africa's peacemakers: Nobel peace laureates of African descent. *African Studies Quarterly*, 15(4), 86-88.
- Gasson, R. (1977). Farmers 'approach to co-operative marketing. *Journal of Agricultural Economics*, 28(1), 27-38.
- George, M., George, N., & Ramesh, N. (2016). Awareness regarding anemia, gestational diabetes and pregnancy induced hypertension among antenatal women attending outpatient department in a rural hospital. *Hindu*, 142, 94.7.
- Ghai, C. (2012). *A textbook of practical physiology* JP Medical Ltd.
- Ghimire, K. B., & Pimbert, M. P. (2013). *Social change and conservation* Routledge.
- Goodwin, H., & Santilli, R. (2009). Community-based tourism: A success. *ICRT Occasional Paper*, 11(1), 37.
- Greenberg, S., Gutwin, C., & Cockburn, A. (1996). Awareness through fisheye views in relaxed-WYSIWIS groupware. *Graphics Interface*, , 96. pp. 28-38.
- Grigoroudis, E., Petridis, K., & Arabatzis, G. (2014). RDEA: A recursive DEA based algorithm for the optimal design of biomass supply chain networks. *Renewable Energy*, 71, 113-122.
- GROOM, M. J. M. (1995). *Principles of Conservation biology*/Martha J.Groom, Gary K. Meffe and C.Ronald Carroll.,
- Günay, A., Arslankaya, E., & Tosun, I. (2007). Lead removal from aqueous solution by natural and pretreated clinoptilolite: Adsorption equilibrium and kinetics. *Journal of Hazardous Materials*, 146(1), 362-371.

- Gutwin, C., & Greenberg, S. (1999). A framework of awareness for small groups in shared-workspace groupware. *J Cscw*,
- Gutwin, C., & Greenberg, S. (2002). A descriptive framework of workspace awareness for real-time groupware. *Computer Supported Cooperative Work (CSCW)*, 11(3-4), 411-446.
- Haab, T. C., & McConnell, K. E. (2002). *Valuing environmental and natural resources: The econometrics of non-market valuation* Edward Elgar Publishing.
- Hales, D. (1989). Changing concepts of national parks. *Conservation for the Twenty-First Century*, , 139-144.
- Hamza, A., Ferm, P., Budde, F., & Ertl, G. Cadmium sulphide.
- Han, F., Yang, Z., Wang, H., & Xu, X. (2011). Estimating willingness to pay for environment conservation: A contingent valuation study of kanas nature reserve, xinjiang, china. *Environmental Monitoring and Assessment*, 180(1-4), 451-459.
- Hanley, N., & Splash, C. (1993). *Valuing environmental goods: The contingent valuation method*.
- Hanley, N., Barbier, E. B., & Barbier, E. (2009). *Pricing nature: Cost-benefit analysis and environmental policy* Edward Elgar Publishing.
- Hanley, N., Mourato, S., & Wright, R. E. (2001). Choice modelling approaches: A superior alternative for environmental valuation? *Journal of Economic Surveys*, 15(3), 435-462.
- Hanley, N., Wright, R. E., & Alvarez-Farizo, B. (2006). Estimating the economic value of improvements in river ecology using choice experiments: An application to the water framework directive. *Journal of Environmental Management*, 78(2), 183-193.
- Hanemann, W. M. (1984). Welfare evaluations in contingent valuation experiments with discrete responses. *American journal of agricultural economics*, 66(3), 332-341.
- Haruna, U., Sani, M., Danwanka, H., & Adejo, E. (2012). Economic analysis of fresh tomato marketers in Bauchi metropolis of Bauchi state, Nigeria. *Nigerian Journal of Agriculture, Food and Environment*, 8(3), 1-8.
- Hein, L., Van Koppen, K., De Groot, R. S., & Van Ierland, E. C. (2006). Spatial scales, stakeholders and the valuation of ecosystem services. *Ecological Economics*, 57(2), 209-228.
- Hensher, D. A. (2010). Hypothetical bias, choice experiments and willingness to pay. *Transportation Research Part B: Methodological*, 44(6), 735-752.

- Hewitt, K. (1983). Interpretations of calamity from the viewpoint of human ecology.
- Hewitt, K. (2014). *Regions of risk: A geographical introduction to disasters* Routledge.
- Hobley, M. (1996). *Participatory forestry: The process of change in India and Nepal*. Overseas Development Institute (ODI).
- Hoehn, J. P., & Randall, A. (1987). A satisfactory benefit cost indicator from contingent valuation. *Journal of Environmental Economics and Management*, 14(3), 226-247.
- Horowitz, J. K., & McConnell, K. E. (2002). A review of WTA/WTP studies. *Journal of Environmental Economics and Management*, 44(3), 426-447.
- Horowitz, J., McConnell, K., & Murphy, J. (2008). *Behavioral foundations of environmental economics and valuation. Handbook on Experimental Economics and the Environment*, Edward Elgar, Northampton, MA,
- Hoyos, D. (2010). The state of the art of environmental valuation with discrete choice experiments. *Ecological Economics*, 69(8), 1595-1603.
- Hunt, S. D., Sparkman Jr, R. D., & Wilcox, J. B. (1982). The pretest in survey research: Issues and preliminary findings. *Journal of Marketing Research*, 269-273.
- Hyman, E. L. (1993). Forestry policies and programmes for fuel wood supply in northern Nigeria. *Land use Policy*, 10(1), 26-43.
- Ibrahim, S. S., & Aliero, H. M. (2012). An analysis of farmers access to formal credit in the rural areas of Nigeria. *African Journal of Agricultural Research*, 7(47), 6249-6253.
- Idowu, O., Halidu, S., & Odebiyi, A. (2011). Evaluation of the effect of legislation on wildlife conservation: A case study of Kainji lake national park, Kainji, Niger state, Nigeria. *International Journal of Environmental Sciences*, 1(7), 1609.
- Ijaola, S. O. (2016). From colonialism to neo-colonialism, Christianity in cultural demythologization and ecological crises in the Niger Delta, Nigeria. *AFRREV IJAH: An International Journal of Arts and Humanities*, 5(3), 161-178.
- Ijeomah, H., Nwanegbo, O., & Umokoro, O. (2015). Assessment of tourist attractions in Okomu national park and Oguta lake eco-destinations of Nigeria. *Pat*, 11(2), 219-239.
- Ishaya, S., & Abaje, I. (2008). Indigenous people's perception on climate change and adaptation strategies in Jema'a local government area of Kaduna state, Nigeria. *Journal of Geography and Regional Planning*, 1(8), 138.

- Israel, G. D. (1992). Determining sample size University of Florida Cooperative Extension Service, Institute of Food and Agriculture Sciences, EDIS.
- Izard, C. E. (2013). Human emotions Springer Science & Business Media.
- Jackson, R. S., Stynes, D., Propst, D., & Siverts, L. (1990). Economic impact analysis as a tool in recreation program evaluation. US Army Corps of Engineers Recreation Study, 2
- Jagsi, R., Guancial, E. A., Worobey, C. C., Henault, L. E., Chang, Y., Starr, R., et al. (2006). The “gender gap” in authorship of academic medical literature—a 35-year perspective. *New England Journal of Medicine*, 355(3), 281-287.
- Jagsi, R., Griffith, K. A., Kurian, A. W., Morrow, M., Hamilton, A. S., Graff, J. J., et al. (2015). Concerns about cancer risk and experiences with genetic testing in a diverse population of patients with breast cancer. *Journal of Clinical Oncology: Official Journal of the American Society of Clinical Oncology*, 33(14), 1584-1591.
- Jank, S., Bertsche, T., Herzog, W., & Haefeli, W. E. (2008). Patient knowledge on oral anticoagulants: Results of a questionnaire survey in Germany and comparison with the literature. *International Journal of Clinical Pharmacology and Therapeutics*, 46(6), 280-288.
- Jia, X., Fu, B., Feng, X., Hou, G., Liu, Y., & Wang, X. (2014). The tradeoff and synergy between ecosystem services in the grain-for-green areas in Northern Shaanxi, China. *Ecological Indicators*, 43, 103-113.
- Jobstvagt, N., Hanley, N., Hynes, S., Kenter, J., & Witte, U. (2014). Twenty thousand sterling under the sea: Estimating the value of protecting deep-sea biodiversity. *Ecological Economics*, 97, 10-19.
- Johnston, R. J., Opaluch, J. J., Magnusson, G., & Mazzotta, M. J. (2005). Who are resource nonusers and what can they tell us about nonuse values? Decomposing user and nonuser willingness to pay for coastal wetland restoration. *Water resources research*, 41(7).
- Johnson, N., Cabarle, B., Pearce, D., Warford, J., Pastor, P., Rodríguez Muñoz, G., et al. (1993). Surviving the cut; natural forest management in the humid tropics. World Resources Inst., Washington, DC (EUA).
- Joppa, L. N., Loarie, S. R., & Pimm, S. L. (2008). On the protection of "protected areas". *Proceedings of the National Academy of Sciences of the United States of America*, 105(18), 6673-6678.
- Joy, P., Thomas, J., Mathew, S., & Skaria, B. P. (1998). Medicinal plants. *Tropical Horticulture*, 2, 449-632.

- Jureerat, B. (2015). Cloths and the way of life among Melayu people in Pattani, Thailand in the 18th century. *Asian Social Science*, 11(13), 158.
- Just, R., Hueth, D. L., & Schmitz, A. (2008). *Applied welfare economics* Edward Elgar Publishing.
- Kaffashi, S. (2016). Asian social science paper. *Asian Social Science*, 12(1)
- Kaffashi, S., Shamsudin, M. N., Radam, A., Rahim, K. A., & Yacob, M. R. (2013). Non-users' trade-off between natural scenery, water quality, ecological functions and biodiversity conservation: A way to preserve wetlands. *Environment Systems and Decisions*, 33(2), 251-260.
- Kaffashi, S., Shamsudin, M. N., Radam, A., Rahim, K. A., & Yacob, M. R. (2013). We are willing to pay to support wetland conservation: Local users' perspective. *International Journal of Sustainable Development & World Ecology*, 20(4), 325-335.
- Kahneman, D., Knetsch, J. L., & Thaler, R. H. (1990). Experimental tests of the endowment effect and the coarse theorem. *Journal of Political Economy*, 1325-1348.
- Kamins, A. O., Restif, O., Ntiamoa-Baidu, Y., Suu-Ire, R., Hayman, D. T., Cunningham, A. A., et al. (2011). Uncovering the fruit bat bush meat commodity chain and the true extent of fruit bat hunting in Ghana, West Africa. *Biological Conservation*, 144(12), 3000-3008.
- Kast, F. E., & Rosenzweig, J. E. (1972). General systems theory: Applications for organization and management. *Academy of Management Journal*, 15(4), 447-465.
- Kelley, H., van Rensburg, T. M., & Jeserich, N. (2016). Determinants of demand for recreational walking trails in Ireland. *Tourism Management*, 52, 173-186.
- Kerr, M. K., & Churchill, G. A. (2001). Bootstrapping cluster analysis: Assessing the reliability of conclusions from microarray experiments. *Proceedings of the National Academy of Sciences of the United States of America*, 98(16), 8961-8965.
- Khan, H. (2006). Willingness to pay for Margalla hills national park: Evidence from the travel cost method. *The Lahore Journal of Economics*, 11(2), 43-70.
- Kiami, F., Allahyari, M., & Kavooosi-Kalashami, M. (2016). An investigation on the recreational value of Masouleh village, Iran. *Tourism Planning & Development*, 13(1), 111-119.
- Kilgore, M. A., Snyder, S., Taff, S., & Schertz, J. (2008). Family forest stewardship: Do owners need a financial incentive? *Journal of Forestry*, 106(7), 357-362.

- Kim, J., Mjelde, J. W., Kim, T., Lee, C., & Ahn, K. (2012). Comparing willingness-to-pay between residents and non-residents when correcting hypothetical bias: Case of endangered spotted seal in South Korea. *Ecological Economics*, 78, 123-131.
- Kim, S. S., Wong, K. K., & Cho, M. (2007). Assessing the economic value of a world heritage site and willingness-to-pay determinants: A case of Changdeok Palace. *Tourism Management*, 28(1), 317-322.
- King, D. M., & Mazzotta, M. (2000). *Ecosystem Valuation*,
- Klandermans, B. (1984). Mobilization and participation: Social-psychological expansions of resource mobilization theory. *American Sociological Review*, , 583-600.
- Klandermans, B., & Staggenborg, S. (2002). *Methods of social movement research* U of Minnesota Press.
- Klein, L. R., Hendrix, W. G., Lohr, V. I., Kaytes, J. B., Sayler, R. D., Swanson, M. E., et al. (2015). Linking ecology and aesthetics in sustainable agricultural landscapes: Lessons from the Palouse region of Washington, USA. *Landscape and Urban Planning*, 134, 195-209.
- Knapp, K. R., Kruk, M. C., Levinson, D. H., Diamond, H. J., & Neumann, C. J. (2010). The international best track archive for climate stewardship (IBTrACS). *Bulletin of the American Meteorological Society*, 91(3), 363.
- Kolawole, A. (1982). The role of grassroots participation in national development: Lessons from the Kwara state of Nigeria. *The Community Development Journal: An International Journal for Community Workers*, 17(2), 121-133.
- Kontogianni, A., Tourkolias, C., Machleras, A., & Skourtos, M. (2012). Service providing units, existence values and the valuation of endangered species: A methodological test. *Ecological Economics*, 79, 97-104.
- Kotchen, M. J., & Reiling, S. D. (2000). Environmental attitudes, motivations, and contingent valuation of nonuse values: A case study involving endangered species. *Ecological Economics*, 32(1), 93-107.
- Kristjanson, P., Förch, W., Barahona, C., Garlick, C., & Thornton, P. (2010). CCAFS baseline household level survey: Manual for survey sites.
- Kristjansson, A. L., Sigfusdottir, I. D., & Allegrante, J. P. (2010). Health behavior and academic achievement among adolescents: The relative contribution of dietary habits, physical activity, body mass index, and self-esteem. *Health Education & Behavior: The Official Publication of the Society for Public Health Education*, 37(1), 51-64.

- Krutilla, J. V. (1967). Conservation reconsidered. *The American Economic Review*, 57(4), 777-786.
- Lancaster, K. J. (1966). A new approach to consumer theory. *The Journal of Political Economy*, , 132-157.
- Landres, P. B., Morgan, P., & Swanson, F. J. (1999). Overview of the use of natural variability concepts in managing ecological systems. *Ecological Applications*, 9(4), 1179-1188.
- Landres, P. B., Verner, J., & Thomas, J. W. (1988). Ecological uses of vertebrate indicator species: A critique. *Conservation Biology*, 2(4), 316-328.
- Larby, P. (2009). Theses in progress in commonwealth studies 2005-9.
- Laughland, A. S., Musser, W. N., Shortle, J. S., & Musser, L. M. (1996). Construct validity of averting cost measures of environmental benefits. *Land Economics*, 100-112.
- Layton, D. F., & Brown, G. (2000). Heterogeneous preferences regarding global climate change. *Review of Economics and Statistics*, 82(4), 616-624.
- Leach, M., Bloom, G., Ely, A., Nightingale, P., Scoones, I., Shah, E., et al. (2007). Understanding governance: Pathways to sustainability STEPS Centre.
- Lee, C., Lee, J., Mjelde, J. W., Scott, D., & Kim, T. (2009). Assessing the economic value of a public birdwatching interpretative service using a contingent valuation method. *International Journal of Tourism Research*, 11(6), 583-593.
- Levy, P., & Lemeshow, S. (1999). Sampling of populations: Methods and applications wiley. New York,
- Lindhjem, H., & Navrud, S. (2009). Asking for individual or household willingness to pay for environmental goods? *Environmental and Resource Economics*, 43(1), 11-29.
- Lisk, F. (1985). Popular participation in planning for basic needs: Concepts, methods and practices: A study prepared for the international labour office within the framework of the world employment programme Avebury.
- LO, O. (2004). The fate of a tropical rainforest in Nigeria: ABEKU sector of Omo forest reserve.
- Lobenstine, L., & Bailey, K. (2014). Redlining the adjacent possible: Youth and communities of color face the (not) new future of (not) work. Future of Work Project (Open Society Foundations, 2014),
- Longcore, T., & Rich, C. (2004). Ecological light pollution. *Frontiers in Ecology and the Environment*, 2(4), 191-198.

- Loomis, J. B. (1990). Comparative reliability of the dichotomous choice and open-ended contingent valuation techniques. *Journal of Environmental Economics and Management*, 18(1), 78-85.
- Loomis, J. B., & White, D. S. (1996). Economic benefits of rare and endangered species: Summary and meta-analysis. *Ecological Economics*, 18(3), 197-206.
- Loomis, J., Kent, P., Strange, L., Fausch, K., & Covich, A. (2000). Measuring the total economic value of restoring ecosystem services in an impaired river basin: Results from a contingent valuation survey. *Ecological Economics*, 33(1), 103-117.
- Louviere, J. J. (1988). *Analyzing decision making: Metric conjoint analysis* Sage.
- Louviere, J. J. (1992). Experimental choice analysis: Introduction and overview. *Journal of Business Research*, 24(2), 89-95.
- Louviere, J. J., Flynn, T. N., & Carson, R. T. (2010). Discrete choice experiments are not conjoint analysis. *Journal of Choice Modelling*, 3(3), 57-72.
- Louviere, J. J., & Hensher, D. A. (1982). Design and analysis of simulated choice or allocation experiments in travel choice modeling
- Louviere, J. J., & Islam, T. (2008). A comparison of importance weights and willingness-to-pay measures derived from choice-based conjoint, constant sum scales and best-worst scaling. *Journal of Business Research*, 61(9), 903-911.
- Louviere, J. J., & Street, D. (2000). Stated-preference methods. *Handbook of Transport Modeling*, 131-143.
- Louviere, J. J., & Woodworth, G. (1983). Design and analysis of simulated consumer choice or allocation experiments: An approach based on aggregate data. *Journal of Marketing Research*, 350-367.
- Lowensohn, S., Johnson, L. E., Elder, R. J., & Davies, S. P. (2007). Auditor specialization, perceived audit quality, and audit fees in the local government audit market. *Journal of Accounting and Public Policy*, 26(6), 705-732.
- Lun, Y. E. (2012). Perspectives on biodiversity conservation.
- Mack, R. N., Simberloff, D., Mark Lonsdale, W., Evans, H., Clout, M., & Bazzaz, F. A. (2000). Biotic invasions: Causes, epidemiology, global consequences, and control. *Ecological Applications*, 10(3), 689-710.
- Makarabhirom, P. (2002). Constraints on people's participation in forest management in Thailand. *Kyoto Review of South-East Asia*, 2
- Mamo, G., Sjaastad, E., & Vedeld, P. (2007). Economic dependence on forest resources: A case from Dendi district, Ethiopia. *Forest Policy and Economics*, 9(8), 916-927.

- Manski, C. F., & Lerman, S. R. (1977). The estimation of choice probabilities from choice based samples. *Econometrica: Journal of the Econometric Society*, 1977-1988.
- Martinez-Alier, J. (1995). The environment as a luxury good or “too poor to be green”? *Ecological Economics*, 13(1), 1-10.
- Martišková, B. K. (2015). *Nigérie Jako Regionální Mocnost*,
- Maskrey, A. (1993). *Natural disasters: Protecting vulnerable communities*.
- Maturana, H. R., & Varela, F. J. (1987). *The tree of knowledge: The biological roots of human understanding*. New Science Library/Shambhala Publications.
- Maynard, L. J., Hartell, J. G., Meyer, A. L., & Hao, J. (2004). An experimental approach to valuing new differentiated products. *Agricultural Economics*, 31(2-3), 317-325.
- Mazvimavi, K., & Twomlow, S. (2009). Socioeconomic and institutional factors influencing adoption of conservation farming by vulnerable households in Zimbabwe. *Agricultural Systems*, 101(1), 20-29.
- Mazzotta, M. J., & Kline, J. (1995). Environmental philosophy and the concept of nonuse value. *Land Economics*, 71(2), 244-249.
- McFadden, D. (1980). Econometric models for probabilistic choice among products. *Journal of Business*, , S13-S29.
- McNeely, J. A. (1997). *Conservation and the future: Trends and options toward the year 2025* IUCN.
- Meduna, A., Ogunjinmi, A., & Onadeko, S. (2009). Biodiversity conservation problems and their implications on ecotourism in Kainji lake national park, Nigeria. *Journal of Sustainable Development in Africa*, 10(4), 59-73.
- Mehta, J. N., & Heinen, J. T. (2001). Does community-based conservation shape favorable attitudes among locals? An empirical study from Nepal. *Environmental Management*, 28(2), 165-177.
- Meltsner, A. J., & Bellavita, C. (1983). *The policy organization* Sage Publications, Inc.
- Merker, B. (2007). Consciousness without a cerebral cortex: A challenge for neuroscience and medicine. *Behavioral and Brain Sciences*, 30(01), 63-81.
- Miles, M. B., & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* Sage.
- Mishra, R. (1984). *The welfare state in crisis: Social thought and social change* Wheat sheaf Books.

- Mitchell, R. C., & Carson, R. T. (1984). A contingent valuation estimate of national freshwater benefits: Technical report to the US environmental protection agency. Washington, DC, Resources for the Future,
- Mitchell, R. C., & Carson, R. T. (1989). Using surveys to value public goods: The contingent valuation method Resources for the Future.
- Mmopelwa, G., Kgathi, D., & Molefhe, L. (2007). Tourists' perceptions and their willingness to pay for park fees: A case study of self-drive tourists and clients for mobile tour operators in Moremi game reserve, Botswana. *Tourism Management*, 28(4), 1044-1056.
- Mogas, J., Riera, P., & Bennett, J. (2006). A comparison of contingent valuation and choice modelling with second-order interactions. *Journal of Forest Economics*, 12(1), 5-30.
- Molnar, P. (2004). Late cenozoic increase in accumulation rates of terrestrial sediment: How might climate change have affected erosion rates? *Annu.Rev.Earth Planet.Sci.*, 32, 67-89.
- Molnar, P. (2004). Late cenozoic increase in accumulation rates of terrestrial sediment: How might climate change have affected erosion rates? *Annu.Rev.Earth Planet.Sci.*, 32, 67-89.
- Morrison, M., & Bennett, J. (2000). Choice modelling, non-use values and benefit transfer. *Economic Analysis and Policy*, 30(1), 13-32.
- Moss, P., & Petrie, P. (2005). From children's services to children's spaces: Public policy, children and childhood Routledge.
- Mullins, L. J. (2007). Management and organisational behaviour Pearson education.
- Muzio, D., & Kirkpatrick, I. (2011). Introduction: Professions and organizations-a conceptual framework. *Current Sociology*, 59(4), 389-405.
- Nagin, D. S., Piquero, A. R., Scott, E. S., & Steinberg, L. (2006). Public preferences for rehabilitation versus incarceration of juvenile offenders: Evidence from a contingent valuation survey. *Criminology & Public Policy*, 5(4), 627-651.
- National Policy on Environment 1969, Nigeria.
- Natural Resources Conservation Act 1989, Nigeria.
- Naughton, B. (2007). The Chinese economy: Transitions and growth MIT press.
- Nelson, E., Mendoza, G., Regetz, J., Polasky, S., Tallis, H., Cameron, D., et al. (2009). Modeling multiple ecosystem services, biodiversity conservation, commodity production, and tradeoffs at landscape scales. *Frontiers in Ecology and the Environment*, 7(1), 4-11.

- Newing, H. (2010). Bridging the gap: Interdisciplinarity, biocultural diversity and conservation. *Nature and Culture: Rebuilding Lost Connections*. Earthscan, London, UK, , 23-40.
- Ngeth, S. C., & Buss, F. L. (1992). Interview with Sopath chin Ngeth: In la Crosse, Wisconsin, june 1983 Southwest Institute for Research on Women, University of Arizona.
- Ntiamoa-Baidu, Y. (1998). Wildlife development plan 1998-2003. Wildlife Department, Accra, Ghana,
- Ntiamoa-Baidu, Y. (2008). Indigenous beliefs and biodiversity conservation: The effectiveness of sacred groves, taboos and totems in Ghana for habitat and species conservation. *Journal for the Study of Religion, Nature & Culture*, 2(3)
- Nyangena, W. (2008). Social determinants of soil and water conservation in rural Kenya. *Environment, Development and Sustainability*, 10(6), 745-767.
- Oates, J. F. (1999). *Myth and reality in the rain forest: How conservation strategies are failing in West Africa* Univ of California Press.
- Odunlami, S. S., & Lake, B. (2003). An assessment of the ecotourism potential of Yankari national park, Nigeria. *Eco Club.Com E Paper Series NR*, 7
- Olakunle, O. F., Omotayo, A., & Odewumi, S. (2011). Pattern and problems of deforestation in southwestern nigeria. *International Journal of Academic Research*, 3(3)
- Olaleru, F., & Egonmwan, R. (2014). Wildlife conservation challenges in Okomu national park, Nigeria. *Ethiopian Journal of Environmental Studies and Management*, 7(6), 670-676.
- Olaniyi, O. (2016). Ecotourism development in Ikogosi Warmspring, Ekiti state, Nigeria: Implication on woody species composition and structure. *Applied Tropical Agriculture*, 5(2), 45-54.
- Oliver, S., Clarke-Jones, L., Rees, R., Milne, R., Buchanan, P., Gabbay, J., et al. (2004). Involving consumers in research and development agenda setting for the NHS: Developing an evidence-based approach. *Health Technology Assessment*, 8(15), 154pp.
- Oliver-Smith, A. (1986). *Natural disasters and cultural responses* Department of Anthropology, College of William and Mary.
- Oliver-Smith, A. (2009). *Development & dispossession: The crisis of forced displacement and resettlement* School for Advanced Research Press.
- Ormerod, P., Van Mele, P., Bentley, J., Guéi, R., Wale, E., Drucker, A., et al. (1997). *The death of economics* FAO, Roma (Italia).

- Park, T., Loomis, J. B., & Creel, M. (1991). Confidence intervals for evaluating benefits estimates from dichotomous choice contingent valuation studies. *Land Economics*, 67(1), 64-73.
- Pascual, U., Phelps, J., Garmendia, E., Brown, K., Corbera, E., Martin, A., et al. (2014). Social equity matters in payments for ecosystem services. *Bioscience*, biu146.
- Paul, S. (1987). *Community participation in development projects* World Bank Washington, DC.
- Pearce, D. W. (1994). *Project and policy appraisal* Organisation for Economic Co-operation and Development.
- Pearce, D. W., & Turner, R. K. (1990). *Economics of natural resources and the environment* JHU Press.
- Pearce, D. W., Markandya, A., & Barbier, E. (1989). *Blueprint for a green economy* Earthscan.
- Pearce, D. W., & Moran, D. (1994). *The economic value of biodiversity* Earthscan.
- Pielke Jr, R. A., Landsea, C., Mayfield, M., Laver, J., & Pasch, R. (2005). Hurricanes and global warming. *Bulletin of the American Meteorological Society*, 86(11), 1571.
- Pielke Jr, R. A., & Pielke Sr, R. A. (1997). *Hurricanes: Their nature and impacts on society*.
- Pimbert, M., & Pretty, J. N. (1995). *Parks, people and professionals*. Geneva: United Nations Research Institute for Social Development,
- Pokharel, R. K., & Larsen, H. O. (2007). Local vs official criteria and indicators for evaluating community forest management. *Forestry*, 80(2), 183-192.
- Pokharel, R. K., Neupane, P. R., Tiwari, K. R., & Köhl, M. (2015). Assessing the sustainability in community based forestry: A case from Nepal. *Forest Policy and Economics*, 58, 75-84.
- Polsby, N. W. (1980). *Community power and political theory*.
- Prathaneel, B., Makarabhirom, K., Jaiyong, P., & Pradubwong, S. (2014). Khon kaen: A community-based speech therapy model for an area lacking in speech services for clefts. *The Southeast Asian Journal of Tropical Medicine and Public Health*, 45(5), 1182-1195.
- Pulwarty, R. S., & Riebsame, W. E. (1997). The political ecology of vulnerability to hurricane-related hazards. *Hurricanes* (pp. 185-214) Springer.

- Quarantelli, E. L. (1995). Patterns of sheltering and housing in US disasters. *Disaster Prevention and Management: An International Journal*, 4(3), 43-53.
- Quarantelli, E. L. (1988). Disaster crisis management: A summary of research findings. *Journal of Management Studies*, 25(4), 373-385.
- Quiggin, J. (1998). Individual and household willingness to pay for public goods. *American Journal of Agricultural Economics*, 80(1), 58-63.
- Rajpurohit, K., & Krausman, P. (2000). Human-sloth-bear conflicts in Madhya Pradesh, India. *Wildlife Society Bulletin*, , 393-399.
- Randall, A., Ives, B., & Eastman, C. (1974). Bidding games for valuation of aesthetic environmental improvements. *Journal of Environmental Economics and Management*, 1(2), 132-149.
- Ravitch, S. M., & Riggan, M. (2016). *Reason & rigor: How conceptual frameworks guide research* Sage Publications.
- Rechlin, M., Hammett, A., Burch, W., & Song, Y. (2002). Sharing the wealth: A comparative study of the distribution of benefits from community Forestry management in southern China and Nepal. *Journal of Sustainable Forestry*, 15(2), 1-23.
- Recoftc. (2007). Sharing the wealth, improving the distribution of benefits and costs from community forestry: Policy and legal frameworks. Synthesis of discussions at the second Community Forestry forum, 21-22 march 2007, Bangkok, Thailand, RECOFTC.
- Richer, J. (1995). Willingness to pay for desert protection. *Contemporary Economic Policy*, 13(4), 93-104.
- Robison, L. J., & Siles, M. E. (1999). Social capital and household income distributions in the United States: 1980, 1990. *The Journal of Socio-Economics*, 28(1), 43-93.
- Rogerson, C. M. (2012). Urban tourism, economic regeneration and inclusion: Evidence from SouthAfrica. *Local Economy*, , 0269094212463789.
- Rokeach, M. (2008). *Understanding human values* Simon and Schuster.
- Rokeach, M. (2008). *Understanding human values* Simon and Schuster.
- Rollins, K. (1997). Wilderness canoeing in Ontario: Using cumulative results to update dichotomous choice contingent valuation offer amounts. *Canadian Journal of Agricultural Economics/Revue Canadienne d'Agroeconomie*, 45(1), 1-16.
- Rondinelli, D. A. (1987). Development administration and US foreign aid policy.

- Roque, F., Soares, S., Breitenfeld, L., Gonzalez-Gonzalez, C., Figueiras, A., & Herdeiro, M. T. (2014). Portuguese community pharmacists' attitudes to and knowledge of antibiotic misuse: Questionnaire development and reliability. *PloS One*, 9(3), e90470.
- Rossi, P. H., & Howard, E. Freeman. 1993. *Evaluation: A Systematic Approach*, 5
- Rowe, R. D., d'Arge, R. C., & Brookshire, D. S. (1980). An experiment on the economic value of visibility. *Journal of Environmental Economics and Management*, 7(1), 1-19.
- Ruiz, T., & Bernabé, J. C. (2014). Measuring factors influencing valuation of nonmotorized improvement measures. *Transportation Research Part A: Policy and Practice*, 67, 195-211.
- Ryan, M., & Hughes, J. (1997). Using conjoint analysis to assess women's preferences for miscarriage management. *Health Economics*, 6(3), 261-273.
- Ryan, M., Ratcliffe, J., & Tucker, J. (1997). Using willingness to pay to value alternative models of antenatal care. *Social Science & Medicine*, 44(3), 371-380.
- Saghravani, S. R., Mustapha, S., Ibrahim, S., & Randjbaran, E. (2009). Comparison of daily and monthly results of three evapotranspiration models in tropical zone: A case study. *American Journal of Environmental Sciences*, 5(6), 698-705.
- Sahney, S., & Benton, M. J. (2008). Recovery from the most profound mass extinction of all time. *Proceedings Biological Sciences*, 275(1636), 759-765.
- Salant, P., Dillman, I., & Don, A. (1994). *How to conduct your own survey*
- Samdin, Z. (2008). Willingness to pay in TamanNegara: A contingent valuation method. *International Journal of Economics and Management*, 2(1), 81-94.
- Samdin, Z., Aziz, Y. A., Radam, A., & Yacob, M. R. (2010). Factors influencing the willingness to pay for entrance permit: The evidence from TamanNegara national park. *Journal of Sustainable Development*, 3(3), 212.
- Sandorf, E. D., Aanesen, M., & Navrud, S. (2016). Valuing unfamiliar and complex environmental goods: A comparison of valuation workshops and internet panel surveys with videos. *Ecological Economics*, 129, 50-61.
- Sanjuán-López, A. I., Philippidis, G., & Resano-Ezcaray, H. (2011). How useful is acceptability to explain economic value? An application on the introduction of innovative saffron products into commercial markets. *Food Quality and Preference*, 22(3), 255-263.
- Sanoff, A. P. (2006). A perception gap over students' preparation. *Chronicle of Higher Education*, 52(27), B9-B14.

- Saul, J., Shepherd, W., & Boxal, J. (2007). Quantifying the performance of storm tanks at wastewater treatment plant. Proceedings of the 2007 World Environmental and Water Resources Congress, Tampa, Florida, may, 2007. ASCE,
- Scarpa, R., Ferrini, S., & Willis, K. (2005). Performance of error component models for status-quo effects in choice experiments. Applications of simulation methods in environmental and resource economics (pp. 247-273) Springer.
- Schmidt, K. (2002). The problem with awareness': Introductory remarks on awareness in CSCW'. Computer Supported Cooperative Work (CSCW), 11(3-4), 285-298.
- Scott, A., Watson, M. S., & Ross, S. (2003). Eliciting preferences of the community for out of hours care provided by general practitioners: A stated preference discrete choice experiment. Social Science & Medicine, 56(4), 803-814.
- Scott, M. J., Bilyard, G. R., Link, S. O., Ulibarri, C. A., Westerdahl, H. E., Ricci, P. F., et al. (1998). Valuation of ecological resources and functions. Environmental Management, 22(1), 49-68.
- Seetharam, M. (1990). Citizen participation in rural development Mittal Publications.
- Seller, C., Stoll, J. R., & Chavas, J. (1985). Validation of empirical measures of welfare change: A comparison of nonmarket techniques. Land Economics, 61(2), 156-175.
- Shamsudin, M. N., Radam, A., Rahim, K. A., Yacob, M. R., Muda, A., & Yazid, M. (2011). Economic valuation of Shadegan international wetland, Iran: Notes for conservation. Regional Environmental Change, 11(4), 925-934.
- Shields, P. (2014). Tools for writing excellent papers: ASPA student summit 2014.
- Shih, Y., & Fang, K. (2004). The use of a decomposed theory of planned behavior to study internet banking in Taiwan. Internet Research, 14(3), 213-223.
- Silveira, F. A., Negreiros, D., Barbosa, N. P., Buisson, E., Carmo, F. F., Carstensen, D. W., et al. (2016). Ecology and evolution of plant diversity in the endangered campo rupestre: A neglected conservation priority. Plant and Soil, 1-24.
- Simon, R. (2015). Prevalence and Usage of Open Recreational Spaces in Ibadan, Southwest Nigeria,
- Singh, K. (1992). People's participation in natural resource management Institute of Rural Management.

- Singh, K., & Subramanian, S. (1992). People's participation in organising and managing tree growers' co-operative societies: A case study in Orissa. Symposium on Management of Rural Co-Operatives December 7-11, 1992.
- Smythe, K. R. (2015). *Africa's past, our future* Indiana University Press.
- Soule, M. J., Tegene, A., & Wiebe, K. D. (2000). Land tenure and the adoption of conservation practices. *American Journal of Agricultural Economics*, 82(4), 993-1005.
- Soule, M. E., & Simberloff, D. (1986). What do genetics and ecology tell us about the design of nature reserves? *Biological Conservation*, 35(1), 19-40.
- Soule, M. E., & Wilcox, B. A. (1980). *Conservation biology. an evolutionary-ecological perspective*. Sinauer Associates, Inc.
- Steckenreuter, A., & Wolf, I. (2013). How to use persuasive communication to encourage visitors to pay park user fees. *Tourism Management*, 37, 58-70.
- Stiefel, K. M., Tennigkeit, F., & Singer, W. (2005). Synaptic plasticity in the absence of back propagating spikes of layer II inputs to layer V pyramidal cells in rat visual cortex. *European Journal of Neuroscience*, 21(9), 2605-2610.
- Stiefel, M., & Wolfe, M. (1994). *A voice for the excluded: Popular participation in development: Utopia or necessity?* Zed Books.
- Stronza, A., & Gordillo, J. (2008). Community views of ecotourism. *Annals of Tourism Research*, 35(2), 448-468.
- Sudarmadi, S., Suzuki, S., Kawada, T., Netti, H., Soemantri, S., & Tugawati, A. T. (2001). A survey of perception, knowledge, awareness, and attitude in regard to environmental problems in a sample of two different social groups in Jakarta, Indonesia. *Environment, Development and Sustainability*, 3(2), 169-183.
- Swait, J., & Adamowicz, W. (2001). Choice environment, market complexity, and consumer behavior: a theoretical and empirical approach for incorporating decision complexity into models of consumer choice. *Organizational Behavior and Human Decision Processes*, 86(2), 141-167.
- Swait, J., & Adamowicz, W. (1996). The effect of choice environment and task demands on consumer behavior: discriminating between contribution and confusion.
- Swartz, L. H., Noell, J. W., Schroeder, S. W., & Ary, D. V. (2006). A randomised control study of a fully automated internet based smoking cessation programme. *Tobacco Control*, 15(1), 7-12.

- Sylvester, C. M., Shulman, G. L., Jack, A. I., & Corbetta, M. (2007). Asymmetry of anticipatory activity in visual cortex predicts the locus of attention and perception. *The Journal of Neuroscience : The Official Journal of the Society for Neuroscience*, 27(52), 14424-14433.
- Tanko, A. I. (2013). Agriculture, livelihoods and fadama restoration in northern Nigeria. *Wetland Management and Sustainable Livelihoods in Africa*, , 205.
- Teel, T. L., & Manfredo, M. J. (2010). Understanding the diversity of public interests in wildlife conservation. *Conservation Biology*, 24(1), 128-139.
- Teerawattananon, Y., Tantivess, S., Yothasamut, J., Kingkaew, P., & Chaisiri, K. (2009). Historical development of health technology assessment in Thailand. *International Journal of Technology Assessment in Health Care*, 25(S1), 241-252.
- Terborgh, J. (2002). *Making parks work: Strategies for preserving tropical nature* Island Press.
- Thomas, C. D., Cameron, A., Green, R. E., Bakkenes, M., Beaumont, L. J., Collingham, Y. C., et al. (2004). Extinction risk from climate change. *Nature*, 427(6970), 145-148.
- Thomas, D. S., & Twyman, C. (2005). Equity and justice in climate change adaptation amongst natural-resource-dependent societies. *Global Environmental Change*, 15(2), 115-124.
- Tonidandel, S., Williams, E. B., & LeBreton, J. M. (2014). Size matters... just not in the way that you think. *More Statistical and Methodological Myths and Urban Legends*, , 162.
- Treves, A. (2009). Hunting for large carnivore conservation. *Journal of Applied Ecology*, 46(6), 1350-1356.
- Trivedi, P. (2006). *Ecology and conservation of avifauna of some forested areas in Gujarat, India*. Unpublished Phd.Thesis, Saurashtra University,
- Tversky, A., & Kahneman, D. (2014). Belief in the law of small numbers. *A Handbook for Data Analysis in the Behavioral Sciences: Volume 1: Methodological Issues Volume 2: Statistical Issues*, , 341.
- Tyndall, A. V., Davenport, M. H., Wilson, B. J., Burek, G. M., Arsenault-Lapierre, G., Haley, E., et al. (2013). The brain-in-motion study: Effect of a 6-month aerobic exercise intervention on cerebrovascular regulation and cognitive function in older adults. *BMC Geriatrics*, 13(1),1.
- Tyndall, E. (2012). *Can Human Resource Management be a Source of Sustainable Competitive Advantage for an Organisation during a Recessionary Period?*

- Uphoff, N. (2000). Understanding social capital: Learning from the analysis and experience of participation. *Social Capital: A Multifaceted Perspective*, , 215-249.
- Usman, B., & Adefalu, L. (2010). Nigerian forestry, wildlife and protected areas: Status report. *Biodiversity*, 11(3-4), 54-62.
- Van Dyke, F. (2008). *Conservation biology: Foundations, concepts, applications* Springer Science & Business Media.
- Varley, A. (1994). *Disasters, development and environment*. John Wiley & Sons.
- Venkatachalam, L. (2003). Designing contingent valuation (CV) surveys for estimating use values: Some experience from a case study of a water supply project. *Journal of Social and Economic Development*, 5(2), 267-284.
- Venkatachalam, L. (2004). The contingent valuation method: A review. *Environmental Impact Assessment Review*, 24(1), 89-124.
- Vick, S., & Scott, A. (1998). Agency in health care. examining patients' preferences for attributes of the doctor–patient relationship. *Journal of Health Economics*, 17(5), 587-605.
- Vié, J., Hilton-Taylor, C., & Stuart, S. N. (2009). *Wildlife in a changing world: An analysis of the 2008 IUCN red list of threatened species* IUCN.
- Vodouhê, F. G., Coulibaly, O., Adégbidi, A., & Sinsin, B. (2010). Community perception of biodiversity conservation within protected areas in Benin. *Forest Policy and Economics*, 12(7), 505-512.
- Waldron, A., Mooers, A. O., Miller, D. C., Nibbelink, N., Redding, D., Kuhn, T. S., et al. (2013). Targeting global conservation funding to limit immediate biodiversity declines. *Proceedings of the National Academy of Sciences of the United States of America*, 110(29), 12144-12148.
- Walker, M., & Mondello, M. J. (2007). Moving beyond economic impact: A closer look at the contingent valuation method. *International Journal of Sport Finance*, 2(3), 149.
- Walpole, M. J., & Goodwin, H. J. (2001). Local attitudes towards conservation and tourism around komodo national park, Indonesia. *Environmental Conservation*, 28(02), 160-166.
- Walpole, M., Almond, R. E., Besancon, C., Butchart, S. H., Campbell-Lendrum, D., Carr, G. M., et al. (2009). Ecology. tracking progress toward the 2010 biodiversity target and beyond. *Science (New York, N.Y.)*, 325(5947), 1503-1504.

- Ware, J. E., Kosinski, M., Dewey, J. E., & Gandek, B. (2000). SF-36 health survey: Manual and interpretation guide Quality Metric Inc.
- Ware, J. E., Kosinski, M., Dewey, J. E., & Gandek, B. (2000). SF-36 health survey: Manual and interpretation guide Quality Metric Inc.
- Watkins, F. (2004). Evaluation of DFID development assistance: Gender equality and women's empowerment: DFID's experience of gender mainstreaming: 1995 to 2004 Department for International Development.
- Whitman, K., Starfield, A. M., Quadling, H. S., & Packer, C. (2004). Sustainable trophy hunting of African lions. *Nature*, 428(6979), 175-178.
- Whytock, R. C., Buij, R., Virani, M. Z., & Morgan, B. J. (2016). Do large birds experience previously undetected levels of hunting pressure in the forests of central and WestAfrica? *Oryx*, 50(01), 76-83.
- Wilcox, D. (1994). The guide to effective participation Partnership Brighton.
- Wilcox, R. R. (1998). How many discoveries have been lost by ignoring modern statistical methods? *American Psychologist*, 53(3), 300.
- Wilkie, D. S., Starkey, M., Abernethy, K., Effa, E. N., Telfer, P., & Godoy, R. (2005). Role of prices and wealth in consumer demand for bushmeat in Gabon, central Africa. *Conservation Biology*, 19(1), 268-274.
- Williamson, O. E. (1984). The economics of governance: Framework and implications. *Zeitschrift Für Die Gesamte Staatswissenschaft/Journal of Institutional and Theoretical Economics*, (H. 1), 195-223.
- Wilson, M. A., & Hoehn, J. P. (2006). Valuing environmental goods and services using benefit transfer: The state-of-the art and science. *Ecological Economics*, 60(2), 335-342.
- Windle, J., & Rolfe, J. (2011). Comparing responses from internet and paper-based collection methods in more complex stated preference environmental valuation surveys. *Economic Analysis and Policy*, 41(1), 83-97.
- Wistowsky, W. J. (2008). Canada's national parks: What are they worth to Canadians and why? ProQuest.
- Wyart, V., & Tallon-Baudry, C. (2009). How ongoing fluctuations in human visual cortex predict perceptual awareness: Baseline shift versus decision bias. *The Journal of Neuroscience : The Official Journal of the Society for Neuroscience*, 29(27), 8715-8725.
- Yacob, M. R., Radam, A., & Shuib, A. (2009). A contingent valuation study of marine parks ecotourism: The case of Pulau Payar and Pulau Redang in Malaysia. *Journal of Sustainable Development*, 2(2), 95.

Yacob, M. R., Shuib, A., & Radam, A. (2008). How much does ecotourism development contribute to local communities? An empirical study in a small island. *ICFAI Journal of Environmental Economics*, 6(2)

YNP. (2000) A Handbill of the Yankari National Park, Nigeria.

Yusuff, M. A. (2016). Performance assessment of tourism sector as a vital tool of economic growth in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 6(10), 143-150.

Zainuddin, A. P. (1977). Factors associated with level of participation of members of village development and security committees in four peninsular Malaysian states.

