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**AFRICAN TRADITIONAL KNOWLEDGE SYSTEM AS INNOVATIVE STRATEGIES
FOR SHARED NATURAL RESOURCE MANAGEMENT IN AFRICA**

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Abstract

In contemporary African society, people's view of the universe has changed. Nature is now viewed in terms of exploitation of natural resources. Efforts at managing shared natural resources have not been faced with much success. This has been attributed to among other factors, the lack of capacity of rural people in managing natural resources. However, this paper argues on the contrary that rather than a lack of capacity, the lack of adequate recognition given to African traditional knowledge system in natural resource management can be attributed to the challenges in natural resource management. This has led to the development of policies and institutional structures without having recourse to traditional knowledge system and the wealth of knowledge contained therein. Natural resources management although now becoming a mantra has always been part of the fabric of the African society. However colonialism with its attendant consequences led to a subjugation of the African traditional knowledge system. Contemporary Africa can borrow a leaf

from its past African traditional knowledge system which attached great value to nature and its resources. African cultural heritage can be used to preserve and rehabilitate the environment and the natural resources which have witnessed speedy degradation due to human exploitation.

Keywords: Africa, Traditional Knowledge System, Natural Resources

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1.0 Background of the Study

Each generation must out of relative obscurity, discover its mission, fulfill it or betray it,

Frantz Fanon

In the 21st century, Africa's record in natural resources governance does not look too encouraging. A cursory glance at natural resource management in Africa raises concerns. Its richness in natural resources which should be an advantage has become a challenge to the continent. In several parts of Africa, conflicts over natural resources abound. From the Democratic Republic of Congo, to Nigeria, to Central Africa Republic, to Kenya, conflict over natural resources rages on. One of the fundamental causes of this is that African cultural heritage and her traditional knowledge system was not taken into account in the development process of the continent. This becomes evident in the natural resources context with the accompanied accelerated degradation despite African traditional cultures which have the potential of contributing immensely to the preservation of natural resources.

Africa has been tagged the cradle of humanity. She is the cradle of civilization. However, one of the consequences of colonial rule is its imposition of European based state institutions and thought ideology on Africa as well as the relegation of African beliefs and customs to the background under the guise of it being barbaric. Thus, Africans have pursued challenges only from the point of view of what is obtainable elsewhere with the African cultural heritage left behind. Colonial states were defined by artificially fixed boundaries which had no respect for ethnic lines which led to built in problems of instability with increased conflict over natural resources. With the growth in population size, more tension rises on how natural resources are shared and used.

Across Sub-Saharan Africa, natural resources maintain center place in people's lives and livelihoods. People's everyday use of natural resources is shaped by local norms and customs mostly at the local levels. The traditional systems managing natural resources are built on common beliefs within a community.¹ Traditional African societies view nature as sacred. It was not

¹ Baruah, P. (2014). Traditional Natural Resources Management Practices: A Review of Local Concepts and Issues on Change and Sustainability. *Global Journal of Biology, Agriculture and Health Sciences*. 3 (4), 93-97. P. 93.

something to be exploited with undue regard. Traditional African resource management presents a holistic view of man within the biosphere, highlighting the dependence of man on scarce natural resources.² It places emphasis on the ability of man to reduce depletion whilst encouraging environmental improvement, and socio-economic development. At the urban areas, the story is different as commercial uses of natural resources are determined by government policies of the colonial and post-colonial epochs. There has been a slight gradual shift in the past years from the centralized model of natural resource management to a model which is more devolved, known as Community-Based Natural Resources Management (CBNRM). This model allows for greater involvement of communities in determining how land and resources within their communities are managed. This then provides for more inclusion of African traditional knowledge system which determines in the most part the activities of peoples of rural Africa, in the broader African sphere.

Despite the efforts being made, Africa's strides at natural resource management have been faced with challenges. Thus it becomes increasingly realized that the answers to the questions of natural resource management in Africa will have to come from a variety of sources. One of the causes of Africa's challenges at finding a sustainable framework for her management of natural resources is that she has failed to take into account her cultural heritage and traditional knowledge system in factoring into place applicable context specific management approaches which takes her peculiarities into account.

Recent efforts at natural resources management seems to look to contemporary measure without consideration for African traditional knowledge system and practices at natural resources management. African cultural heritage possesses some positive factors within the context of natural resources management. These could help change generally, individual and institutional behaviors with a view to good management of natural resources. Consequently, it is never too late for Africans to realize the errors of the past and cherished hopes for the future with optimism that despite the blunders of the past which relegated African cultural heritage to the background, realization of its place and proactive measures towards it can help greatly in natural resource management in Africa.

² Medugu, I. N. (2006). Achieving Sustainable Agriculture in Nigeria: A Land Use Policy Perspective. *Tokyo Academic, Industry and Cultural Integration Tour*. 10-19. pp. 1-11. P. 5.

This paper adopts an African historiography approach, which suggests a sharp critique of the subjugation of African knowledge system over time. Part one provides for its introduction, part two and three contains the research question and research objective respectively, part four provides for the theoretical framework upon which the paper stands, part five contains the literature review and critical evaluation, and this work ends with part six which contains the conclusion and possible recommendations.

2.0 Research Question

To what extent can African traditional knowledge system and practices ensure efficient management of natural resources within Africa?

3.0 Research Objective

This paper aims to analyze the extent to which African traditional knowledge system and practices can ensure efficient management of natural resources within Africa.

4.0 Theoretical Framework

This work is hinged on some theories which form its theoretical framework. Its theoretical framework is based on the theories of Afrikology.

Afrikology propounded by Nabudere is to the effect that mainstream scientific knowledge does don't hold all the answers to humanity's problems and as such requires the development of new knowledge. The theory thus seeks to promote an African heritage knowledge based solution as a long-term solution to African problems. He posits that "The task for the African scholars is to explore, trace and investigate the role ancient African knowledge systems contributed in laying the ground for the institutions of knowledge creation and their application to human needs throughout history."³

In promoting an African heritage knowledge base, Kwame Nkrumah, opines that Consciencism 'will enable African society to digest the Western and the Islamic and the Euro-Christian elements

³ Nabudere, D.W. (2011). *Afrikology, Philosophy and Wholeness: An Epistemology*. Pretoria, South Africa: African Institute of South Africa. p. 2.

in Africa, and develop them in such a way that they fit into the African personality.’⁴ Frantz Fanon on the other hand proposes the deconstruction of colonial paradigms. To him, African national awareness would come about with an African consciousness embedded in the promotion of universal values.⁵

This work posits that traditional African knowledge systems provide enough empirical evidence to show that natural resources can be locally managed efficiently. Traditional practices occupy a unique position in the management of natural resource due to their wide and far reaching acceptance by members of that particular community, creating obligations in terms of the political, religious, judicial and spiritual embodiments of the community.

5.0 Methodology

This study applies a desk top research approach. Relevant secondary sources were relied on for this research. This study will entail literature review of the content of the relevant secondary sources.

In its structuring, section one of this study contains the background of the study. Section two provides for the research question, while section three contains the research objective. Section four contains the theoretical framework on which the work is based. The methodology of the study is provided for in section five. Section six contains the literature review and section seven, critical evaluation. Section eight of this study shall conclude and proffer possible recommendations on approaches to future solutions along the lines of increased reliance on traditional African knowledge systems in natural resources management.

6.0 Literature Review

Management of natural resources is not a new phenomenon to Africa and her people. Local communities have managed the land on which they live and the natural resources surrounding them for a very long time. This much was identified by Fabricius et al when they opined that

⁴ Nkrumah, K. (1970). *Consciencism. Philosophy and Ideology for Decolonization*. New York: Monthly Review Press. P. 79.

⁵ Fanon, F. (1979). *Les damnes de la terre*. Paris: Maspero. Pp. 174-175.

indigenous African communities often developed elaborate resource management systems.⁶ Many traditional systems of natural resource management are maintained throughout the continent by local groups of pastoralist, farmers and hunters. This is not only an African phenomenon as local communities world over have been identified to do same.⁷ There has been an increasing awareness of the importance of African cultural heritage and her traditional knowledge system. This is coupled with the recognition of how historic forces have disrupted its growth and development as well as dependence on it.

This form of traditional knowledge system has also been referred to as Traditional Ecological Knowledge (TEK) by some.⁸ TEK has been described as “a cumulative body of knowledge and Beliefs, handed down through the generations by cultural transmission, about the relationship of living beings (including humans) with one another and with their environment.”⁹ TEK has emerged over time and across generations from firsthand extensive interaction with a particular local ecology. It is a system embedded in the lived experience of traditional pursuits, in activities or ways of life that take place in the natural environment. Traditional ecological knowledge systems which encompass management knowledge, beliefs, and practices,¹⁰ are different from most Western conceptualizations of management.¹¹ Vine Deloria Jr. (1992)¹² opines this much when he states that Indigenous managers adopt the ‘idea that the natural world might have knowledge, feelings, and intelligence in and of itself’, which view contrasts significantly with ‘modern’ scientific understanding of the earth as ‘inert.’

⁶ Fabricius, C., Koch, E., Magome, H., & Turner, S. (2004). Rights, Resources and Rural Development: Community Based Natural Resource Management in Southern Africa. London: Earthscan.

⁷ See Ostrom, E. (1990). *Governing the Commons- The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.

⁸ See Whiteman, G. (2004). Why are we Talking Inside? : Reflecting on Traditional Ecological Knowledge (TEK) and Management Research. *Journal of Management Enquiry*. 13 (3), 261-277.

⁹ Berkes, F. (1995). Indigenous knowledge and Resource Management Systems: A Native Canadian Case Study from James Bay. In S. Hanna & M. Munasinghe (Eds.), *Property Rights in a Social and Ecological Context, Case Studies, and Design Applications* (pp. 99-109). Washington DC, Beijer International Institute of Ecological Economics and the World Bank. p. 100.

¹⁰ Berkes, F., & Henley, T. (1997). Co-Management and Traditional Knowledge: Threat or Opportunity? *Policy Options*, 18(2), pp. 29-31.

¹¹ Deloria, V. (1992). Spiritual Management: Prospects for Restoration on Tribal lands. *Restoration and Management Notes*, 10 (1), 48-50.

¹² Deloria, V. *Ibid* at p. 49.

Africa has consistently been referred to as the cradle of humanity. This is due to archeological findings that place the discovery of earliest remains of human bones, within the continent. Being the cradle of humanity also meant having its own knowledge system which evolves with time. Akinwale posits that from archeological studies the existence of a wealth of indigenous knowledge connected to local institutions and aimed at natural resource management has been confirmed.¹³ However, the African knowledge system has been largely downplayed by colonial powers consequent upon their evasion of Africa, and still continues to be downplayed in present times.

Africans for decades have lived under the erroneous impression that everything foreign is better and everything African is inferior or barbaric. The years of colonization took its toll not only on the body and resources of the African but on mind of Africans. Africans could no longer look with pride at their cultural heritage and tried to be more western than the west. Years on the continent and her people still suffer from this coloniality of the mind. Thus, although the colonialists no longer had administrative offices within Africa, they still possess some form of control over the mentality of her people. This is evident more so in African educational system which boasts of schools as centers of refinement from the “out dated” traditional African customs to the “refined” western notion of things. Colonialism brought with it notions of border, individualism and domination over others. With these notions in operation, it was not long after that conflicts over natural resources became the order of the day.

Amongst other policies of the colonial era over which the colonial powers extended their control over the African landscape is the issue of natural resource management. With colonization African cultural heritage and traditional knowledge system was treated with disdain and given no respect whatsoever. Communal ownership of land and resources within the land was no longer the order of the day as land now devolved on the state to allow for easy unhindered exploitation by the colonial authority. One would think that the African elites who took over authority after gaining independence would revert to the African way of doing things. This was however not to be the case as they continued from where their “fathers” left of, inheriting the colonially derived political

¹³ Akinwale, A. A. (2012). Digitization of Indigenous Knowledge for Natural Resources Management in Africa. Aern Summit Conference Paper. *Proceedings of the 2012 Summit of the African Educational Research Network, 18th-20th May, North Carolina State University & Double Tree Hilton , Raleigh Brownstone University Hotel.* pp. 1-19. P. 15.

structures which was based on centralized government which was highly controlling and exploitative. This led to further alienation of local rights and customs.

However, by the late 1980s there emerged a new array of studies which highlighted sustainable forms of collective resource management based on traditional rules and norms.¹⁴ Murphree stated this much when he noted that:

The evidence is that communities can become effective institutions for sustainable resource management, but only if they are granted genuine proprietorship, that is, the right to use resources, determine the modes of usage, benefit fully from their use, determine the distribution of such benefits and determine rules of access. Any policy which excludes these components will frustrate the goal of making communities effective institutions for resource management.¹⁵

Reliance on African cultural practices may prove a challenge for some individuals and agencies within the centre that possess strong disincentives for enacting such. This is because leadership in most African countries is driven by an array of personal interests, clientelism and networks of patronage. Thus such cultural practices which require decentralization of rights over natural resources are viewed as conflicting with their personal interest and frustrated out of implementation.

Africa has always been endowed with great wealth of natural resources. African culture and customs contain practices regarding natural resources management. The coming of colonialism pushed these practices to the background. After the departure of the colonialists, subsequent African regimes have followed the road map laid down by the colonialists and have failed to take into account the management of natural resources as provided by customs and traditions of local communities. Thus there is no flow of information between the holders of culture and policy makers. These factors have caused numerous constraints on the management of natural resources in Africa.

¹⁴ Ostrom, E. (1990). *Governing the Commons- The Evolution of Institutions for Collective Action*. New York: Cambridge University Press.

¹⁵ Murphree, M. (1993). Decentralizing the Proprietorship of Wildlife Resources in Zimbabwe's Communal Lands. In Lewis D. and Carter, N. (Eds) *Voices from Africa: Local Perspectives on Conservation*. Washington DC: WWF-US.

African culture has within its knowledge systems, positive factors in relation to natural resources management. This varies from land occupation systems, to eating habits which forbids the consumption of certain animals, to sacred places and totems which forbid the killing of such totem animals. Traditional natural resources management is visible in several aspects of natural resources. Traditional protected forests serve as safe grounds for the preservation of threatened species. In Ghana, the Boabeng-Fiema forests acts as a monkey sanctuary for the primates which are considered as sacred in both Boabeng and Fiema communities in Ghana. This indirectly leads to the protection of plant species within the sanctuary.¹⁶ In East Usambara Tanzania, where certain taboos exist regarding certain species, the price for cutting down a sacred tree involves the sacrifice of a ram or a black/white cock.¹⁷ Behailu et al highlight the well known water and land conservation practices of the Konso people of Ethiopia which has even gained them a United Nations Educational Scientific and Cultural Organization recognition as a UNESCO Heritage site for their landscape management.¹⁸ The proverb ‘Living Together means Sharing Resources’ has been identified by Garra as a guiding principle ensuring their togetherness.¹⁹ For the Konso people, the vesting of ownership of a water source to people who live closest to such water imputes on such a person, the responsibility to safeguard the water source from abuse.²⁰

Arsano highlights the traditional practices of the Borana of Ethiopia deep wells which possess unique features of ownership custodianship, user access and management.²¹ The Borana system is such that allows for sharing, providing the right to ask for the use of water from the nearest source. However, only those who have obeyed the rules of their own system are entitled to enjoying this right.²² Also, failure to participate in managing the wells leads to a forfeiture of rights to water from other wells except water from rivers.²³ Furthermore, in Cameroun, around the Mount

¹⁶ Saj, T.L., Mather, C. and Sicotte, P. (2006). Traditional Taboo in Biological Conservation: the case of *Colobus Vellerosus* at the Boabeng-Fiema Monkey Sanctuary, Central Ghana. *Social Science Information*. 45 (2), 285-310.

¹⁷ Kweka, D. (2004). The Role of Local Knowledge and Institution in the Conservation of Forest Resources in the East Usambara. As cited in Msuya, T.S. and Kideghhesho, J.R. 2009 the Role of Traditional Management Practices in enhancing Sustainable Use and Conservation of Medicinal Plants in West Usambara Mountains, Tanzania. *Tropical Conservation Science*. 2(1): 88-105. p. 98.

¹⁸ Behailu, B.M., Pietula, P.E. & Katko, T.S. (2016). Indigenous Practices of Water Management for Sustainable Services: Case of Borana and Konso, Ethiopia. *SAGE Open* (October-December), 1-11. P. 2.

¹⁹ Garra, K. (2006). *Konso Water and Gods*. Perugia, Italy: Museo Tamburo Palante.

²⁰ Behailu, B.M., Pietula, P.E. & Katko, T.S. *Op. Cit.* at P. 6.

²¹ Arsano, Y. (2007). *Ethiopia and the Nile: Dilemmas of National and Regional Hydropolitics*. (Doctoral Thesis). University of Zurich, Switzerland.

²² Behailu, B.M., Pietula, P.E. & Katko, T.S. *Op. Cit.* at P. 4.

²³ Behailu, B.M., Pietula, P.E. & Katko, T.S. *Ibid* at P. 5.

Cameroun region, traditionally, the killing of certain animals for consumption although not forming a taboo, is prohibited. The African Elephant is considered a totem around that region and as such not to be killed²⁴

African cultural practices linked nature to God. Nature and resources from nature were given a sacred connotation and as such were treated with the utmost respect. Religion permeates every aspect of the being of Africans. It is integrated into the everyday activities of the African and so the African draws no clear cut separation between what is secular and what is sacred. African traditional knowledge systems are more ecologically embedded with indigenous spirituality being a fundamental element in this approach. African tradition is one that bears close linkage to ancestors and inanimate objects which are believed to communicate and to have life and as such to be treated with respect. Some may be quick to question whether indeed the earth has the ability to speak. However the view as held by African traditional knowledge system finds support in the Gaia hypothesis wherein Lovelock²⁵ holds the belief that the earth is a self-regulating system. Therefore, whether or not Lovelock supports the claim of conscious dialogue, by his hypothesis, he certainly implies that human actions can form a part of such ecological self-regulation.

Traditional African culture is oriented towards the preservation of life and promotion of whatever enhances life. In promoting life, African traditional culture is connected to nature. Nature was viewed as mother earth and its inhabitants her children. God, man and nature are interrelated and interdependent. The African relationship with nature is rooted in God who is revered as the creator of all. Therefore humans, animals, plants and mineral all form a close relationship of unity, depending on one another. In the Bongo district of North-East Ghana for instance, a Tindaana (Chief priest), Tingaane (Earth Shrine) and a Tinkogre (Mother Erath) exist.²⁶ The Tindaana acts as custodians of the land serving as a link between the gods and the people. Traditional protected areas²⁷ are earmarked and protected by the Tindaana which are not to be disturbed with trees

²⁴ Abugiche, A.S., Egute, T.O. & Cybelle, A. (2017). The Role of Traditional Taboos and Custom as Complementary Tools in Wildlife Conservation Within Mount Cameroon National Park Buea. *International Journal of Natural Resource Ecology and Management*. 2 (3), 60-68. P. 63.

²⁵ Lovelock, J.E. (1989). *Gaia: A New Look at Life on Earth*. Oxford, UK: Oxford University Press.

²⁶ Aniah, P., Aasoglenang, A. T., & Bonye, S. Z. (2014). Behind the Myth: Indigenous Knowledge and Belief Systems in Natural Resource Conservation in North East Ghana. *International Journal of Environmental Protection and Policy*. 2 (3), 104-112. P. 107.

²⁷ This includes areas such as sacred groves, sacred hills, water points and burial sites.

allowed to grow, animals and birds of all kinds allowed to live without any disturbance, poaching or interference by man. This preserves bio diversity and prevents over exploitation of natural resources.

Humans were viewed as part of nature but as centre of the universe. All beings lived in a harmonious and peaceful connection with other humans, living beings and inanimate beings within their environment. Acts that promoted harmony and peace in the web of relationships existing within the community were considered as good. Land was sacred and Africans have a strong connection to it both as home, for religious purposes and for economic purposes. Land is believed to be given for the well being of the community. Thus individuals are brought up knowing that land is to be used for each individuals well being and for the well being of the community as a whole. Land was viewed as communal property, allotted by God to the community through their ancestors. Water was respected as a symbol of life and was treated as sacred. Watering places were considered sacred and such treated with respect. Myths and taboos were made concerning such places to aid their preservation. Natural vegetations like trees, and forest were considered sacred and certain trees as ideal places to meet God. Thus they were preserved due to the belief of sacredness. Also, they were seen as medicine to man and animal. Every part was useful, from the leaves, to the bark, to the wood and the root. These attitudes led to preservation of trees, vegetation and ecology.²⁸ Taboos were formulated against cutting certain useful and sacred trees or destroying vegetation.

Contemporary Africa has lost this touch to religion. There is now a dichotomy between what is secular and what is religious there is a marked change in people's view of nature and its resources. This change has led to increased tension among people within a community and increased tension among communities within a state. Traditional African culture revered God as the maker and creator. He was considered the sole owner of it and as such dwells in special places such as mountains, trees, etc. Thus the earth was considered sacred and no one had the right to engage in

²⁸ The Massai of Kenya and Tanzania, placed great reverence on tress and grasses as blessing from God. Ehile trees provided shade for meetings, their leaves were used for purification ceremonies and rituals. From the Chagga of Tanzania, the Isale (dracaena) tree was considered as sacred and its leave used in all rituals and blessing ceremonies and occasions of reconciliation, forgiveness and requests.

activities that destroy it. The power to create and destroy was believed to dwell with the creator alone.

Modern practices place little premium on environmental concerns. This contrasts with African traditional thought process which places non-human and human inhabitants on an equal pedestal of importance in sustainable management of natural resources. It is thus no surprise that modern business places more value on 'natural resources' than on 'natural ecosystem'. This has led to decision making that tends to be human use-value oriented rather than an approach that places value on the roles and relationships between all life forms based on respect for living entities, and for their natural interrelationships.

The African traditional knowledge system and practices from the time of colonialism and subsequently neo-colonialism, has been subjected to subjugation and oppression. The 'myth of emptiness', as posited by Blaut²⁹ was the logic guiding the invasion and subjugation of the African approach to life. By it he posited that Africa was empty of people, and where people were found, they were nomads, mobile and wanderers lacking any sense of political sovereignty, territorial claim, rationality and any idea of property. Mazrui posits that the colonization of Africa, led to unprecedented changes in African societies in the political, economic, cultural and psychological aspects.³⁰ Africa and Africans have been treated as uncivilized, primitive and inferior. For most Africans, their pride of the continent and her abilities is one which is warped and mostly Eurocentric. For them nothing African is of any value and for anything to work then it must come from outside Africa. Thus solutions to challenges within Africa can only be sought outside Africa, to them. The colonial era was driven by studies which were of European imperialistic interest thus generating knowledge that aided in the easier control of Africa by the colonial administration. Murunga opines that they placed emphasis on cannibalizing African languages, customs, values and cultures.³¹

²⁹ Blaut, J. M. (1993). *The Colonizers Model of the World: Geographical Diffusion and Eurocentric History*, New York: Guilford Press P. 15.

³⁰ Mazrui, A.A. (2010). 'Preface: Black Berlin and the Curse of Fragmentation: From Birmarck to Barrack', in A. Adebajo, *The Curse of Berlin: Africa after the Cold War*, pp. v-xii, Scottsville: University of KwaZulu-Natal Press. Xii.

³¹ Murunga, G. R. 2008. Thought on Intellectual and Institutional Links between African and Black Studies. *Africa Development*. XXXIII (1), pp. 40-66. P. 44

There was a difference between the realities on ground in the African continent the colonizers had come to meet and their institutional and administrative practices. This has led to a situation today where there is a wide disconnect to the everyday lived realities of Africa. Thus, built around the erroneous premises that Africa had no history and that Africans were primitive, they strove to foster their ways and manners of approach to issues on Africans. Murunga identifies this subjugation as one of race accumulated through the heritage of hate by which black people were treated as uncivilized, primitive, inferior and as such less than human.³² This has led to an Africa where Africans live in mutual ‘ignorance’ of their cultural heritage, values and lifestyle.

There is an urgent need for collective struggle to free the African mindset from this feeling of inferiority that has held Africa down for so long. This mindset not only fostered ignorance but accelerated the decline of pan African solidarity. The idea of African backwardness was propagated by Europe through the several literatures of travelers, missionaries and explorers all in a bid to paint their invasion as a civilizing mission. Thus anthropologist who studied non-western societies held to the conviction that the modes of thinking of Africans were intrinsically erroneous because Africans traditional thought process did not create a distinction between empirical events and those that are not.³³ However as opined by Keita, European theorists have recognized that the systems of thoughts of the African people emanates from a holistic world view.³⁴

Africans must create their own path that richly describes the contours of their lives from the point of view of Africans themselves. The time has come to correct the erroneous perception of cultural inferiority that has held Africa down. Pal Ahluwalia and Paul Nursey-Bray express this when they posit that the African culture has been belittled, her history denied and where not so denied, appropriated.³⁵ Maldonado-Torres saw this in the light of coloniality which he defines as long-standing patterns of power that emerged as a result of colonialism, but that define culture, labor, intersubjective relations, and knowledge production well beyond the strict limits of colonial

³² Murunga, G.R. *Ibid.* at p. 41.

³³ Keita, L. (2007). Horton Revisited: African Traditional Thought and Western Science. *Africa Development*. XXXII (4). pp. 139-169. P. 142.

³⁴ Keita, L. *Loc. Cit.*

³⁵ Ahluwalia, P. and Nursey-Bray, P. (1997). ‘Introduction’, in P. Ahluwalia and P. Nursey-Bray, (Eds.) *Post-Colonialism: Culture and Identity in Africa*. Commack, New York, Nova Science Publications, Inc. pp. 1-10 at p. 2.

administrations.³⁶ He saw evidences of this in books, academic performance criteria, cultural patterns common sense, and peoples self image.³⁷ Ndlovu-Gatsheni describes this as theft of history.³⁸ He captures this beautifully when he states that under

‘colonial governmentality, the colonized African people were forced to lose their African subjectivity as they were reproduced by the colonial paradigm as objects. In the process what was lost was African ‘personality’ as a form of sovereign subjectivity. Consequently, Africans continue to suffer from alienation.’³⁹

Gumede identifies the critical issues acting as constraints to African advancement as: thought leadership, thought liberation and critical consciousness.⁴⁰ This takes into consideration the need for a conscious African citizenry firmly rooted in pan-Africanist philosophies, aware of their glorious past and aware of the importance of her knowledge production through her traditional knowledge systems. The dominance of foreign thought and the relegation of the African thought process to the background have led to the conceptualization and implementation of policies which have met with abysmal failure in Africa. Gumede sees thought liberation of Africa as long overdue.⁴¹ Africa must return to her thought process which had been historically nuanced, culturally sensitive and contextually grounded. Gumede identifies thought leaders such as Imhotep, Amenemhat, Amenhotep and Akhenaton.⁴² Other great thinkers produced from Africa like Cheikh Anta Diop, Frantz Fanon and a host of others presents Africa with a rich array of knowledge. The richness and advanced nature of African thought leadership bears relevance in instances such as much referenced Ethiopian victory of Adwa.

A way forward as identified by Chinweizu⁴³ is that of the decolonization of the African mind. The over reliance of so called western experts in matters concerning Africa must give way to African

³⁶ Maldonado-Torres, N. (2007). ‘On Coloniality of Being: Contributions to the Development of a Concept’, *Cultural Studies*, 21 (2-3), March/May, 240-270. P. 243.

³⁷ Maldonado-Torres, N. *Loc. Cit.*

³⁸ Ndlovu-Gatsheni, S. J. (2015). Genealogies of Coloniality and Implications for Africa’s Development. *Africa Development*, XL (3), pp. 13-40. P. 16.

³⁹ Ndlovu-Gatsheni, S. J. *Ibid* at p. 30.

⁴⁰ Gumede, V. (2015). Exploring Thought Leadership, Thought Liberation and Critical Consciousness for Africa’s Development. *Africa Development*. XL (4), 91-111. P. 91.

⁴¹ Gumede, V. *Ibid* at p. 93.

⁴² Gumede, V. *Ibid* at p. 101.

⁴³ Chinweizu, (1987). *Decolonizing the African Mind*. Lagos: Per Press.

thought process. Citizens through critical consciousness must be made aware of their rich African traditional heritage. If Africa is to reclaim her lost glory, then such progress must be based on critical consciousness as an important factor.⁴⁴ Africa can only get out of this quagmire when she returns to the reappraisal of her ancient civilization, cultural heritage and traditional knowledge system, only drawing insight from others when such are really enriching. Africa must take a much needed step backwards in order for her to investigate the past as it relates to her wealth of cultural heritage in order to make a fresh start by drawing inspiration from her wealth of wisdom and knowledge embedded in her roots which promote natural resources management.

As stated by Etounga-Manguelle, Africans must return to their root by curing African diseases identified by Africans, through African medicines prescribed by African doctors.⁴⁵ There is a need for reappraisal of African culture if we must progress. It is in this light that Leopold Sedar Senghor opines that “a people cannot be what it is by denying itself.” Africa must place as a priority, cultural practices aimed at natural resources management. Furthermore, Amuwo opines that African states need to be historicised.⁴⁶ Those before us may not have done so much in pushing African ideals, norms and practices but as Fanon posits,

We must rid ourselves of the habit, now that we are in the thick of the fight, of minimizing the action of our fathers and of feigning incomprehension when considering their silence and passivity. They fought as well as they could, with the arms they possessed then; and if the echoes of their struggle has not resounded in the international arena, we must realize that the reason for their silence lies less in their lack of heroism than in the fundamentally different international situation of our time.⁴⁷

⁴⁴ Mbeki, T. (2014). The Task of the African Progressive Movement. *The Thinker: Pan- African Quarterly for Thought Leaders*, Quarter (1) 59, 12-20.

⁴⁵ As cited in Ngouffo and Tchoffo, B. Culture and Sustainable Management of Natural Resources in Africa. *International Conference on the Cultural Approach to Development in Africa. 10-14 Dec. 2001. Dakar-Senegal.* pp 1-31. P. 14

⁴⁶ Amuwo, A. (2009). Capitalist Globalization and the Role of the international Community in Resource Conflicts in Africa. *Africa Development*. XXXIV (3 & 4), pp 227-266. p. 229.

⁴⁷ Fanon, F., (1967). *The Wretched of the Earth*, Harmondsworth, Penguin . P. 166.

The call for returning to the draw board does not represent a call for Africa to reject everything foreign. It only represents a call to consider in first place her own options and then only when truly enriching, draw from foreign insight. The realities of all peoples are not the same and African must learn this. Mwangola puts it beautifully by stating that:

If a paradigm shift is to occur in the study of and by African communities, such discourses must be decoupled both from Eurocentric moorings and any Ahistoric Afrocentric alternatives denying, ignoring or downplaying an African presence and present.”⁴⁸

The African knowledge process is not perfect and can learn from modern approaches. However just as Shrivastava⁴⁹ recommended, we have to start trying to understand organization from the natural environment perspective. This requires us to get off our high horse of modernity in order to like the African traditional knowledge system offers, get into the natural environment. This therefore calls for a reorientation calling us towards adapting around the natural environment instead of making the natural environment adapt to us.

There is need to change the mindset that modern western approaches are better and turn towards an African approach that is more practical and empirically proven to work within communities in Africa. Africa must first learn to trust herself and her institutions in resolving certain challenges before then looking out to use what is good and applicable from the west. We cannot throw away the baby with the bath water by demonizing everything western. However we can learn from them and also improve on what they have. But Africa must never play second fiddle to them by placing their ideologies and ideas on a superior pedestal to African ideas and ideology.

Africa has spent too much time emphasizing on how things are done outside with writers trying to co-opt foreign systems into African situations. African writers must begin to look at issues from an African perspective. Africans must take pride in their heritage and on this foundation approach

⁴⁸ Mwangola, M. S. (2008). Nurturing the Fourth Generation: Defining the Historical Mission for our Generation. *Africa Development*. XXXIII (1), 7-24.p. 17.

⁴⁹ Shrivastava, P. (1994). Castrated Environment: Greening Organizational Studies. *Organization Studies*, 15(5), 705-726.

issues. No nation ever developed pride in her identify or developed relying on knowledge handed them by others. Keita points to the need for intellectual self- appraisal of Africa which he identifies as having being deficient.⁵⁰ Europe and Asia⁵¹ have gone far in this regard and not until Africa begins to look within will she find her bearing. African can draw reflections from the writings of African scholars such as Ibn Khaldun, Zara Yacob, Ahmed Baba amongst others.

Some African writers have spoken from the other end reducing the African cultural heritage to nothing.⁵² Murunga identifies such as “‘experts’, who, while living off Africa, serve a system pitted against Africa’s needs.”⁵³ Western anthropological theory saw African modes of thoughts as incommensurable with the rational modes of expression symbolized by the west.⁵⁴ According to Keita, evidence of advancement in Africa can be traced to evidence of the monumental ruins of Egypto-Nubian culture which points to some systematic knowledge of the laws of mechanics, which is further supported by existing manuscripts in geometry and trigonometry.⁵⁵ He further highlights Egyptian invention of numbers and calculation, geometry and astronomy, and human physiology.⁵⁶ Renowned scholars such as Cheikh Anta Diop posits strong indisputable evidence placing Africa in the realm of scientific discoveries.⁵⁷ Sarton identifies Africa’s role in mathematics which was later passed on to the Greeks by the Egyptians who were pioneers in that realm.⁵⁸ Diop identifies the spread of iron smelting technology, glass making and medical practices extensively throughout Africa.

A new crop of African scholars are beginning to emerge who recognize the value of the African traditional heritage and cultural practices in natural resource management. The positive role culture and traditional African practices can play in this regard is being pushed to the fore front. Africa is a land with rich diversity in the number of indigenous cultural groups with each possessing a rich

⁵⁰ Keita, L. *Op. Cit.* at p. 165.

⁵¹ China for example has embarked on self appraisal relying on the reflections of writers such as K’ung Fu-tzu (Confucius) and Lao Tsze.

⁵² Mudimbe suggests an alternative thought mode for Africa, See Mudimbe, V. Y. (1988). *The Invention of Africa.*, Bloomington, Indiana University Press.

⁵³ Murunga, G.R. *Op. Cit.* at p. 43.

⁵⁴ Keita, L. *Op. Cit.* at p. 144.

⁵⁵ Keita, L. *Ibid.* at pp. 157-158

⁵⁶ Keita, L. *Ibid* at p. 158.

⁵⁷ Diop, C.A. (1991). *Civilization or Barbarism*, New York: Lawrence Hill Books.

⁵⁸ Sarton, G., (1936). *The Study of the History of Mathematics and the Study of the History of Science*. New York: Dover Publications. P. 9.

wealth of knowledge as regards various human fields. Indigenous knowledge systems in Africa are applied in harmony with the natural and spiritual world. This takes into consideration, local ecological limitations thus maintaining a sustainable utilization and protection of natural resources which are commonly shared. The traditional African knowledge systems are based on a dynamic and sophisticated understanding of their local surroundings which they have studied and observed from generations. From outside experiences and innovations some of these systems have witnessed change and improvement overtime. These systems identify a challenge from its onset and find ways to accommodate or mitigate these changes.

Krech's (1999)⁵⁹ refutes the sustainability of indigenous practices and emphasizes indigenous communities as having in some cases exploited parts of the natural environment, and in certain cases, severely. It becomes pertinent to note at this point that this work does not seek to hold that traditional African knowledge system creates for communities that are perfectly sustainable natural resource managers. However this work makes the point that African traditional knowledge system provides for a culture of learning from mistakes or from behavioral patterns that are unsustainable, which are subsequently incorporated into cultural approaches to natural resource management as well as actual management practice.

7.0 Critical Evaluation

Contemporary Africa is rife with conflicts over natural resources. The magnitude of such conflicts has caused some to question whether natural resources are indeed a blessing or a curse for the region. Most of the wars in Africa have been fought over or are being fought over natural wealth control. There has been a relapse in conflict and tensions over natural resources use due to among other causative factors, the application of a one-size-fits-all approach to natural resource management. Majority of these conflicts, stem from dissatisfaction over management of such resources. Traditional Africa was also blessed with resources. Although the understanding of the magnitude of natural resources may not have been known then as it is known now, it does not change the fact that some natural resources were known back then. Although disagreements over natural resources occurred, the nature of grave conflicts over natural resources as is evident now

⁵⁹ Krech, S. (1999). *The Ecological India: Myth and History*. New York: Norton.

was not the order of the day. African cultural heritage was rich in the nature of natural resource management, operating under the ideology of communalism.

Contemporary thinking and ideology imputed from outside Africa is partly responsible for the conflicts emanating from problems with natural resource use in Africa. In debates about the way out of these impasses of natural resources management in Africa, focus has tended to be on everything except African indigenous based solutions. A more practical solution would be to examine resource management within particular African community efforts and traditional knowledge systems which the people see as more in touch with their realities than applying rules, mechanisms and institutions which the people see as alien to them.

African traditional knowledge system and practices can ensure efficient management of natural resources within Africa. African values of communality in natural resources management is founded on the *ubuntu* spirit and the ideology of one Africa into many, many Africans into one. With this, Africans are less prone to conflicts over natural resources. Amuwo has stated that one of the effects of globalization is that it props up forces that marginalize African values, standards and traditions. One of which he identifies as African mechanisms for conflict prevention and resolution.⁶⁰ This can be streamlined to African mechanisms for conflict prevention and resolution emanating from natural resource use. Everyone had a religious and moral responsibility towards the environment. In communal Africa, nature and its resources were the collective heritage of the people and were not owned by one man but were jointly held in trust by one generation for the next. Traditional indigenous practices provided for due consultation of people before decisions are made. This helps in ascertaining whether and the extent to which the people's interests would be prejudiced, before undertaking or permitting any activity pertaining to their lands. Due to the communal nature of existence, everyone participates in the benefits accruing from a jointly owned resource. Trust estates were also common traditional practices in African communities. Elders of communities usually held a resource in trust for and for the benefit of the whole community.

⁶⁰ Amuwo, A. (2009). Capitalist Globalization and the Role of the International Community in Resource Conflicts in Africa. *Africa Development*. XXXIV (3 & 4), 227-266. P. 237.

Drucker's⁶¹ definition of management as a specific approach or practice to organize humans and other resources to effectively achieve a goal shows that African traditional knowledge system presents a complete management system which has the added advantage of having been successfully developed over thousands of years. African traditional knowledge systems thus are at an equivalent level with modern natural resource management. Its value is immense and as such can teach us a lot. Its decision systems and knowledge base is rooted in the very land where the people live and work and exercise management of natural resources, it is not detached neither does it operate as some abstract concept.

Indigenous African knowledge systems is one in which management practice are intrinsically intertwined and not separated. It is a system which is a mixture of management knowledge, beliefs, and practice which all operate in a holistic manner. Unlike modern natural resource management practices which are often developed in isolation or in accordance with the market place before subsequently imposed upon the natural environment, indigenous African knowledge systems are developed in accordance with local ecological needs. Traditional African knowledge systems are not static but dynamic, emerging from practical management experience within a particular local environment. It is knowledge concerning survival on the land, which has been successfully achieved over generations.

Certain challenges have faced the current utilization of traditional African thought systems in natural resources management. One challenge that such practices and knowledge system has always faced is that of its validation by means of scientific studies. It must be noted however that such traditional knowledge system does not seek to be recognized or accepted neither does it need to demonstrate the scientific value of their knowledge and management approach. It is a system that has been empirically tested over the years by indigenous African communities. Their sustainability over the years is actual proof of their efficacy and efficiency. Whiteman posits instead that TEK already relies on cultural tradition, backed by hundreds or thousands of years of trial-and-error practice, and faith, to validate management approaches.⁶² This forms the basis of

⁶¹ Drucker, P.F. (1986). *The Frontiers of Management: Where Tomorrow's Decisions are being Shaped Today*. New York: Truman Talley Books.

⁶² See Whiteman, G. *Op. Cit.* pp. 261-277.

Afrikology theory. It recognizes that mainstream scientific knowledge does not hold all the answers to humanity's problems and as such requires the development of new knowledge. New knowledge in this case is reverting to an African heritage knowledge based solution as a long-term solution to African problems, laying the ground for the institutions of knowledge creation and their application to human needs.

Another challenge faced has been the transfer of such knowledge to the present generation. While for some it is a case of the present generation being too westernized and not appreciating the richness of their cultural heritage, for others, it is that of the holders of these traditional indigenous knowledge not trusting enough the current generation of westernized youths. Another challenge facing African traditional knowledge system and its perceived effectiveness is the absence or paucity of data on their social, economic and environmental impacts. It is in this light that Mwangola calls for the recognition of Africans as premier producers of knowledge emanating from Africa.⁶³ Another problem posed is the mostly oral nature of African traditional knowledge which sometimes dies with the death of the custodian of the knowledge caused mostly by the non cooperation between African intellectuals and 'traditionalists.' Not much can be achieved with the current distance between both actors. The need for cooperation is captioned by Ayi Kwei Armah in his novel *Kmt: In the House of Life* thus:

[W]e are seeking to knock holes in the walls separating us...we need not just to knock holes in these obsolete walls; we need to knock them down completely. We need not only to touch each other through permissive holes; we need to embrace each other in the fullness of liberating possibility. Working together, living together...We would like to sit with you, eat with you, sleep with you, lie with you, in short share everything with you, so that together we can bring your knowledge and ours into one stream...what we propose is this: let us meet here to decide together...⁶⁴

African traditional knowledge systems are high in internal legitimacy but are in need of conversion to high external legitimacy by these practices given recognition within government spheres with

⁶³ Mwangola, M. S. *Op. Cit.* at p. 10.

⁶⁴ Armah, A. K. (2002). *Kmt: In the House of Life*. Popenguine: Per Ankh, pp. 137-138.

relevant legislations on natural resource governance. This is more so when African cultural practices provide a strategy for pursuing the goals of various multi lateral environmental treaties such as the Convention on Biological Diversity (CBD), The United Nations Convention to Combat Desertification (UNCCD), and the United Nations Framework Convention on Climate Change (UNFCCC). International Council for Science (ICSU) identifies the value of traditional knowledge by, describing traditional knowledge as follows: Traditional knowledge is a cumulative body of knowledge, know-how, practices and representations maintained and developed by peoples with extended histories of interaction with the natural environment. These sophisticated sets of understandings, interpretations and meanings are part and parcel of a cultural complex that encompasses language, naming and classification systems, resource use practices, spirituality and world-view. Policy makers are beginning to be pay attention to such local management systems which have persisted for years and which exemplify careful natural resource management. The principles which underline these systems provide opportunities for development of new techniques for natural resource management in Africa, allowing for efficiency and regeneration. Most policies have been mainly growth oriented paying little or no attention to the effects on natural resources.

8.0 Conclusion and Recommendations

Traditional African knowledge systems have been identified as possessing a rich source of knowledge generally. More specifically, contemporary natural resources management within Africa is capable of being managed through reliance on African traditional knowledge system thus promoting Afrikology through reliance on African ideas and ideology. African world view and traditional belief system has a rich heritage that encourages the sacredness of the universe and all created things. Despite the richness that lies within, traditional African knowledge systems have for a long time taken the back burner in natural resources management in Africa. It is in line with this that the following recommendations are made.

Africans must revisit their traditional heritage and recover their African wisdom which has been affected by contemporary eurocentrism. Africans must draw from their wealth of wisdom, taking what is proper and blending it with contemporary ways of natural resource management. Traditional African religion which focuses on the sacredness of human bond and the preservation of nature for continuation of life, as well as the respect and reverence for nature must be taught to

current and future generations of Africans. Contemporary Africa must borrow a leaf from traditional Africa in the context of natural resource management.

African thought systems must be taken into consideration in the event of natural resources management. Efforts should be anchored on traditional ways of nature conservation which can be refined to modified attitudes suitable for contemporary Africa. The African view of communality and beliefs of sacredness of the universe should be taken into consideration if Africa is to manage efficiently, natural resources. African cultural heritage should be the point of departure in natural resources management in Africa. The richness of our cultural tradition should be recognized by policy makers. Love for Africa and what she stands for, her belief and cultures of oneness and regards for all being and even non living things must be revived. No nation progresses when it fails to realize the potentials of its culture but aims to copy that of other regions.

An adjustment of mindsets of Africans is needed. Africans must begin to see the beauty and richness of values and principles which are embedded in her culture and hold her heritage dear. A strategy aimed at intervention in this regards will require catching them young. From the cradle Africans must be taught to take pride in what is theirs as well as taught to understand that African ideas, values and methods are valuable as well as important and can be effective. The era of the western-ideas-first approach towards forming policies has got to give way for an African-approach-first way of viewing things. It is not too late to begin a new despite the errors of the past.

There is need for inter-professional linkages between those who study culture and those who are charged with the responsibility of creating, managing and directing policies in Africa. There should be a readjustment in co operations beyond the realm of academics in order to provide relations between African intellectuals and ‘traditionalists.’ The distance that has been created over the years between academics, policy makers and traditionalists must be brought down.

There is need for training programs to be organized on the African traditional knowledge systems and approaches to natural resources management within Africa. This training should target specific persons such as policymakers and technical service officers.

As regards the lack of or paucity in monitoring and documentation of the effectiveness of African cultural practices of natural resources conservation, it is recommended that good monitoring provisions be put in place in order to measure the successes of practices against outset baselines.

There is need for the development of a performance enhancement framework to take into cognizance the monitoring and measuring of effects of indigenous based practices in effective management of shared natural resources.

The informal rules and constraints provided by African traditional knowledge systems have the potential to ensure natural resource management. These informal rules just need to be formalized through legislations. National legislations should recognize traditional conservation practices as pertinent for natural resource management. National legal principles should be built around traditional knowledge systems and values which are positive.

The blind and naive adaptation to only western models in attempting to draft out a plan for natural resource management in Africa has only led to further drift and conflict. The African traditional values of community, her ideology of “I am because you are” is greatly opposed to the western model of “you are because I am”. We must return to our roots if we are to forge ahead as a people. Notions of individualism which came with colonial rule must give way for the African spirit of *ubuntu*. Communal thought system and practice must be revived which have the tendency to halt conflicts over natural resources. Africans must seek to know how culture influences sharing and joint use of natural resources thus, leading to the curing of African diseases identified by Africans, through African medicines, prescribed by African doctors.

This generation must take a stand to see a change. No more sitting behind the sidelines and allowing African traditional knowledge systems be silenced or made to feel inferior. We need to as a people exploit the rich cultural knowledge that is available to us. And following the words of Armah:

Let us mix the long memories of a people destroyed with new narratives of our own making, as we move into space of our own choosing, as we dream in images woven from our people’s best desires, as we plan on designs drawn from our own reflection, then make again the universe that might have been but was not, here in

this place, now in this time... Let us walk together, invoking the future into now.⁶⁵

⁶⁵ Armah, A.K. *Ibid* at p. 12.

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