

AFRICAN ECOLOGICAL SPIRITUALITY

Perspectives on
Anthroposophy and
Environmentalism

A HYBRID OF APPROACHES

Edited By: Ikechukwu Anthony KANU, OSA, PhD

**AFRICAN ECOLOGICAL SPIRITUALITY:
PERSPECTIVES IN ANTHROPOLOGY AND
ENVIRONMENTALISM**

A HYBRID OF APPROACHES

**Edited By
Ikechukwu Anthony KANU, OSA, PhD**

AFRICAN ECOLOGICAL SPIRITUALITY: PERSPECTIVES IN ANTHROPOLOGY AND ENVIRONMENTALISM

A HYBRID OF APPROACHES

Edited By: Ikechukwu Anthony KANU, OSA, PhD

First Published in 2021

A publication of The Association for the Promotion of African
Studies

COPYRIGHT © 2021 by The Association for the Promotion of
African Studies

All rights reserved: No part of this publication may be reproduced, stored or retrieved or transmitted in any form or by any means electronic, mechanical, photographic, recording or otherwise without the prior written permission of the Editor

ISBN: 978-978-997-557-0



13245 Trebleclef Lane Silver Spring
20904, Maryland,
United States of America

Dedication

Dedication

*Celebrating Professor Ikechukwu Anthony KANU, OSA
@40*

“...now the text ends, and the commentary and fascination begins”

TABLE OF CONTENTS

Dedication - - - - - **iv**

Table of Contents - - - - - **v**

Introduction:

African Ecological Spirituality and the Environment ix

Chapter One

African Eco-Spirituality: Nature and Sources

Ikechukwu Anthony KANU, OSA, PhD - - 1

Chapter Two

African Cosmvision and
Eco-Spirituality: Healing the Ecological
Crisis in Africa

Anthony Raphael Etuk, PhD - - - 23

Chapter Three

African Sacrality and Eco-Spirituality

Jude I. Onebunne, PhD & Nmesoma I. Chijioke - 49

Chapter Four

Igwebuike as the Operative Condition
of African Eco-Spirituality

Ikechukwu Anthony KANU, OSA, PhD - - 71

Chapter Five

The Human Person, Trees and Spirituality
in Igbo Cosmology

Ifeanyi J. Okeke, PhD - - - - 87

Table of Contents

Chapter Six

African Mythologies and Eco-Spirituality

Ikechukwu Anthony KANU, OSA, PhD - - 111

Chapter Seven

African Trado-Medicine and Eco-Spirituality

Jude I. Onebunne, PhD - - - - 129

Chapter Eight

African Forests in the Face of Coronavirus
(Covid 19) Pandemic

Emmanuel Osewe AKUBOR, PhD - - - 151

Chapter Nine

Eradication of Toxic Wastes and Pollutants
in Ogoni Land: An Igwebuiké Approach

Princess O. Idialu, Ph.D - - - - 207

Chapter Ten

An Ecological Reminiscence of the
Environment in William Wordsworth's
"Nutting" and Gabriel Okara's
"The Call to the River Nun"

Dauda Bivan Amos - - - - - 229

Chapter Eleven

Cybernetic Immortality and Ecological
Imbalance: Insights from African
Anthropologist Physico-Spiritual Ecology

Idoko Vincent Edache - - - - 245

Table of Contents

Chapter Twelve	
Conflicting Perceptions of Traditional Medicine in the Oku Fondom of the Bamenda Grassfields (Cameroon)	
<i>Nixon Kahjum Takor & Gilbert Mbingek Wensakwi</i>	271
Chapter Thirteen	
Green Cultural Practices and Sustainable Business Management	
<i>Okanazu, Oliver Okechukwu & Akele, Francis Egberi</i>	- - - - 289
Chapter Fourteen	
African Cultural Beliefs and Eco-Spirituality	
<i>Jude I. Onebunne, PhD & Success O. Okechukwu</i>	- 319
Chapter Fifteen	
Herdsmen/Farmer's Crisis and its Effects on Ecology	
<i>Atsue Iorliam Isaac</i>	- - - - 333
Chapter Sixteen	
Food Security, Technological Revolution and Africa's Quest for Development in the 21st Century: Examining the Nexus	
<i>EGBULE, Philip Onyekachukwu & UZOMAH, Ngozi Louis, PhD</i>	- - - 343
Chapter Seventeen	
Education and the African Environment	
<i>OMOJOLA Immaculata Olu, (SSMA), PhD</i>	- 365

Table of Contents

Chapter Eighteen					
Local Press, Food Security and the Environment in Nigeria: Critical Perspectives					
<i>Blessing Arsun Dapoet</i>	-	-	-	-	381
Chapter Nineteen					
Role of the Press in Curbing Ecological Crisis in Nigeria: An Appraisal					
<i>Tahna'an Rosemary MOVEN</i>	-	-	-	-	407
Chapter Twenty					
Eco-Media and Greenhouse Gas Emissions in Nigeria: An Empirical Study					
<i>Justine John DYIKUK</i>	-	-	-	-	431
Chapter Twenty One					
A Qualitative investigation of the Impacts of Covid-19 Lockdown on responsible consumption among women in Enugu State, Nigeria					
<i>Catherine Chiugo Kanu, Ph.D., Uchenna Solomon Agbo, Ph.D., Chinyere Anita Anetu</i>					451

INTRODUCTION

African Ecological Spirituality and the Environment

The world is currently experiencing the severe consequences of the mismanagement of the environmental. This environmental crisis is posing a serious threat to the existence of the human person alongside other living organisms within the ecosystem as the exploitation of nature is finding expression in deforestation, desertification, extinction of species, forced migration, bush fire, air pollution, soil erosion, oil depletion, ozone depletion, greenhouse gas increase, extreme energy, water pollution, natural disasters, metals and solid minerals depletion, etc., (Gwamna 2016). Chiras (1989) sums up the fears in these words: "Together, the problems of overpopulation, depletion, and pollution have created an ecological crisis – a threat to the integrity of natural systems of which humans are part, and therefore a threat to the survival of human life." (p. 5)

Regarding deforestation, which involves the removal of forest products, thereby converting the land to a non-forest use, is resulting in the damage of the habitat, biodiversity loss, aridity, etc. As a result of the disappearance of tropical rainforests, ecosystems preserved in these thick forests are facing extinction. Human activities such as digging of the soil and cutting down of plants have led to erosion (Ehrenfed 1978). Thus, nutrients needed by plants are washed away by erosion; there is also the reduction of the quality and quantity of land, the pilling of sediments inside streams, lakes, brooks and other bodies of water, etc., which is not healthy for the organisms residing in these water bodies. There is also the pollution of the air, land and water bodies with toxic substances and noise which impair the normal functioning of the ecosystem by spreading tropical diseases, extreme weather condition, crop failures, poor crop

yield, death of living organisms, loss of species, loss of livelihood of fishermen, etc.

Africa currently suffers desertification, resulting from human activities like overcultivation, overgrazing, deforestation and poor irrigation. There is also the problem of the depletion of the ozone layer which results to global warming as manufacturing industries vent smoke and discharge chemicals that pollute the air and water sources. The likely consequence of global warming is that more people might get sick or die from heat and stress related problems due to excessive heat waves in the daytime and warmer temperatures in the nights; there is also the fear about severe droughts, erratic climate conditions as well as increase in natural disasters like earthquakes, tidal waves, hurricanes, tsunami, tornados, flood, and erosion (Emiola 2013). Thus, Nnamani (2005) writes:

Largely through human activity, life on earth faces serious danger of extermination. Since the dawn of modernity, humans have sequentially polluted, degrade and destroyed the very environment which sustains their lives and those of other living organisms. Not only have they succeeded in making the environment hostile to life, they have also turned it into a breeding ground for usual and unusual diseases and sickness (p. 20).

To address this fundamental problem, Francis (2015) and Ruether (1992) hold that there is a need for a new humanism that is capable of articulating relegated perspectives in the service of an integrated vision of the environment and life that is sustainable; a humanism outside of the Western world's materialism and consumerism (Delaney, 2009) and the mechanistic and capitalistic worldview of the modern man (Schalkwyk, 2011) which are responsible for many intensive forms of environmental exploitation and degradation, leading to the global ecological and environmental crises as we have them

today. Pope Francis (2015) articulates the need for a wholistic approach to ecological crisis thus:

We urgently need a humanism capable of bringing together the different fields of knowledge, including economics, in the service of a more integral and integrating vision. Today, the analysis of environmental problems cannot be separated from the analysis of human, family, work-related and urban contexts, nor from how individuals relate to themselves, which leads in turn to how they relate to others and to the environment. There is an interrelation between ecosystems and between the various spheres of social interaction, demonstrating yet again that the whole is greater than the part (no. 141).

This is very important given the place that the human person occupies in the world or the universe. The human person is not just like other existing realities; and this is not in any way meant to disregard the integrity of other existing realities but to emphasize the central place of the human person in the ecosystem. The promotion of urbanization, industrialization and communization at the expense of the human person without whom such a promotion has no value is not sustainable (Delaney, 2009). Focusing on the rights of human persons as equal 'citizens' of this earth, Francis (2015) adds that: "human beings too are creatures of this world, enjoying a right to life, and happiness, and endowed with unique dignity. So we cannot fail to consider the effects on people's lives of environmental deterioration, current models of development and the throwaway culture" (no. 43).

Interestingly, in the face of all these, Africa is today united by the consciousness that individual destinies are caught up with the health of natural systems at the national, regional and continental levels. This Book of Readings on *African Ecological Spirituality: Perspectives in Anthroposophy and Environmentalism*

focuses on scholarly and indigenous perspectives regarding the evolution of eco-spirituality in Africa. It attempts at providing answers to fundamental questions that have been looming at the horizon of thought for years on the contribution of African spirituality to ecological discourse.

This book is a response to the quest for a sacralized worldview as African eco-spirituality is a manifestation of the consciousness and experience of the sacred in the ecology which may serve as a sustained source for African communities' and individuals' practical struggle for the healing of the earth's ecology and for humanity's sustainable living from the earth's resources (Taylor 2009; Schalkwyk, 2011). African eco-spirituality centers on "having a reverential attitude toward the environment in taking care of it while dwelling within its premises" (Suganthi 2019, n.pg.) and believes that the preservation of the environment depends on the spiritual awareness of men and women and an attitude of responsibility towards the ecosystem, which include tending, dwelling, reverence, connectedness, and sentience (Suganthi, 2019).

A cursory glance at the historical development of African anthroposophy, reveals that African earth-based spiritual traditions and innovative spiritual practices that are emerging in response to the painful realities of climate change, mass extinction, biodiversity loss, and the disruption of local and global ecosystems have for long not received the attention that it deserves. This work, therefore, would become one of the greatest ornaments and lights in the world of African eco-spirituality as it responds to questions that are long overdue from the world of African spirituality.

References

- Chiras, D.D., *Environmental Science: A Framework for Decision Making*. Addison-Wesley Publishing Company.
- Delaney, Colleen (2009). "Ecospirituality: The Experience of Environmental Meditation in Patients with Cardiovascular Disease". *Holistic Nursing Practice*. 23 (6): 362.
- Ehrenfed, David (1978). *The arrogance of humanism*. New York: oxford University Press.
- Emiola Nihinlola (2013) *Theology Under the Mango Tree: A Handbook of African Christian Theology*. Lagos: Fine Print & Manufacturing Limited.
- Francis, Pope (2015). *Laudatio Si (Praise be to You)*. Papal Encyclical on Climate. <https://www.ewtn.com>
- Gwamna, Dogara Je'adayibe (2016). *Ecological Crisis*. Nassarawa State University, Keffi. 29 January, Ph. D Lecture Class.
- Nnamdi S. O., "Afrika Der Zukunft Ist Schwarz", *Africa: the Future is Bleak*. In C. Umezina (ed.) *Essay in Philosophy* Nsukka. Afro - Obis Publications Ltd 2000, 23-35.
- Ruether, Rosemary Radford. (1992). *Gaia and God: An Ecofeminist Theology of Earth Healing*. HarperCollins, San Francisco.
- Schalkwyk, Annalet (2011). "Sacredness and Sustainability: Searching for a Practical Eco-Spirituality". *Religion and Theology*. 18 (1-2): 77-92.
- Suganthi, L. (2019). "Ecospirituality: A Scale to Measure an Individual's Reverential Respect for the Environment. *Ecopychology*. 11 (2). <https://www.liebertpub.com/doi/10.1089/eco>.
- Taylor, Bron. (2009). "Dark green religion." *Nature Spirituality and the Planetary Future*. University of California Press, California.

Chapter One

AFRICAN ECO-SPIRITUALITY: NATURE AND SOURCES

Ikechukwu Anthony KANU, OSA, PhD
Department of Philosophy and Religious Studies
Tansian University, Umunya, Anambra State
ikee_mario@yahoo.com
ORCID iD: 0000-0003-1977-202X

Executive Summary

The world in which we live has been wounded by the current ecological issues staring us all at the face. Carbon dioxide emissions are still with us. Sulfur oxides still bring acidic rains. Misuse and subsequent depletion of natural resources have not stopped. Floods, draughts, outbreak of diseases emerging from ecological changes are yearly experiences. The seas are constantly being polluted leading to the death of sea animals. Rivers, seas, canals, etc., are shrinking and drying up. Scientific discoveries and advances in the area of technology cannot adequately attend to the problem of ecological crisis in our globalized world. There is the need for alternative perspectives and models or approaches in such a manner that it works for all peoples and in all places. While developing solutions to ecological problems there is the need to put into consideration the categories of particular people, and to use languages that people understand. It is in this regard that a discourse on African eco-spirituality becomes very important, not only to show the contribution of the African worldview to ecological discourses but to show that solutions to ecological problems need to be packaged within categories that the African will not only understand but respect. While there are a few papers written on African eco-spirituality, there is hardly literature that discusses

its nature and sources in a profound manner in relation to the African worldview. This paper, therefore, discusses African ecological spirituality with the purpose of bringing out its distinctive characteristics and the sources of its perspective. For the purpose of this study, the phenomenological and analytic methods of inquiry were employed. It submitted that African eco-spirituality is an indispensable dimension in the effort towards finding and articulating alternative solutions to the present ecological crisis.

Keywords: African, Ecology, Eco-Spirituality, Proverbs, Myths, Taboos, Deities, Spirits

Introduction

Eco-spirituality was born out of the need to establish a connection between spirituality and the earth or ecology. This began with the growing appreciation of the relationship between spirituality and the environment, and the growing understanding of the universe as the representation of the presence of a great spirit. It was also a reaction to the Western emphasis on the material, consumerism, technological and economic which lacked the spiritual depth required for a humane approach to the problem of ecological crisis (Delaney 2009). Thus, Aurelie (2017) defines eco-spirituality as:

A wide range of discourses, whose common interest is in showing that the current ecological crisis is an essentially spiritual crisis of values, so that answers to it should not be merely technological or material but should be sought on a spiritual level, through the foundation of an 'inner ecology' and an enlightened reflection about the meaning of life, the Other, the sacred (p. 7).

Eco-spirituality does not in any way speak of a particular spirituality, but can be developed alongside a particular

spirituality, such as the Christian eco-spirituality, Buddhist eco-spirituality, African eco-spirituality, etc., which provides the principles that shape its peculiarity. However, a spirituality does not necessarily involve any particular religion. One can have a secular spirituality that has nothing to do with Islam or Christianity or African traditional religion. It is, therefore, possible to have proponents of eco-spirituality coming from different religions like Islam, Christianity, Buddhism, Jainism, Hinduism, etc. To understand this better there is need to make a distinction between spirituality and the religious. While the religious has got to do with a particular religion, the spiritual goes beyond the bounds of particular religions, such that one can be spiritual and yet not believe in God. It is in this regard that Aurelie (2017) avers that:

It is possible to pursue spirituality inside organized religion or out of any religious context, and even without having any faith in God. As it is founded on a personal inner experience, it is difficult to define it univocally, but it is generally associated with a quest for interiority, for self-knowledge, transcendence, wisdom, the sacred (p. 2).

What qualifies it as a particular eco-spirituality is the type of spirituality that forms the basis of its moral, religious dimension. This is possible as most spiritualities have a deep connection to the earth even though some might have more connections than the other. Rockefeller and John (1992) argue that eco-spirituality emerged as a result of the realization that ecological crisis affects all lives not minding a person's religious affiliation, therefore, requiring a multi-religious approach. Writing further they aver that:

The foundation of this collaboration among religions, academics, and activists is an awareness of a commitment to a new ecological worldview that reflects alternative values, ethics, and actions about and toward life on Earth.

There is an understanding that religion not only broadens the conversation beyond discussing environmental issues in terms of economics, political legislation, or scientific analysis, but also that at the heart of spirituality is an encounter with the sacred: an intuition of the wondrous mystery in the power of life and being (p. 10).

Pope Francis (2015) teaches that: “If we are truly concerned to develop an ecology capable of remedying the damage we have done, no branch of the sciences and no form of wisdom can be left out, and that includes religion and the language particular to it” (no. 63). It is in this regard that it becomes important to look at African eco-spirituality as an alternative approach towards the solving of the problems posed by ecological crisis emerging not only in Europe, America and Asia, but also here in Africa. This paper will focus on defining African eco-spirituality, determining its sources and categorizing its characteristics. What then is African eco-spirituality?

Theoretical Framework

The theoretical framework to be used for this study is the traditional african ethics of care theory developed by Ogungbemi (2007). He argues that the traditional African lived with nature with respect and awe. He writes about the traditional environmental management guided by care thus:

In our traditional relationship with nature, men and women recognize the importance of water and air management to our traditional communities. The ethics of not taking more than you need from nature is a moral code. Perhaps this explains why earth, forest, rivers wind and other natural objects are traditionally believed to be both natural and divine. The philosophy behind this belief may not necessarily be religious but a natural means by which the human environment can be preserved the

ethics of care is essential to traditional understanding of environmental protection and conservation (p. 36).

Although this ethic was not written in books or carved on walls, the African was given an orientation in which he or she is not to take more than he or she needs from nature or the environment. This is a value with a universal appeal and application which African traditional preservation behavior introduces to the entire effort towards the preservation of the environment. The questions: How do we know how much we need, given, the nature of human greed and insatiability? Who judges whether we have been taking more or less than need from the natural resources? If we have been taking more than we need, what are the penalties and how fair are they? were dealt with at the level of taboos, however, adoption by modern society will imply developing guidelines and setting limits using categories the modern man or woman understands.

This idea of care for the environment, needed on the part of the human person for the sustenance of the environment and the well being of the human person is at the heart of African eco-spirituality. It is also the basis for the interpretation of the African's relationships with the forces of nature: he or she craves for nature knowing fully well that the survival of nature will mean his or her own survival.

African Eco-spirituality

African Eco-spirituality also known as African spiritual ecological, establishes a connection between the ecosystem and the African spirituality, which is the African's consciousness and relationship with the supernatural. This consciousness and relationship with that which is spiritual now becomes a basis for a responsible and humane relationship with and management of the environment. It is anchored on the African worldview of

spiritual interconnectedness of reality, and thus, the sacredness of the eco-system. Life in the African ecosystem is one in which relationships between nature and humans, spirit and nature are not dichotomized or compartmentalized, but are integrated into an interdependent system of existence that is tied together through spiritual interactions. Every dimension of the ecosystem is as important as the other and must not be exploited for personal gains; in this case, actions must be motivated by the general good of the entire ecosystem.

African eco-spirituality packages the understanding that the human person is a steward not master of the earth; reciprocity between land, plants and humans makes life on earth possible; symbiotic relationship with the earth; and being aware of the impacts of one's actions in the use of the environment on the present and future generations. Thus Olga (2012) avers that "eco-spirituality brings together religion and environmental activism" (n.pg.) and Valerie (2000) asserts that it is "a manifestation of the spiritual connection between human beings and the environment." (p. 227). It refers to ecological discourses or reflections that are anchored on the African fundamental beliefs in the sacredness of the natural world and in the connection between human beings and nature, with the aim of finding solutions to the emerging ecological crisis.

In relation to the idea of the sacred in African ecospirituality, Sponsel (2014) referring to eco-spirituality generally writes that: "there are spiritual elements at the root of environmental issues" (p.1719). The spiritual dimension of eco-spirituality is the major contribution that it makes in the face of the present ecological crisis. Thus, White (1967) avers that "there is a critical need to recognize and address the spiritual dynamics at their roots" (p.1203). The reflections in African eco-spirituality precisely, are done in such a manner that it respects the African patterns of life

or culture as its starting point. African eco-spirituality also holds as fundamental the need for reconnecting oneself with nature, people and the cosmos as a whole, rooted in the manner in which the African understands the world around him or her. What distinguishes African ecological spirituality from others is that it is deeply religious and may not be formulated outside religious lines. Mbiti (1969) puts this succinctly:

Wherever the African is, there is his religion. He carries it to the fields where he is sowing seeds or harvesting new crop, he takes it with him to a beer parlour or to attend a funeral ceremony; and if he is educated, he takes religion with him to the examination room at school or in the university; if he is a politician, he takes it to the house of parliament. (p. 2).

In the contention of Njoku (2004), this is such that:

The African man (woman) had many taboos to observe, and many daily rituals to perform, either to appease the community or the divinities. If he was not an indirect or unconscious slave of the dominant conscious, he held perpetual allegiance to one divinity or another. If he was 'free' with men, he was not free with nature or his environment. Suppose community and environment allow him to live his life with fewer burdens, he would still have to pay the debts owed by his past ancestors. (p. 57).

Still within this context, Busia (1967) remarks that the African is "intensely and pervasively religious ... in traditional African communities it was not possible to distinguish between religious and non-religious areas of life. All life is religious" (p.34)

It, therefore, offers an alternative approach to the present ecological crisis. In this regard, Orobator (2016) posits that: “Upon careful scrutiny, the wisdom of the African spiritual tradition ... offers resources for cultivating sound ecological virtues and commitment” (p. 1). In the contention of Uwineze (2021):

African spirituality invites us to an *aggiornamento*, a return to our origins (*ressourcement*), to use traditional African resources in deep appreciation of and conversation with Pope Francis’ exhortation to care for and dialogue with our common home (p. 1).

African eco-spirituality connects the science of ecology with African spirituality, which cannot be obtained outside of the African worldview or cosmology, which establishes a very strong spiritual connection between human beings and the environment. In this case, the African worldview and experience provides the context for ecological reflection.

Sources of African Eco-spirituality

There are several sources of African eco-spirituality that could be enumerated. However, in this work reference would be made to African proverbs, African gods and spirits of nature, African mythologies, African totems and African taboos.

1. African Proverbs

There are several African proverbs that bring out the richness of African ecological spirituality, and in such circumstances, these proverbs become a source of African eco-spirituality. Examples of such proverbs include:

1. A tree on a hill is a meeting place for birds
2. Trees pull the rain
3. Hills with trees are footprints of God
4. The best time to plant a tree is twenty years ago, the second-best time is now

5. When there is something wrong in the forest, there is something wrong in the society
6. A person who has planted a tree before he dies did not live in vain
7. To plant a tree is to mix with God
8. Eat, but leave some in the forest for others
9. Do not finish the arrowroot; think of the future
10. Earth is our mother's womb
11. One will take a reserve if only one put it in the reserve
12. Treat the earth well; it was not given to you by your parents
13. Do not drain the river till it dries
14. A dried-up tree do not bear a green one
15. A tree blossoms with rain
16. No one throws a stone where he or she has placed a container of milk

2. African Gods and Spirits of Nature

One of the motivations for the emergence of eco-spirituality is the understanding of the earth as the manifestation of the presence of great spirit. This becomes interesting when studied from the African perspective where several African deities and spirit forces have taken the form of the different dimensions of the ecosystem. An understanding of these spirit forces can be a source of African eco-spirituality. Examples of these gods and spirits of nature include:

- a. *Mmuo Mmiri*: Igbo river goddess
- b. *Ala*: Igbo earth goddess
- c. *Osun*: Yoruba goddess of the river Osun
- d. *Oya*: Yoruba goddess of the river Niger
- e. *Oba*: The Yoruba goddess of rivers
- f. *Oko*: The Yoruba goddess of agriculture
- g. *Osanyin*: The Yoruba god of herbs and small plants
- h. *Olokun*: The Yoruba god of the seas

- i. *Anyanwu*: Igbo god of the sun
- j. *Ahiajoku*: Igbo god of agriculture and vegetation
- k. *Sango*: Yoruba god of lightening and thunder
- l. *Amadioha*: Igbo god of lightening and thunder
- m. *Damballah*: Benin Republic god of fertility and usually lives in springs and swamps. He is symbolized by a snake.
- n. *Erzulie-Freda-Dahomey*: Benin Republic Sea goddess.
- o. There are spirits that inhabit the mountains
- p. There are spirits that inhabit the trees
- q. There are spirits that inhabit the forests
- r. There are spirits that inhabit the animals
- s. There are spirits that inhabit rivers and seas

3. African Mythologies

The African world with varied ethnic groups and languages has several mythologies that can become sources of African ecological spirituality. These myths show how the divine gives special places to animals and plants to show that they are very significant to the Creator God. For instance, in Nri Igbo myth, when the children of Eri the proto ancestor died, Yam grew up from where the son was buried and plantain and cocoyam from where the daughter was buried. The growing up of these plants where these persons were buried was a personification of these plants, in the sense of the children of Eri come back to life. Thus, when the Igbo celebrate New Yam festival, it is a celebration of life, the life of the first son of Eri. Also, in the Yoruba myth of creation, the creator god made use of the Chameleon and the Chicken for the realization of creation. The inclusion of these animals, point to the important place that animals occupy in the divine plan, and therefore, must not be treated as though they are of no value in the divin scheme. These mythologies among others can be a huge source of African eco-spirituality when reflected upon.

4. African totems

The African believes that a person can be related to the other or another in two ways. The first way is through blood relationship, in terms of having the same father and other or being connected to the same ancestor, meaning a blood relationship. The second type of relationship is the totemic relationship in which a person shares the same totem being with another person. Totemism is the assertion of kinship between the human person and a specie of animals or some other animate or inanimate objects (Mbiti 1934; Theoderson et al 1975; Durkheim 1970; Meek 1937; Amirthalingam 2014). It could also be understood in terms of species of animals or plants whose life have been bond up with the life of a particular tribe (Burton 1977). They could also be regarded as those things that a tribe or family bear their names and revere (Freud 1970). Totems are found in virtually every African society, and have been part of the culture of the African people handed down from one generation to another. Different groups or tribes have their totem or totems and this gives them their unique identity as a kinship, and in places where different groups share the same totem, they might begin to consider themselves as related to each other. What totems do is that it shows the relationship between human beings, animals and the environment, and constitutes the human person's earliest conservation behavior.

Once a child is born, it becomes his or her duty to defend his or her totem as it is a part of his or her identity as a member of the clan or kinship. They have obligation to feed, protect, care for and rescue the totem where and when necessary. There are times great stories are told young people on how human beings became great by being kind to these totems. This was a way of encouraging the young to keep to the tradition of their people by seeking greatness by keeping to the totems of the community or tribe. To each totem is attached a symbolic meaning which a

taboo accompanies, such that to kill or destroy any of them has consequences. Examples of totems among the Igbo of Eastern Nigeria include:

- a. Python, referred to as father or mother
- b. *Utobi*, a specie of money
- c. Fishes in particular streams or rivers
- d. *Oziza*, a type of crab
- e. Iroko tree
- f. *Ogirishi* tree
- g. *Akpu onyima*, silk tree
- h. *Ofo* tree
- i. *Ngwu* tree

This totemic relationship is based on the African's concept of the universe. According to Onwubiko (1991): "Ideologically speaking, the African world is a world of inanimate, animate and spiritual beings. The African is conscious of the influence of each category of these beings in the universe. Their existence, for the African, is reality; so also is the fact that they interact as co-existent beings in the universe." (p. 3) These are considered totem not only because of their relationship with a tribe or people, but also because of their relationship with spirit forces that these tribes or people revere.

5. African Taboos

Africans have moral principles referred to as taboos that served as proscriptions, spelling out how African traditional societies ought to or ought not to relate with their environment. These taboos provide and preserve balance and harmony within the community, and in the community's relationship with nature (Magesa 2015). Some of these taboos include:

- a. Hunting an animal and not eating the meat
- b. Killing a pregnant animal
- c. Killing an animal fending for her young

- d. Killing a python
- e. Killing a dog
- f. Killing an Iguana
- g. Killing a tiger
- h. Entering particular forests
- i. Going to the stream on particular days
- j. Hunting on particular days
- k. Not washing cloth or taking bath on some parts of the stream
- l. Not fishing in some particular streams

These taboos were respected by members of African communities because of the spiritual background that they possess, given that they are either promulgated by a deity or the ancestors as a conservation behavior or as a respect for the nature that symbolizes a spirit force.

Characteristics of African Eco-spirituality

Several characteristics can be drawn from the very nature of African eco-spirituality. However, for the purpose of this initial study, the religious, cosmological, moral and complementary characteristics would be discussed.

a. Religious

African eco-spirituality is highly religious, and begins by linking a person back to God as a starting point. This strongly religious characteristic is on account of the myriad of spiritual powers that dominate the African world, and which manifests themselves in every creature. This religious dimension is clear from the reality that the African does not understand his or her existence outside of God- he or she is bound by the spirituality that continuously speaks of created reality as sacred. God is both transcendent and immanent in his creation, he did not create it and then left it. He holds his creation in being and the process of creation still perdures through the cooperation of the human person with

God. It is therefore very difficult for the African to discuss issues bordering on eco-spirituality without reference to his or her religion. Thus, while it is still spiritual, it is also very religious.

If African eco-spirituality is religious, of what relevance is it to the discourse on eco-spirituality? Does the religious dimension destroy the spirituality required for the preservation of nature? A cursory glance reveals that several events and points of agreement over the years have led to the recognition of the importance of the religious perspective in the discourse on the fight against ecological crisis. The major reason is the ability of religious affiliations to have come to a point where they have been able to articulate an understanding of nature as the outcome of divine ordering which must not be manipulated and exploited for the purpose of maintaining a balance in nature. This perspective is anchored on the interconnectedness and interdependence of the different dimensions of creation (Francis 2015 & Global Buddhist Climate Change Collective, 2015). The religious perspective is also fundamental as 4 out of every 5 human beings have a religious belief. This makes it very important to respond to ecological questions from the perspective of religion which comes from the angle of stewardship and trusteeship (Halpert 2012; Islamic International Climate Change Symposium, 2015; Oxford Centre for Hindu Studies/Bhumi Project, 2015; Northcott, 2013).

Religions are having a better understanding of scientific positions on climate change. The consequence is that those adhering to religious beliefs now queue behind the policies that have been made from the outcome of these scientific findings (Francis 2015). More so, the need to reconstruct the religious perspective on unlimitless pursuit of prosperity requires the input of religious persons and bodies (Zholnai 2013; Northcott, 2013; Pettifor, 2013; Khalid, 2013; Izzi Dien, 2013). From this

understanding, it is not out of place to have an African perspective that is heavily religious.

b. Cosmological

African eco-spirituality is cosmological. It is related to the way the African understands the universe and conducts himself or herself in it. It is this cosmological foundation that forms the basis and in fact that makes it an African eco-spirituality different from other eco-spiritualities. The universe for the African is anthropocentric. Everything that God has created was created for the human person and it is the human person that gives meaning to the realities around him or her. As such, the human person is at the center of creation. The implication is that if the human person cares for the earth, it will mean his or her own good, and if he or she mismanages the earth he or she will obviously be at the center of the crisis. Thus, it is the responsibility of the human person to ensure that there is balance in the cosmos for his or her own peace and happiness.

Although there are gods, spirits, ancestors, animals, plants, inanimate objects, etc., in the African universe, it is the human person that has the responsibility of preserving or maintaining the earth. Therefore, instances of abuse and misuse of natural resources like water, land, gas, animals, forests, the earth, etc., in Africa because of excessive greed will have consequences that will end on the table of the human person; just as the consequences rests on the table of the human person, in the same way does the solution lie on his or her table.

c. Moral

The human person has a moral responsibility to care for the earth. The manifestations of ecological problems are only a sign of a moral decadence in the responsible use of natural resources or the mismanagement of natural resources. It, therefore, calls for

a moral responsibility articulated and expressed in what we refer to as African eco-spirituality. This moral responsibility is not only one that resides with the individual but with every member of the African community. The communal responsibility is anchored on the fact that if punishment comes as a result of mismanaging the earth, everyone would be a part of the painful experience. This explains why everyone, at a time when there were no police, puts hands together to ensure that the law is kept. These laws are the taboos of the community bordering on the use of trees, care for animals, forests, water bodies, etc. These taboos always have a religious background for what it disapproves (Uche 2009) but usually enforced by the community (Dauglas 2009) for the preservation of the collective ecosystem. Thus, these taboos are referred to as the ecological guardians of the environment (Adu-Gyamfi 2011; Johannes 1978, 1982, 1984; Chapman 1985, 1987; Gadgil 1987).

d. Complementary

African eco-spirituality understands the dimensions of the world as inextricably related to all other life forms within an *interrelated, interconnected* web. Every reality in the African world has an inseparable link to every reality. The world complements the being of the human person while the human person complements the being of the world. While the world provides a home for the human person, the human person beautifies the world through creativity, science and technology to make it a better home.

The implication of the human person destroying the world is that he or she unknowingly destroys his or her home, and so becomes homeless at home. The world is the human person's seat of belongingness. If the world is destroyed, the human person would suffer self-alienation as he loses his or her belongingness. This explains the African proverb which says: "No one throws a

stone where he or she has placed a container of milk". The ruin of the world entails the ruin of the human person. The safety of the world entails the safety of the human person. Thus, Uwenze (2021) writes that:

Oneness, harmony, mutuality, and interdependence are central to most African culture's conception of existence because everything that exists as a being with others. Life in the world is so interlinked that to upset one aspect of it is to begin to put an end to the whole of it (p. 1).

This understanding should help the African to treat nature with the same respect that he or she deserves, given that the world is a part of his or her being.

Conclusion

This work has focused on African eco-spirituality, a form of indigenized eco-spirituality. In the face of carbon dioxide emissions that are still with us, sulfur oxides still causing acidic rains, misuse and subsequent depletion of natural resources, floods, draughts, outbreak of diseases emerging from ecological changes, the seas are constantly being polluted leading to the death of sea animals; rivers, seas, canals, etc., are shrinking and drying up, African eco-spirituality emerges as an African response to the global challenge. It is also a recognition of the fact that scientific discoveries and advances in the area of technology cannot adequately attend to the problem of ecological crisis in our globalized world. African eco-spirituality is a recognition of the need for alternative perspectives and models or approaches in such a manner that it works for all peoples and in all places. It further recognizes the importance of putting into consideration the categories of particular people, and to use languages that people understand in developing solutions to the ecological crisis at hand.

References

- Adu-Gyamfi, Y. (2011). Indigenous beliefs and practices in ecosystem conservation: Response of the church. *Scriptura*. 107. 145-155
- Amirthalingam, M. (2014). Significance of Totemism among the Tribes of India. *ECO NEWS vol. 19, No. 4*. 22
- Aurélié C. (2017). *Ecospirituality. Aurélié Choné; Isabelle Hajek; Philippe Hamman. Rethinking Nature. Challenging Disciplinary Boundaries*. New York: Routledge.
- Bonfiglio, Olga. (2012). "Celebrating Earth Day Through Eco-Spirituality". *The Huffington Post*. Retrieved August 24, 2021.
- Busia, K. A. (1967). *Africa in Search of Democracy*. Praeger, New York.
- Burton, J. W. (1977). About totemism. *Journal of Africa*. 10. 282
- Chapman, M. (1985). Environmental influences in the development of traditional conservation in the South Pacific region. *Environmental Conservation*. 12. 217-230.
- Chapman, M. (1987). Traditional political structure and conservation in Oceania. *Ambio*. 16. 201-205
- Delaney, C. (2009). Ecospirituality: The experience of environmental meditation in patients with cardiovascular disease. *Holistic Nursing Practice*. 23. 6. 362
- Douglas, M. (2009). *Purity and danger*. New York: Routledge and Kegan Paul.
- Durkheim, E. (1970). *The elementary forms of religious life*. London: Allen and Unwood Press
- Francis (2015). *Laudato Si'*. https://www.vatican.va/content/francesco/en/encyclicals/documents/papa-francesco_20150524_enciclica-laudato-si.html
- Freud, S. (1970). *Totems and taboos*. London: Rutledge and Paul.

- Gadgil, M. (1987). Social restraints on exploiting nature: The Indian experience. *Development: Seeds of Change*. 1. 26-30
- Halpert J (2012) *Judaism and Climate Change*. Yale Climate Connections 29 February, <http://www.yaleclimateconnections.org/2012/02/judaism-and-climate-change/>, accessed 15 April 2016.
- Islamic International Climate Change Symposium. (2015) *The Islamic Declaration on Global Climate Change*. <http://islamicclimatedeclaration.org/islamic-declaration-on-global-climate-change/>, accessed 15 April 2016.
- Izzi Dien M (2013) Environmental economics of Islam. In: Bell C, Chaplin J and White R (eds). *Living Lightly, Living Faithfully: Religious faiths and the future of sustainability*. Faraday Institute/KLICE: Cambridge, UK, pp 65–76.
- Johannes, R. E. (1978). Traditional marine conservation methods in Oceania and their demise. *Annual Review of Ecology and Systematics*. 9. 349-364
- Johannes, R. E. (1982). Traditional conservation methods and protected marine areas in Oceania. *Ambio*. 5. 258-261.
- Johannes, R. E. (1984). Marine conservation in relation to traditional lifestyle of tropical Artisanal fishermen. *The Environmentlist*. 4. 7. 30-35.
- Khalid F (2013) The environment and sustainability – An Islamic perspective. In: Bell C, Chaplin J and White R (eds). *Living Lightly, Living Faithfully: Religious Faiths and the Future of Sustainability*. Faraday Institute/KLICE: Cambridge, UK, pp 221–244.
- Lincoln, Valerie (2000). "Ecospirituality". *Journal of Holistic Nursing*. 18 (3): 227–44.
- Magesa, L. (2015). African spirituality and the environment: Some principles, thesis and orientations. *Hekima Review*. 53. 119

- Mbiti, J. S. (1934). What the African believes. *West African Review*. 26.
- Mbiti, J.S. (1969). *African religions and philosophy*. London: Heinemann.
- Meek, C. K. (1937). *Law and authority in a Nigerian tribe: A study in Indirect rule*. London: Oxford University Press
- Njoku, F.O.C. (2004). *Development and African philosophy: A theoretical reconstruction of African socio-political economy*. New England: Universe.
- Northcott M (2013) *A Political Theology of Climate Change*. Eerdmans: Grand Rapids, MI.
- Ogungbemi, D. (2007). *Philosophy and Development*. Ibadan: Hope Publication.
- Onwubiko, O. A. (1991). *African Thoughts, Religion and Culture, vol. 1*. Enugu: SNAAP Press.
- Orobator, A. E. (2016). *An immense pile of filth: Human ecology and communitarian salvation*. Duffy Lecture, Boston College, March 29. Unpublished Paper.
- Rockefeller, Steven, and John Elder, eds. (1992). *Spirit and Nature: Why the Environment Is a Religious Issue*. Michigan: Beacon Press.
- Sponsel, Leslie E. (2014). "Spiritual Ecology". In Leeming, David A. (ed.). *Encyclopedia of Psychology and Religion*. 2nd ed. Springer, Boston. pp. 1718–1723
- Theoderson et al (1975). *Modern dictionary of sociology*. London: Allen and Union Press
- Uche, O. O. C. (2009). The socio-religious significance of taboos in Nigeria. In F. Aghamelu & C. Asomugha (Eds.). *Readings in African thoughts and culture*. (pp. 238-257). Enugu: Strong Tower.
- Uwineze, M. (2021). *African spirituality and its contribution to ecological crisis*. La Civiltà Cattolica. www.laciviltacattolica.com

White, Lynn (1967). "The Historical Roots of Our Ecologic Crisis". *Science*. 155 (3767): 1203–1207.

Chapter Two

AFRICAN COSMOVISION AND ECO-SPIRITUALITY: HEALING THE ECOLOGICAL CRISIS IN AFRICA

Anthony Raphael Etuk, PhD

University of Uyo,

Akwa Ibom State

etuky4real@gmail.com

Executive Summary

In our age of huge ecological crisis and colossal consequences for humanity and the earth system, occasioned by man's ill-exploitation of the earth's resources, this paper argues that the root of our ecological crisis is in the spiritual deficit of the modern man, which informs man's attendant exploitative approach to nature. Thus, in the light of the contemporary search for remedy through ecological spirituality, the paper calls for spiritual renaissance of Africans through the re-sacralization of their worldview in line the traditional African eco-spirituality, to save the African continent from ecological collapse. For this aim, the paper explores the concept of African eco-spirituality and appeals to its viable potential in addressing the present ecological crisis and ensuring a sustainable ecological management and protection in Africa. The hermeneutical, speculative and prescriptive methods of research are adopted in the paper.

Keywords: Cosmovision, Ecosystem, Eco-spirituality, Biodiversity, Global Warming

Introduction

The need for ecological preservation and conservation is, more than ever, everywhere emphasized today. Of course, the pervasive effects of the global ecological crisis on all life on earth in our day, has made this essential concern a basic necessity. Ranging from environmental degradation, climate change, global warming, to the depletion of natural resources (food, water, and energy), the ecological crisis has not only created massive imbalance in the ecosystem, but ruefully threatens the survival of humans as well as the earth's biodiversity. Sequel to this is the global urgency for the conservation and preservation of the ecosystem, if life on earth must continue. Amidst this call, however, is the general recognition that the unchecked human activity and ill-considered exploitation of nature are responsible for the problem. Among the oft-proposed mitigating measures are investment in cost-effective and sustainable energy technologies, elimination of distorting subsidies favouring fossil fuels at the expense of renewable alternatives, the development of climate-friendly markets (e.g., carbon trading), targets for concentrations of greenhouse gases, and rationalized consumption and production patterns (Melnick et al., 2005, p.28).

However, the failure of these proposals to effectively address the challenge of our ecological crisis has not only awoken the consciousness of many to the limitations of the scientific and technological approaches the problem, but also to the fundamentally moral, spiritual and religious nature of the problem as associated with man, who is exploiting the earth's resources irresponsibly. This awareness has, in recent time, encouraged the concern for environmentally based spirituality, as an approach in tackling the problem. Thus, at the forefront of ecological debates today, is the clarion call for a spiritual and moral response to our environmental crisis. Pope Francis, for instance, recognizes that, "The ecological crisis is essentially a

spiritual problem,” (2015, para. 9), and urges “the need for a spiritual and moral response to these environmental crisis” (2015, para. 206). This concern is, thus, the basis of today’s advocacy for spiritual ecology or eco-spirituality, based on the assumption that spirituality is an important dimension in contributing to how we value and care for our environment.

However, as expressed in their traditional eco-spirituality, caring for the environment has been a part of the African traditional way of life. The African eco-spirituality, which takes its bearing from the African cosmovision or cosmology, embraces the awareness of the sacredness of the whole reality (or the whole “web of life”). This manifests itself in the deep sense of reverence and respect traditional Africans have for the natural world, and the way they regulated their relationship with nature to ensure that nature and the environment are protected, while at the same time serving their human needs. Unfortunate, however, this African eco-spirituality appears lost today in the continent, due to the impacts of the materialistic, mechanistic, capitalist and consumerist world economy, which simply ravages the resources of the earth. Consequently, Africans now relate with nature and their environment from the capitalistic, manipulative and exploitative point of view in their attempt to accumulate wealth in terms of money. The net outcome is the present ecological disaster engulfing the continent. In the face of this challenge, this paper emphasizes the need for Africans to re-sacralize their worldview and re-invent their spiritual orientations of love, care and reverence for nature as augured in the indigenous African eco-spirituality, in order to reliably address the challenge of ecological crisis and ensure sustainable environmental preservation and conservation in the continent.

Conceptual Clarification:

Ecosystem

The word, “ecosystem” deserves an attention here given its relation to our basic term here, “eco-spirituality” – a shortened derivative from “ecosystem” and “spirituality”. An ecosystem (or ecological system) consists of all the organisms and the physical environment with which they interact (Chapin, 2011, p. III). It consists of biotic and abiotic components that function together as a unit. The biotic components include all the living things, whereas the abiotic components are the non-living things. These biotic and abiotic components are linked together through nutrient cycles and energy flows (Odum, 1971, p.56). Thus, an ecosystem entails an ecological community consisting of different populations of organisms that live together in a particular habitat.

Ecosystems are controlled by external factors, such as climate, parent material which forms the soil and topography; and internal factors, such as, decomposition, root competition, shading, disturbance, succession, and the types of species present. Ecosystems provide a variety of goods and services upon which humans depend for their survival. These include water, food, fuel, construction material, and medicinal plants, the maintenance of hydrological cycles, cleaning air and water, the maintenance of oxygen in the atmosphere, crop pollination and even things like beauty, inspiration and opportunities for research.

Ecosystem processes are driven by the species in an ecosystem, and the net outcome of the actions of individual organisms as they interact with their environment is the balance this ensures in the ecosystem. Hence, biodiversity (the biological variety and variability of life on Earth) plays an important role in the proper

functioning of the ecosystem (Schulze, et al., 2005, p.449). Although humans exist and operate within ecosystems, much of human exploitation of nature have negatively impacted the ecosystem, resulting in a medley of ecological problems facing the world today.

For the terrestrial ecosystems threats include such as environmental pollution, climate change, global warming, biodiversity loss, air pollution, water pollution, habitat fragmentation, soil degradation, and deforestation. For the aquatic ecosystems threats also include unsustainable exploitation of marine resources (for example overfishing), marine pollution, microplastics pollution, the effects of climate change on oceans (e.g. warming and acidification), and building on coastal areas (Alexander, 1999, p.14).

Spirituality

The other aspect of the term “eco-spirituality”, is “spirituality, which denotes the "deepest spiritual values and meanings by which people live" (Sheldrake, 2001, p.1). It can also be conceived as Anne Carr defines it as “the whole of our deepest religious beliefs, convictions, and patterns of thought, emotion, and behaviour in respect to what is ultimate, to God” (1982, p.49). She adds that, “spirituality is holistic, encompassing our relationships to all of creation – to others, to society, and nature, to work and recreation – in a fundamentally religious orientation” (1982, p.49). Christina Puchalski broadens the reach of the concept as she sees spirituality as, “the aspect of humanity that refers to the way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to nature, and to the significant or sacred" (2014, n.pg.). The essential elements captured about the concept of spirituality in these range of definitions is it is “a relationship with the supernatural or spiritual realm that

provides meaning and a basis for personal and communal reflection, decisions and action” (Ver Beek, 2000, p. 32). Spirituality is commonly associated with religion because, “people explain their spirituality through a religious perspective” (Wijk, 2010, p.7).

Eco-Spirituality

“Eco-spirituality” (or Spiritual Ecology), as obvious from the definitions above, connects the ecosystem (ecology) with spirituality. In his paper, "Celebrating Earth Day Through Eco-Spirituality", Olga Bonfiglio says, “eco-spirituality brings together religion and environmental activism” (2012, n.pg.). In the light of this, Valerie Lincoln (2000, p.227) writes that eco-spirituality is "a manifestation of the spiritual connection between human beings and the environment." As an eco-spirituality is field in religion, conservation, and academia Eco-spirituality rests on the conviction that “there are spiritual elements at the root of environmental issues” (Sponsel, 2014, p.1719); and that, to decisively address our distressing global environmental crisis, “there is a critical need to recognize and address the spiritual dynamics at their roots” (White, 1967, p.1203).

Thus, it recognises that there is a spiritual facet to all issues related to conservation, environmentalism, and earth stewardship (Sponsel, 2014, p.1718). Reflecting on this basic concern of eco-spirituality, Virginia Jones, cited in Bonfiglio says: "Eco-spirituality is about helping people experience 'the holy' in the natural world and to recognize their relationship as human beings to all creation” (2012, n.pg.). Historically, eco-spirituality emerges as a reaction to the Western world's materialism and consumerism (Delaney, 2009, p.32), as well as the “mechanistic and capitalistic world view” (Schalkwyk, 2011, p.1), believed to be responsible for many intensive forms of environmental

exploitation and degradation, leading to the global ecological and environmental crises as we have them today. For this reason, Annalet Van Schalkwyk is convinced that the ecological crisis is “man-made” (2011, p.2).

Several mitigating measures have been proposed by environmental experts and by several International Organizations or Conferences on Environmental Protection in view of addressing this frightening global ecological crisis. For instance, the United Nations Millennium Project's Task Force on Environmental Sustainability recommends a series of measures, including investment in cost-effective and sustainable energy technologies, elimination of distorting subsidies favouring fossil fuels at the expense of renewable alternatives, the development of climate-friendly markets (e.g., carbon trading), targets for concentrations of greenhouse gases, and rationalized consumption and production patterns (Melnick et al., 2005, p.28). Again, in the United Nation's 2030 Agenda for Sustainable Development, member states expressed their commitment to protect the planet from degradation and take urgent action on climate change (Tarusariran. 2017, p.398).

However, given the seeming inability of these measures to halt the perilous slide of ecological crisis and its consequences on man and the earth, today many have rightly argued that these measures are merely dealing with the symptoms of the problem, rather than tackling the fundamentally spiritual issues at root of the problem, whereby the modern man's defective worldview, which denies the transcendence, secularizes and instrumentalizes nature, engenders in him the attitude of ill-exploitation and degradation of nature, leading the present ecological crisis. In the light of this, James Speth, submits that, the top environmental problems are not only biodiversity loss,

ecosystem collapse and climate change, but also, and more fundamentally “human selfishness, greed and apathy, and to deal with these we need a cultural and spiritual transformation” (qtd. in Crockett, 2014, n. pg.). And Pope Francis in his Encyclical Letter, *Laudato Si*, recognizes that, “The ecological crisis is essentially a spiritual problem,” (2015, para. 2015, para. 9), requiring from man a spiritual and moral response (2015, para. 206). The Pope acknowledges the interconnectedness of human beings with nature, and maintains that, “the issue of environmental degradation challenges us to examine our lifestyle” (para. 2015, para. 206), which requires that we “look for solutions not only in technology but in a change of humanity; otherwise, we would be dealing merely with symptoms” (2015, para. 9).

The vanguards of eco-spirituality are, thereby, united in the conviction that the present ecological crisis needs to be understood as requiring a new way of life, not just a few adjustments here and there” (Ruether, 15). Particularly, the crisis is deemed to “necessitate the search for an ecological re-sacralized worldview of which an “ecological” understanding of religion and spirituality is part, and for an awareness of the sacredness of the whole reality (or the whole “web of life”); the cosmos, the earth system and its ecosystem, and of humanity as part of this whole and not separate from it” (Schalkwyk, 2011, p.3). Thus, to resolve the present global ecological crisis, there exist a serious need for an ecological spirituality, or environmentally based religion and spirituality, by which humans must re-examine and re-assess their underlying attitudes and beliefs about the earth, and their spiritual responsibilities toward it. Eco-spirituality is, therefore, “the direct consciousness and experience of the sacred in the ecology which may serve as a sustained source for communities’ and individuals’ practical struggle for the healing of the earth’s

ecology and for humanity's sustainable living from the earth's resources" (Schalkwyk, 2011, p.6). It is the consciousness and experience of the physical-spiritual interconnections between ourselves and the environment.

In the words of Suganthi (2019), eco-spirituality is simply, "having a reverential attitude toward the environment in taking care of it while dwelling within its premises" (n.pg.). It is on the strength of this emerging view that proponents of eco-spirituality emphasize the importance of including spiritual elements in contemporary debates on environmental conservation and preservation, as well as awareness of and engagement of contemporary religion and spirituality in ecological issues. There exists the emphasis the, that ecological renewal and sustainability necessarily depends upon spiritual awareness of men and an attitude of responsibility towards the ecosystem. This includes rejection of the attitude of seeing no other meaning in the natural environment than what serves for immediate use and consumption; and on the other hand, a recognition of the sacredness of nature and the adoption of behaviours that reflect that recognition in the utilization of the earth's resources. Lincoln (200, p.227) identifies five principles of eco-spiritual consciousness: tending, dwelling, reverence, connectedness, and sentience (cited in Suganthi, 2019, n.pg.).

Eco-spirituality includes a vast array of people and their traditional practices that intertwine spiritual and environmental experience and understanding. In case of the African traditional eco-spirituality, which is our major concern here, nature is sacred, imbued by intrinsic spiritual value, and worthy of reverent care" (Taylor, 2009, p.xi). This condition the attitudes of the traditional Africans and their way of relating with nature in a manner that manifests reverence and stewardship, to ensure

their sustainable living from the earth's resources and their effective conservation of the earth's ecology.

African Cosmovision

An understanding of the African cosmivision is crucial for our appreciation of our discussion on the African eco-spirituality, because the latter is an offshoot of the former. African cosmivision or cosmology defines the traditional African worldview or the African concept of the universe and what there is in the universe, which serves as a major determinant of how they perceive, interpret and relate with the universe (Ojong, 2008, p.201). Notwithstanding the presence of a variety of subcultures in the African continent, there exist some basic assumptions across borderline which defines their cosmivision, which is itself rooted in the African ontology – African concept of reality. From the ontological perspective, it is impossible to separate the life of the Africans from their religion as they maintain a densely religious or spiritual notion of reality. The religious awareness of the African people is not an abstraction, but a living component of their way of life. Kofi Busia and John Mbiti affirm this about the traditional African societies. Busia (1967, p.34) remarks that the African is “intensely and pervasively religious ... in traditional African communities it was not possible to distinguish between religious and non-religious areas of life. All life is religious”. Mbiti also asserts that “Africans are notoriously religious” (1969, p.72). For B. E. Idowu “in all things [Africans] are religious... for the African to be is to be religious” (1967, p.3).

Given the background influence of this religious and spiritual ontological framework, the Africans cosmivision or worldview is also densely spiritual. Africans believe that the entire cosmos is the product of God, and that, “there are three intimately related cosmological modalities, which encompass a continuum

of realities” (Ijiomah, 2014, p.97). These cosmological areas or universe include the sky, where God, major deities and angels reside; the earth, where humans, animals, natural resources and physically observable realities abide; and the underworld, where ancestors and some bad spirits live (Elemi, 1980, p.54). Irrespective of the different categories of cosmological domains, Africans believe that they are not separate, but interrelate and interact with each other by vital force (Tempels, 1959, p.5). And although all the realities belonging to these different domains of the sky, the earth and the underworld, are categorized into two: the physical and the spiritual realities, yet, “they all relate with other” (Maurier, 1985, p.65). This relationship or interaction is made possible by the fact that every existent (including the environment) has a spirit or force inhabiting it. These forces, which must be acknowledged and treated with reverence though reverential handling of every existent, relate as contraries and yearn for each other (Ijiomah, 2014, p.99).

This belief accounts for Africans’ sense of sacredness of nature as well as their veneration of things, which prompted the early European explorers to the African continent to describe African religion as animistic. Thus, in the cosmovision of the Africans, every reality in the universe, is not only a product of God, they have both physical and spiritual elements and they relate with each other through vital force, making them yearn for each other. This creates a strong notion and conviction for the Africans that life is a unity that consists of three integrated domains, namely the natural world, the human world and the spiritual world. Mbiti captures this African integrated worldview thus: “The spiritual universe is in unity with the physical universe, and these two intermingle so much that it is not easy, or even necessary at times to draw the distinction or separate them” (1969, p.72). In other words, the African world which exists in

two spheres – the visible, tangible, and concrete world of humans, animals, vegetation, and other natural elements; and the invisible world of the spirits, ancestors, divinities, and the supreme deity, is one world, indivisible, with one sphere touching on the other.

Commenting on the implications of this African unitary and integrated cosmivision, T. Okeke submits that, for the Africans, the visible and the invisible are perceived as one, interrelated, interacting systems, where agency and causality form a gigantic network of reciprocity, which translates into several acts of what we call religion, respect for nature, sacrifice, divination, communalism, which mark the relations between spirits and ancestors on the one hand, and men on the other hand (2005, p.3). It is this integrated and densely religious/spiritual cosmivision that gives the motivation gives meaning, motivation and direction to the African eco-spirituality.

African Eco-Spirituality

Spirituality may be defined as “a relationship with the supernatural or spiritual realm that provides meaning and a basis for personal and communal reflection, decisions and action.” (Ver Beek, 2000, p. 32). African Eco-spirituality defines the African’s direct consciousness and experience of the sacred in the ecology which serves as a motivation for their responsible management of the earth’s resources, while at the same time living sustainably from the earth’s resources. African eco-spirituality not only presumes the sacredness of the ecosystem, it also considers the nature of each being and of its mutual connection in an ordered system of spiritual connectedness. Features of this African eco-spirituality include the believe in the earth a sacred ownership of God (Lang, 2018, p.61), which has vital force and forms a part of the continuum with other spheres in the cosmological modalities; man as the steward not master of

the earth; life as a continual act of prayer and thanksgiving to God the Creator, for the gift of life and the earth for man's sustenance; knowledge and symbiotic relationship with the earth; and being aware of the impacts of one's actions in the use of the environment on the present and future generations. Such spiritual orientation about the ecosystem necessarily implies a mutuality and reciprocity between man, earth and the cosmos. It is also particularly rooted in the belief that humans communicate with the spiritual world (God, deities, ancestors) via the natural world (earth). Hence, to keep this communication channels between human and spiritual world, it is important to conserve the earth by creating a favourable environment where flora and fauna can have their habitats. This means that conservation of the environment is key for a fruitful spiritual connection between man and the spiritual world. This also means that, for the Africans, nature and the environment are part and parcel of the sacred reality of life, or one with man, since there is no separation. To destroy nature and environment is to destroy oneself. Living in harmony with the natural world translates to living in harmony with the spiritual world, as they are interconnected and co-dependent (Tarusarira, 2017, n.pg.). It is believed that punishment takes place, in the form of drought, diseases and conflicts, when the rules and norms that protect the environment are exceeded (Gonese, 1999, p.9).

Africans indeed believe that reciprocity between land, plants and humans makes life on earth possible. This is shows up in the efficient land use and management by traditional Africans, which prevented land degradation, even as land is utilized for agriculture, extraction of natural resources and other land-based activities that are considered fundamental to livelihoods, food security, incomes and employment. It is for this reason that in Africa, the entire relationship between humans and nature,

including activities such as use of the environment, has a sense of sacred, with deep religious and spiritual underpinnings. Writing about Africa eco-spirituality McDonnell says that, “relationships between nature and humans, spirit and nature are not dichotomized or compartmentalized, but are integrated into an interdependent system of existence that is tied together through spiritual interactions” (2014, p.98). Turaki (2006, p.95) observes that African eco-spirituality is steep in a “profound respect and reverence without exploitation for nature”. This has had immense positive benefits for the traditional African management of the ecosystem. This eco-spirituality automatically ensures that nature and the environment are protected. It abhors all forms of environmental degradation, while encouraging environmental conservation and preservation in diverse ways.

Furthermore, this eco-spirituality conserves biodiversity, as animals are also considered as a part of a larger spiritual system, and are respected and not killed unless in self-defence or to provide immediate sustenance or sacrifice (Tarusarira, 2017, n.pg.). For this reason, in certain cases, some animals may be regarded as sacred to devotees of a particular divinity (hence, not killed or endangered); or natural phenomena such as trees, hills, or rivers may be deified; hence, not to be degraded or polluted. Moreover, non-living elements, such as rain, are also deemed as sacred and as powerful spirits, as they are needed to sustain life. Human beings are, therefore, seen as being spiritually connected to all that happens within the greater frameworks of nature, which must be respected, conserved and used with care, rather than seen as a given to be exploited and abused through unchecked human activities. Hence, land is considered sanctified by its possession by God and ancestral spirits: “land does not belong to humans, but that it belongs to ancestors or a God” (Workineh, 2005, p.17). Humans are the custodians of the land.

They have to take care for it so that they can pass it through to the yet unborn generation (Wijk, 2010, p.12). In this vision nature is seen as a living being that works together with mankind. The earth is therefore not seen as a property that can be exploited in the way humans simply desire, but has to be taken care of in a way that benefits the whole community (including the unborn).

Good care of the land can secure health and survival, through responsible farming practices, such as shifting cultivation, to allow the land to regain its lost nutrients after a period of cultivation and agricultural cycles shaped by the seasons and religious observances covering the entire year. The entire farming cycle was marked by ritual practices which included sacrifice to and appeasement of the spirits or God; prayer and requests for communal intercession. In every community, there existed traditional religious specialists whose roles were connected with agriculture. They carried out religious observances throughout the year in an annual cycle of rituals intended to promote agriculture and ensure environmental protection (Lang, 2018, p.62). Knowledge on traditional agricultural practices was established by years of experiences to cope with environmental conditions and was induced by the strong notion of the interrelationship of human, nature and spiritual realm.

Loss of African Eco-Spirituality and Consequences

Today, Africans, like the rest of humanity face mounting environmental crisis. Part of the reasons for this with regard to the African continent is the loss of African eco-spirituality, due to influence from western materialism, consumerism and secularized worldview. The origin of it all is colonialism. When in the nineteenth century, most of Africa was colonized by various European powers, it was ostensibly to bring 'enlightenment' to the 'dark continent'. However, "colonialism

eventually became synonymous with material exploitation, cultural expropriation and anthropological impoverishment” (George Ehusani, 1997, p.18). Citing Ivan Sertima, Ngugi Wa Thiong’o says of the state of emergency all over Africa, occasioned by colonialism: “No human disaster... can equal in dimension of destructiveness the cataclysm that shook Africa... the thread of cultural and historical continuity was so savagely torn asunder that henceforth one would have to think of two Africas: the one before and the one after the Holocaust” (1983, p.86).

Among the swarming consequences of colonialism in Africa was the loss of African sense of eco-spirituality, because with colonization, indigenous sense of sacredness of nature was historically replaced by an imposed western colonial belief that land and the environment are commodities to be used and exploited, with exploitation of natural resources in the name of socio-economic evolution. This perspective "remove any spiritual value of the land, with regard only given for economic value, and this served to further distance communities from intimate relationships with their environments” (Ritskes, 2012, p.45), with devastating consequences for the people and their environment. Wijk writes that where the ancient agricultural systems were based on a relation between human, nature and spirituality, the western colonial world separates this triad (2010, p.15). In consequence, today in Africa, the sense of sacredness for the natural world is lost, as land, for instance, is seen merely as an acreage to be exploited, bought and sold. Ehusani confirms that, “today the characteristic African humanness, personalism, hospitality, wholesome relations, and the overwhelming sense of the sacred, have been invested and obscured by the cankerworm of Western materialism and individualism” (1997, p.20).

Another factor responsible for this loss of African eco-spirituality is the secularist philosophy of our age and materialism, which reject the sacred value Africans attach to land and empty the land of all its spiritual roots. These spirits of secularism and materialism have long been embraced by Africans at the peril of their environmental life, as this shows up in the irresponsible use of land and other natural resources, with lethal consequences on the ecosystem in the continent. The influence of this western secularism and materialism in Africa ramifies itself in the ethno-religious conflicts and civil wars, which have become more vicious in the continent with massive loss of human and natural resources, for Africans now possess lethal weapons of war to main and kill their fellow men, since life has lost its sacred value. Also, in the last two decades, armed robbers, hired assassins, terrorists and bandits have multiplied their ranks and laid siege of the continent, killing and maiming their victims with reckless abandon, because life has lost its value with the loss of sense of sacred, inspired by materialism. With the same loss of sense of sacred for nature, herdsman are not only frequently terrorizing human communities, but are also massively destroying the terrestrial and aquatic environments.

Globalization has also resulted in the loss of African eco-spirituality through the exposure of the Africans to the capitalistic economic system of thinking, based on the idea that one can use the natural resources one desires and that it is necessary to accumulate wealth in terms of money (Rolston, 2006, p. 308). Reflecting on this, Schalkwyk observes that, "The present ecological disaster is a result of human exploitation of the earth's natural resources due to a capitalist and consumerist world economy, which disadvantages the larger majority of the world's population, but most of all, which ravages the bounty of the earth in the name of using 'natural resources' in a productive

economy” (2011, p.2). This creates a difference in approach in the Africans’ relationship with nature and the ecosystem, by which they now adopt the capitalistic and manipulative approach in dealing with nature in an attempt to accumulate wealth in monetary terms. This exploitation creates crises like the extinction of species and biodiversity, the destruction of habitats in which species need to survive; pollution of water, air and the environment in which humans, animals and plants have to exist; the depletion of mineral resources, forests and fisheries; change of climate patterns, global warming and so forth (Schalkwyk, 2011, p.2).

Thus, the spiritual elements of justice, mutual trust and respect for fellow human beings and nature have all disappeared because of the tendency to exploit the land and relationships for, personal benefit (Wijk, 2010, p.12). The intrinsic motivations by African to take good care of the land (good stewardship) induced by African indigenous eco-spirituality is now absent because of the expansion of this capitalistic thinking. Extrinsic motivations, like the pressure to behave according the new economic principles, becomes the new norm. The sense of sacred and conviction to take care of the ecosystem for spiritual equilibrium with the Supreme Being and the ancestral spirits as well as for future generations has disappeared because of exploiting the land and environment for monetary benefits. The communal cohesion and reciprocity that was established from the African eco-spirituality has also consequently disappeared. Besides, the internationalization of the food production has made the modern African farmers to focus more and more on the economic profitability of their production as the expense of the ecosystem. As Price puts it, “pressure from markets and cash undermines what farmers know as the right thing to do” (Price, 2007, p. 30). This has resulted in the over cultivation and exploitation of natural resources to fulfil the production needs (Chapin et al.,

2009, p.242). In this way, the environment becomes sacrificed for development and economic benefit. With these influences Africans have been challenged to regard their cropping calendar, land rituals practices and festivals that ensured effective land management as wrong, just because the practices of the new religions in the continent are not in line with the African traditions. The strong link between spiritual values and environmental management, which has positive effects on the ecosystem has now disappeared. In general, Africans have become disconnected from the natural world, to which they attached significant spiritual value. The consequence of this is the ecological crisis facing the continent today.

Development organizations and environmental agencies neglect the importance of spirituality, focusing mainly on the same narrow capitalistic and materialistic ends. This is at the base of the environmental degradation by multinational companies operating in Africa today. These companies, which are overly concerned with profit maximization show little or no concern for the damaging effects of their resource exploitation on humans and on the ecosystem. Ken Saro-Wiwa, cited in Kekong Bisong observes as a result of exploitation in the Niger Delta region of Nigeria, “the once fertile African farmland has been laid waste by constant oil spills and acid rain. Puddles of ooze, the size of football fields dot the landscape, and fish and wildlife have vanished” (2005, p.36). The Wildlife Fund for Nature has calculated that Shell’s gas-flaring activities in Nigeria are a major contributor to global warming (qtd. in Kekong, 2005, p.36). And according to the United Nations Conference on Environment and Development, “due to the nearly four decades of oil extraction, the Niger-Delta coastal rainforest and mangrove habitats is the most endangered river delta in the world” (cited in Kekong, 2005, p.36).

Recommendations

Certainly, the environmental crisis in the African continent, and by extension, the world, has created a need for environmentally based religion and spirituality. African eco-spirituality is necessary in this process as it frees man from a consumeristic and materialistic approaches to nature and imposes a sense of understanding about the interrelatedness of cosmic realities and sacredness of nature. This ultimately encourages the protection of the environment as it creates an understanding of the earth as a total community of living beings, where humans have to immerse themselves in nature, and not dominate or objectify nature. This immersion leads one to finding one's connection with nature, towards respecting and loving nature. In line with the current search for eco-spirituality for ecological conservation, African eco-spirituality in its value for nature, thus, presents a solution to the ecological crisis facing the African continent today, occasioned western materialistic, consumerist and capitalistic and secularized worldviews. Not only is it possible to counteract these degrading forces on our environment with African eco-spirituality, we can also restore our environment ruined by these forces through certain recommendations in line with spirit of this concept.

In view of this, we recommend that our ecological crisis needs to be seen not just as a crisis in the health of nonhuman ecosystems. Rather, we need to see the connection between the impoverishment of the earth and the impoverishment of our human spirit though these defective worldviews. In other, words, our ecological crisis has its root in the spiritual disconnect of many African from their sense of sacredness of nature, which must be rediscovered by reliving our belief about the interrelatedness of cosmic realities, divine ownership of the earth, and sacredness of nature, which African eco-spirituality represents. Again, we identify with the assertion that "a healed

ecosystem – humans, animals, land, air, and water together – needs to be understood as requiring a new way of life, not just a few adjustments here and there” (Ruether, 1992, p.15). Hence, we recommend the re-animation of our obligation for a reverent and responsible use of nature’s resources, to be in harmony with the spiritual world, and so, ensure the conservation and preservation of the ecosystem for the present and future generations, as the African eco-spirituality commits. Again, we recommend a new ecological vision and communal ethic that can knit together Africans across religious and ethnic divides for good of our environment, where elements of justice, mutual trust, respect for fellow human beings and commitment to protect the environment is seen as a mark of authentic existence and Africanness. To preserve the earth is to be eco-spiritual; and to be eco-spiritual is to be an authentic African.

Conclusion

The environmental crisis that Africa as well as the rest of world faces today, as evident in our discussion above, is closely connected with a dysfunctional worldview and lopsided concept of reality, namely, the materialism, consumerism and capitalism. These triad is manifested everywhere today in the denial of transcendence, denial of interrelatedness of cosmic realities, the illusion of man’s absolute control and unlimited power of scientific knowledge. These are at the root of today’s explosive wave of industrial and technological civilization and are all a by-product of the spiritual poverty of the modern man. This worldview has eroded from the hearts of many today, the sense of sacredness of nature and the requisite attitude of stewardship towards nature. With such defective worldview starved of spirituality, humans have today disrupted the harmony with nature, and dislocated the complex coherence within reality, resulting in ecological crisis swamping the entire world.

Ensnared in this web, Africans have lost their indigenous sense of eco-spirituality, by means of which they have often regulated the relationship with the environment to ensure its conservation and preservation. This calls for the re-invention of this African eco-spirituality, has the potential to save Africans not only from the spiritual bug caused by western materialism, consumerism and capitalism – which is at the root of our ecological crisis – but also effective enough to heal our ecosystem from the degrading forces of this bug. In African eco-spirituality, we therefore, see a credible alternative to the despicable forces of western materialism, consumerism and capitalism, which are destroying our ecosystem. In their place, African eco-system presents a vision of nature as a sacred living being that works together with mankind; and the earth, not as a property to be can exploited in the way humans want, but a sacred sphere to be taken care of in away that benefits the whole community (including the unborn).

References

- Alexander, David E. (1999). *Encyclopedia of Environmental Science*. Springer, New York.
- Animalu, A. Ucheakonam. (1990). *A Way of Life in Modern Scientific Age*. Government Press, Owerri.
- Busia, K. A. (1967). *Africa in Search of Democracy*. Praeger, New York.
- Bonfiglio, Olga. (2012). "Celebrating Earth Day Through Eco-Spirituality". *The Huffington Post*. Retrieved August 24, 2021.
- Carr, Anne. (1982). "On Feminist Spirituality". In J. W. Conn (Ed.). *Women's Spirituality: Resources for Christian Development*. Paulist Press, New York, 49-58.
- Chapin, F. Stuart, (2011). "Glossary". *Principles Of Terrestrial Ecosystem Ecology*. 2nd ed. P. Matson, Peter Vitousek, Melissa Chapin (Eds.). Springer, New York.
- Chapin, S., Carpenter, G. Kofinas, C. Folke, N. Abel, and W. Clark. (2009). "Ecosystem Stewardship: Sustainability Strategies for a Rapidly Changing Planet". *Trends in Ecology and Evolution*. 25 (4): 241-249
- Crockett, Daniel (2014). "Connection Will Be the Next Big Human Trend". *Huffington Post*. https://en.wikipedia.org/wiki/Spiritual_ecology. Retrieved August, 6, 2021.
- Delaney, Colleen (2009). "Ecospirituality: The Experience of Environmental Meditation in Patients with Cardiovascular Disease". *Holistic Nursing Practice*. 23 (6): 362.
- Ehusani, George. (1997). *An Afro- Christian Vision: Towards a More Humanized World*. Intec, Ibadan.
- Elemi, Michael. (1980). *Introduction to the Traditional African and World Religions*. Ushie, Ogoja.

- Francis, Pope. (2015). *Laudato Si* (On Care for Our Common Home). Libreria Editrice, Vatican City:<http://w2.vatican.va/content/francesco/en/encyclicals/documents/papafrancesco>. (Retrieved Sept. 2, 2021)
- Gonese, C. (1999). "Culture and Cosmvision of Traditional Institutions in Zimbabwe". http://www.compasnet.org/afbeeldingen/Books/Food%20for%20Thought/fft_13.pdf
- Idowu, B. E. (1967). "The Study of Religion with Special Reference to African Traditional Religion." *ORITA: Ibadan Journal of Religious Studies*. 1 (1): 3-12.
- Ijiomah, Chris. (2014). *Harmonious Monism: A Philosophical logic of explanation for Ontological Issues in supernaturalism in African Thought*. Jochrisam, Calabar.
- Kekong, Bisong. (2005). "Profit Maximization and Abuse of Human Rights in Oil Rich Niger-Delta of Nigeria". In John Wangbu (Ed.). *Niger Delta: Rich Region, Poor People*. Snaap, Enugu.
- Lang, Michael Kpughe. (2018). "The Role of Religion in Agriculture: Reflections From the Bamenda Grassfields of Cameroon Since Pre-Colonial Times". *Mgbakoigba: Journal of African Studies*. 7 (2): 54-73.
- Lincoln, Valerie (2000). "Ecospirituality". *Journal of Holistic Nursing*. **18** (3): 227-44.
- Maurier, H. (1985). *Philosophy de L' Afrique Notre*. Antropps Intitute, Augustine.
- Mbiti, John. S. (1969). *African Religions and Philosophy*. Heinemann, Oxford.
- Melnick, D. Jeffrey McNeely, Yolanda Navaaro, Guido Schmidt-Traub, and Robin Sears. (2005). *Environment and Human Wellbeing: A Practical Strategy: Achieving the Millennium Development Gaols*. Earthscan, London.

- McDonnell, P. (2014), "Challenging the Euro-Western Epistemological Dominance of Development through African Cosmovision." In George J. Sefa Dei and Paul Banahene Adjei (Eds.). *Emerging Perspectives on African Development*. Peter Lang, New York: 98–116.
- Odum, Eugene P. (1971). *Fundamentals of Ecology*. 3rd ed. Saunders, New York.
- Ojong, Kyrian, (2008). *A Philosophy of Science for Africa*. African Pentecost Communications, Calabar.
- Okeke, T. (2005). *Philosophy, Culture and Society in Africa*. Afro-Orbis, Nsukka.
- Price, L. L. (2007). "Locating farmer-based knowledge and vested interests in Natural Resource Management: The Interface of Ethnopedology, Land Tenure and Gender in Soil Erosion Management in the Manupali watershed, Philippines". *Journal of Ethnobiology and Ethnomedicine*. 3: 30-45
- Puchalski, Christina. (2014). "Religion vs Spirituality". *Chopra*. <https://chopra.com/articles/religion-vs-spirituality-the-difference-between-them>. Retrieved June 3, 2021.
- Ritskes, Eric. (2012). "A Great Tree Has Fallen: Community, Spiritual Ecology, and African Education". *Science, Technology, and Mathematics Education: Review and Reflection*. 2 (1). <https://en.m.wikipedia.org/wiki>. Retrieved August 3, 2021.
- Rolston, H. (2006). "Caring for Nature: What Science and Economics Can't Teach Us but Religion Can". *Environmental Values*. 15: 307-313
- Ruether, Rosemary Radford. (1992). *Gaia and God: An Ecofeminist Theology of Earth Healing*. HarperCollins, San Francisco.
- Schalkwyk, Annalet (2011). "Sacredness and Sustainability: Searching for a Practical Eco-Spirituality". *Religion and Theology*. 18 (1-2): 77-92.

- Schulze, Ernst-Detlef, Erwin Beck; Klaus Müller-Hohenstein. (2005). *Plant Ecology*. Springer, Berlin.
- Sponsel, Leslie E. (2014). "Spiritual Ecology". In Leeming, David A. (ed.). *Encyclopedia of Psychology and Religion*. 2nd ed. Springer, Boston. pp. 1718–1723
- Suganthi, L. (2019). "Ecospirituality: A Scale to Measure an Individual's Reverential Respect for the Environment. *Ecopyschology*. 11 (2). <https://www.liebertpub.com/doi/10.1089/eco>.
- Tarusarira, Joram. (2017). "African Religion, Climate Change, and Knowledge Systems". *Ecumenical Review*. 69 (3): 398-410.
- Taylor, Bron. (2009). "Dark green religion." *Nature Spirituality and the Planetary Future*. University of California Press, California.
- Tempels, Placid. (1959). *Bantu Philosophy*. Presence Africana, Paris.
- Thiong’O, Ngugi Wa. (1983). *Decolonizing the Mind*. Currey Press, London.
- Turaki, Y. (2006). *Foundations of African Traditional Religion and Worldview*. WorldAlive Publishers, Nairobi.
- Ver Beek, K. A. (2000). "Spirituality: A Development Taboo". *Development in Practice*. 10 (1): 31-43.
- White, Lynn (1967). "The Historical Roots of Our Ecologic Crisis". *Science*. 155 (3767): 1203–1207.
- Wijk, Geertje van. (2010). "African Spirituality in Land Management" *Wageningen University, Land Degradation and Development Group*. <https://edepot.wur.nl/155328>. Retrieved Sept. 12, 2021.
- Workineh, K. 2005. The Rehabilitation of Indigenous Environmental Ethics in Africa. *Diogenes*. 207: 17-34.

Chapter Three

AFRICAN SACRALITY AND ECO-SPIRITUALITY

Jude I. Onebunne, PhD

Department of Philosophy

Nnamdi Azikiwe University Awka

juno.anyi@gmail.com

&

Nmesoma I. Chijioko

Nnadiabube Research Institute

Ngozika Housing Estate, Awka

ifechukwuhijioko@gmail.com

Executive Summary

There is an underlining relationship between African *sacrality* and Eco-spirituality. African *sacrality* is a concept that encompasses various African practices, beliefs and some significant subject matters which are designated or exalted by divine sanction and entitled to extreme relevance, not to be profaned or violated. The concept of African *sacrality* has a direct implication on Eco-spirituality which is based on the sacredness of nature, earth and universe. Using the method of critical analysis the researchers found out that the African practice of upholding natural phenomena as sacred has been long dead and the belief that humanity is somehow separate and above nature has been birthed. This belief in turn has created many of today's problems as it concerns Eco-spirituality in one way or the other. The researchers, therefore, suggested that a review which would bring about the revival of the African *sacrality* is needed for a smooth evolution of proper and effective ecological-spirituality.

Keywords: Africa, African *Sacrality*, Ecology, Eco-Spirituality, Ecosystem.

Introduction

The transformational process brought about by eco-spirituality demonstrates a strong interplay between what Wayne Teasdale describes as the two sides of the spiritual journey. "... the awakening and actualization of who we are in our ultimate being is incomplete unless our compassion, sensitivity and love are similarly awakened and actualized in our lives and relationships". The inner path into the heart of creation leads to an expansion of one understands of reality, so that one starts to see the total reality as sacred. A transformed understanding of the world leads to the outer or *kataphatic* path; where one's task is to learn to live on the earth and in the cosmos in a way that honors the sacred that gives it life. Africans over the past years is known for its *sacralities*, the fact that thing like days, trees, animals, places, etc are sometimes set aside because of its historical significance and termed sacred has been the bedrock or foundation for eco-spirituality in Africa. The African sacred values have unintentionally been the most important form of conservation, this in turn, has given rise to the erroneous worshiping of these sacred entities. African ecosystem, therefore, creates an unfathomable aura of incomprehensible realities leading to a form of eco-spirituality. The proposed review would be such that corrects the erroneous notion of worshiping the eco system, bringing the true concept of eco-spirituality to life by so doing a clear picture of how to uphold the eco-system as sacred and spiritual would be in view.

African Sacrality

African people under the influence of traditional religion do not exploit the environment. Rather, they explore the environment. People and nature are bound together by moral order (Taringa

2006; Kanu 2015). A clear understanding of African *sacrarities* would further be revealed by critically expose and show Africans appreciation of human relationship with the eco-system. For example, the Shona believe that the land belongs to Mwari and other lesser spirits. Also, for the Shona land belongs to the living, the dead and those yet to be born. Land and its resources, therefore, ought to be used sustainably for the benefit of future generations. Also, among the Shona, land belongs to ancestral guardians of the land (*varidzivenyika*). According to Chavunduka (2001), it was believed that each geographical area or territory belongs to the ancestors. The ancestors are responsible for controlling rainfall and fertility of the land. This implies that people should not exploit land as they are only stewards manning it on behalf of the ancestors. Ownership of land forms the main link between politics, religion and spirituality in Zimbabwe. The environment is thus sacred as it belongs to the spirit world. According to Ranger (1985), Shona people of africa ideas are about relationships whether with other people, animals, ancestors and with the land. The Shona personify animals in the principle of totem animals (*mutupo*) (Taringa, 2006). Rocks, water bodies and mountains are also personified as living beings. People should, therefore, respect their totem animals. Good examples may be the *shiri* (bird) totem, people with such a totem are not expected to eat birds and also the *dziva* totem where people should revere water bodies thereby preserving aquatic life. Land is entrusted in the chief. Traditionally land had no marketable value and could not be sold. More importantly most resources found on the land like wood and other non-wood forest products had no market value. The practice of selling firewood which has caused a lot of deforestation was, therefore, unheard of among the Shona people. Of paramount importance is the sacredness of the land. Land is sacred because it houses the dead relatives buried in it.

Taringa (2006) also notes that land is sacred because the umbilical cords of people are buried in it. Common practices of, for example, starting fires were unheard of. Only natural fires were common in mountains and these had a religious significance among the Shona. The impacts of such fires were not destructive. Sacred sites on the landscape play a role in many African regions.

Byers, Cunliffe and Hudak (2001) gave an example of Rusitu Botanical Reserve which is a traditional sacred forest in South eastern Zimbabwe. Unauthorized tree cutting is believed to be revenged by ancestral spirits through droughts, death and mental illness or vanishing. According to Bourdillon (1987), *mhondoro* spirits are viewed as guardian spirits of a place and are represented by lions. They maintain harmonious relations between people and the land. Chiefs and village heads are supposed to enforce respect for sacred sites and punish people who break the rules. In a study by Byers, Cunliffe and Hudak (2001) it was found that there existed numerous sacred places in Muzarabani area and these include sacred pools, forests, trees, rivers, mountains and mountain ranges. In the same study, a Korekore respondent indicated that dry forests are used as burial places, and this makes them spirit inhabited. The respondent argued that people like places with *Acacia ataxacantha* for burials because its thorns catch and stop witches from entering the forests to disturb the bodies of the dead for evil purposes. In a study by Byers, Cunliffe and Hudak (2001), 57.6% of the respondents acknowledged that there was a sacred site near them and 85.7% reported that it was important to respect sacred sites. Taboos (*zviera*) form part of Shona morality. Taboos are understood to be specific rules that forbid people from performing certain actions, the performance of which may result in the negation of the moral conduct that govern human behaviour (Chemhuru & Masaka, 2010). Breaching of *zviera* is

thought to invite misfortunes such as bad luck, drought or death (Tatira, 2000). Violation of Shona taboos is thus said to invite an angry reaction from the spirit world. Taboos are one of the approaches used by the Shona to manage water sources such as springs (zvitubu, zvisipiti) or wells (matsime).

According to Taringa (2006), water bodies or wetlands are sacred because they are the abode of animals associated with spirits. Metal and clay containers which have been used for cooking may not be used to fetch water from certain water bodies. Water spirits/ mermaids and pythons are considered guardians of wetlands. Appropriate behavior and observance of obligations and rites are important and required to maintain social harmony, longevity and contentment of spirits (Kazembe, 2009). The Shona peoples believe that there are spirits that guard such water sources and they migrate if the source is polluted and this results in drying up of the water source. Containers with soot are believed to pollute water sources, so through some cultural beliefs and practices, the Shona protected sources of water from pollution and running dry. Water spirits performed important duties and some of them were rainmaking and to mobilize chiefs and the community to conserve the environment (Machoko, 2013). He argues that there is an urgent need for Zimbabweans to be reconnected to their traditional beliefs if environmental degradation is to be reversed. The Shona also believed in sacredness of flora and fauna. Cutting down trees in certain areas was prohibited and these areas were called *marambotemwa*. Flora ensures that water table does not fall as it minimizes runoff. According to Mhaka (2015), vegetative cover of *marambotemwa* prevents soil erosion and sedimentation of water sources thereby ensuring sustainable environmental use.

In most traditional communities among the Shona people, mountains and forests are burial sites for chiefs and are also considered habitats for ancestral spirits. The Shona considers it morally wrong to cut trees in certain forests. The Shona thus holds taboos in relation to cutting or destroying of certain trees. In some cases, the misfortunes may befall the whole community in the form of droughts, hailstorms that destroy crops, or wild locusts that devour crops. Among the people of Chivhaku clan in Buhera district, it was believed that some wild beasts would destroy the perpetrators' crops. Certain animals are associated with bad omens and these include hyenas and owls. Hardly could a Shona person kill such animals as they are associated with witchcraft. According to Mhaka (2015) it should be noted that there are situations where Shona religious leaders have resisted embracing western scientific approaches to pest and weed control and enhancing soil fertility arguing that doing so would anger guardian spirits. Excessive use of agrochemicals can have a negative impact on the environment. The Shona sometimes performs rituals when the land is invaded by pests. The sacredness of the different ecology component in the Shona peoples community is just similar to most African communities, over the years even before Africans encountered civilization, these sacredness upheld have been a means of protecting the African heritage for the future generation.

Understanding of Eco-spirituality

Ecology is the science of the mutual relationship of organisms to their environment. It is the relationship of living things to one another and their environment or the study of such relationships. Spirituality means attitudes, beliefs and practices which animate people's lives and help them reach out towards super-sensible realities. Spirituality includes several interrelated levels of reference such as the level of lived experience, which means the attitudes and behaviours of human beings which are typically

influenced by their-ultimate values, and therefore their-spirituality.

Eco-spirituality expresses the joining of spirituality with ecological perspectives. There are numerous types, traditions, expressions, and understandings of eco-spirituality. It does not refer to any one set of beliefs, but to a range of ethical or moral, religious, spiritual, or agnostic beliefs, tendencies, or actions that relate to ecological concerns. Eco-spirituality has evolved since the 1960s and is currently part of popular culture in North America. The connection between spirituality and the Earth has deep and historical roots in many religious traditions and in particular with those that have remained in tune with the rhythms and limits of the Earth, such as some indigenous traditions around the world.

Eco-spirituality has many meanings, the first referring to a thirst for connection between spirituality and the Earth, given the extent of and the general lack of religious responses to the ecological crisis. There is this fact of recognition that the ecological crisis threatens all life on Earth, and it is fundamentally a moral, spiritual, and religious problem.

Since the early 1970s there has been a global, public, and political consciousness of the need for ethics and religions to be consistent with ecological and social liberation, noting, as does Steven Rockefeller (1992), that there are many diverse cultural paths joining in this awareness. Discussions have been increasingly cross-cultural and interreligious. Organizations such as the United Nations, the World Wildlife Fund, World Conservation Strategy, and numerous religious groups have been involved in interdisciplinary work aimed at developing religious and spiritual responses to the ecological crisis that are

connected to political decision-making. From the initiatives of Mary Evelyn Tucker and John Grim, the Harvard Centre for the Study of World Religions hosted a Religion and Ecology Project involving ten conferences since 1996, bringing together scholars and environmentalists from Buddhism, Confucianism, Taoism, Shinto, Jainism, Hinduism, indigenous traditions, Judaism, Christianity, and Islam. This work is entering a phase of discussions with the United Nations.

Eco-spirituality is also a term that can be applied to the work in cosmology and particularly that of Thomas Berry, a cultural historian of religions. Berry's work in scientific and religious cosmologies – stories about the origin of the world that provide orientation, guidance, and meaning to life – has done much to revive a sense of the sacredness of life, the Earth, and all the processes of the universe. He offers a comprehensive context for rethinking our current situation and for understanding ourselves as part of a larger evolutionary whole that is both spiritual and material.

There are several elements within eco-spirituality, and priorities are divergent. One challenges the belief that humans are the centre of life, or anthropocentrism. Some propose a bio-centric approach wherein the intrinsic value of animals, plants, rivers, and mountains has a priority over their instrumental value as resources for humans. The eco-spirituality insight emerges from deep ecology, eco-feminism, and African *sacrality* as such.

Philosophy of Nature

Philosophy of nature has much to do the concept of naturalness. Nature remains, despite all the contingency of its existence, obedient to eternal laws; but surely this is also true of the realm of self consciousness, a fact which can already be seen in the belief that providence governs human affairs. There is an

infallible law of nature as nature. Nature is to be viewed as a system of stages, in which one stage necessarily arises from the other and is the truth closest to the other from which it results, though not in such a way that the one would naturally generate the other, but rather in the inner idea which constitutes the ground of nature. It has been an awkward conception in older and also more recent philosophy of nature to see the progression and the transition of one natural form and sphere into another as an external, actual production which, however, in order to be made clearer, is relegated to the darkness of the past. Philosophy of nature therefore is the application of philosophical principles and critical realities on nature or ecosystem as a given. It has to do with thoughts on nature as an extension or externalization of realities very sublime.

Precisely this externality is characteristic of nature: differences are allowed to fall apart and to appear as existences indifferent to each other; and the dialectical concept, which leads the stages further, is the interior which emerges only in the spirit. Certainly the previously favoured teleological view provided the basis for the relation to the concept, and, in the same way, the relation to the spirit, but it focused only on external purposiveness and viewed the spirit as if it were entangled in finite and natural purposes. Due to the vapidness of such finite purposes, purposes for which natural things were shown to be useful, the teleological view has been discredited for exhibiting the wisdom of God. The view of the usefulness of natural things has the implicit truth that these things are not in and for themselves an absolute goal; nevertheless, it is unable to determine whether such things are defective or inadequate. For this determination it is necessary to posit that the immanent moment of its idea, which brings about its transiency and transition into another existence, produces at the same time a transformation into a higher concept. Nature is,

in itself a living whole. The movement of its idea through its sequence of stages is more precisely this: the idea posits itself as that which it is in itself; or, what is the same thing, it goes into itself out of that immediacy and externality which is death in order to go into itself; yet further, it suspends this determinacy of the idea, in which it is only life, and becomes spirit, which is its truth. The idea as nature is: (1) as universal, ideal being outside of itself space and time; (2) as real and mutual being apart from itself particular or material existence, – inorganic nature; (3) as living actuality, organic nature. The three sciences can thus be named mathematics, physics, and physiology.

Man's Relationship with Nature

Nature as they say abhors vacuum. Man as a being in nature contributes positive and often negatively to the existence of nature. However man depends greatly on nature and nature is often nurture by nature. This nurturing, therefore, determines the man's effect on nature. Hence, the relationship between man and nature must be reconsidered. Nature is the whole of the physical world. It is also what exists outside of any human action. Man is in nature but he acts upon it, thereby emancipating himself of it. He is part and parcel of nature as Scripture mandated thus: God blessed them, and God said to them, "Be fruitful and multiply, and fill the earth and subdue it; and have dominion over the fish of the sea and over the birds of the air and over every living thing that moves upon the earth" [Gen 1:26-28]. Here lies the foundation of the spirituality underneath the ecosystem and man as the head of creation.

Man's removal from the natural environment and his anthropocentric positioning in the *anthropic* environment are as a result of long cultural development. Man therefore is part of nature as well as the master of nature. This sublime idea goes through changing patterns of thought and action and

cosmogenic myths which have supported, in the consciousness of humanity, the feeling of belonging to nature as a place of genesis and the becoming of man. When man was no longer identified with nature and extracted from its systemic functioning, he becomes a user of the resources generously offered by nature. Thus, the development of human habitats was done with the decline of the natural environment and at the expense of the alienation of man from nature. The nature that gives us everything and does not request anything in return now appears as a lost paradise that we are looking for inside us. The operation of the natural environment on earth is a model of systemic organization in which the intelligence of matter is an everyday observable reality. Living according to natural rules is a profoundly religious experience of meeting with eternity, finding the lost paradise. That is why the return to nature in the sense of observing and reproducing a model of action and organization, validated by the very functionality of the planet, may be the solution to the salvation of human society from self-destruction, the need to revolute eco-spirituality is then a pressing one that mustn't be left unattended to.

African Sacred Practices: Implication for Eco-spirituality

Many concepts in the African worldview associate God with natural objects and phenomena. It is generally assumed that God created the heaven and earth. Heaven is the counterpart of the earth, and it is considered by African people to be the dwelling abode or place of God. There are stories told all over Africa, of how heaven and earth were originally either close together or joined by a rope or bridge, and how God was close to humanity. The Scriptural account of the Garden of Eden has similar story. All African people associate God with the sky or heaven in one way or another. There are those who say that God reigns and lives in the sky and some even identify Him with the sky or consider it to be his chief manifestation. There are many

people whose names for God mean sky, heaven or simply the above.

The majority of African religious thought forms are based on the notion that heavenly bodies such as the sun, moon and stars communicate the magnificence of God. The regularity of day and night and the constant rhythm of the seasons illustrate the unfailing sustenance of God's providence. The sun, moon and stars feature in the myths and beliefs of many people. Most Kenyan societies consider the sun to be a manifestation of God himself. However, there is no concrete indication that the sun is considered to be God, or God considered to be the sun, however, these may be closely associated. At best, the sun symbolizes aspects of God such as his omniscience, his power, his everlasting endurance and even his nature.

Similar concepts exist concerning the moon, although on the whole, there are fewer associations with God than is the case of the sun. A few societies personify the stars as spirits. For example, the Gikuyu take them as God's manifestations. Rain is regarded by African people to be one of the greatest blessings of God. For that reason, He is commonly referred to as *The Rain Giver*. Some people like the Elgeyo and Marakwet personify rain as a divinity, a supernatural being, or a son of God. Others, like the Akamba, consider rain to be the saliva of God, this being a symbol of great blessings. Many societies make sacrifices, offerings and prayers to God in connection with rain, especially during periods of drought. Rainmakers are reported in all parts of the continent, their duty being to solicit God's help in providing rain or in halting it if too much falls. The Banyore of Western Kenya as well as Igbo people of Nigeria are believed to be able to manipulate rain. They have the ability to cause rain or stop it from raining. Thunder is taken by many to be God's voice. Others like the Gikuyu and Embu interpret it to be the movement

of God. The Abanyala and Samia regard thunder as an indication of God's anger. Thunder is personified as a divinity among the Abaluhya, Luo and Kisii. The Gikuyu take lightning to be God's weapon by means of which He clears the way when moving from one sacred place to another.

In few cases, the wind is associated with God. Some people describe him metaphorically as the wind or air, or moving like the wind while others think that the wind is one of the vehicles by which God travels in great power through the sky. The Nyala, Hayo, Samia, and Marachi consider wind and storms to be God's manifestations while The Wanga consider wind as the movement of God. Like the heavens, the earth has many natural objects and phenomena and various concepts associate them with God or give them other religious meaning. In some areas, rivers and streams are personified or attributed to divinities. Oceans, seas, lakes and permanent ponds are often thought to be inhabited by spirits or divinities that generally have to be propitiated when people use the water in one way or another.

The symbolism of water appears in rituals of blessings, marriages, healing and purification. The stream is a receptacle of cosmic forces and therefore, a preferred location for certain rituals. Rivers and streams are often accorded religious significance, especially when they are believed to be dwelling places of spirits. Water is responsible for the germination of seeds and sprouting of plants and therefore offers assurance for the formation of all new life

Sacred Biota (Flora and Fauna)

Animals and plants constitute human food and their importance is obviously great. African people have many religious associations with them, some of which are linked with concepts of God, such as the beliefs that he has absolute power over the

universe. The religious significance of a particular animal or plant may differ from one community to another. For example, the Luhya of Busia District, Kenya have religious practices often binding oaths or purification rites, which involves the use of certain animals. Hens and cocks may be used as sacrifices to God or mediators between God and humanity, including ancestors. Burnt offerings are widely considered to be essential. There are myths which tell how domestic animals originated at the same time or in the same way as man himself. Cattle, sheep and goats are found for sacrificial and other religious purposes and examples of this are found in most Kenyan communities. Many people have a sacred attitude towards their animals.

The snake is thought by some people, like the Luo, to be sacred, especially the python which may not be killed by people. A considerable number of societies associate snakes with the living dead or other human spirits and such snakes are given food and drink when they visit people's homes. However, some snakes are associated with the religion, therefore, their appearance represents a bad omen. Of the birds, chickens are used in most societies for religious purposes or thought of as lower spiritual beings and part of the living dead. Animal constitutes human food and their importance is obviously great (Mbiti, 1999; Kanu 2013). Likewise, Igbo people have many religions associations with them. The Hindu also respects and venerates the cow. In many myths of African traditional societies, the tortoise or chameleon symbolizes the messenger who brought news from God that men should die. The dog, on the other hand, symbolizes the messenger who should have brought news of immortality or resurrection, but lingered on the way and the other slow animal overtook it and got to God first and delivered death message. Again, the spider, though small creature, appears in many myths and stories. Among the Akan and Ashanti, the spider symbolizes wisdom. For that reason, God is given the title of *Ananse Kokroko*

which means the “Great Spider” that is the “Wise One”. Likewise in Igbo land, there are some sacred animals which are not to be tampered with for instance the Idemili people of Anambra State consider the python as a sacred animals and dared any one not to kill it even if killed mistakenly, a full burial rights must be performed in its honour. The Awka people as well consider the monkey as a sacred animal in their community. These different *sacralities* have helped preserve the lives of these creatures.

The ancient African society never suffered deforestation nor live in fear of ever loosing the natural gift of the eco-system in fact it was to their credit that we enjoy the vague serenity of the environment. The sacredness and respect attached to the environment and its inhabitant was second to, nevertheless, it became a big problem when the respect, value and honour bestowed on this natural resources metamorphosed into worshiping and offering diabolic sacrifices which negatively affected humans surfaced. A redefinition of this practice is encouraging rather a total discard of a culture that has been the source of our natural wealth.

Some plant and tress species are conserved due to their significance to the community, while some are treated with reverence and protected for future use due to their sacred value. Some are protected for their medicinal value, while others are utilized for rituals. Mythical trees feature in a number of stories. The symbolism of vegetation in black Africa centres on trees, which speaks the language of life and death. Some speak of their tree of life to be the source from which all life emanates. For example, the Meru in Kenya talk about the forbidden tree whose fruit God forbade the early men to eat. When men broke that law and ate the forbidden fruit, death came into the world and God withdrew Himself from men. The fig tree is considered sacred

by many societies all over Africa, and people make offerings, sacrifices and prayers around or under it. There are sacred groves and other trees, including the baobab tree used for religious purposes or associated with God and other spiritual beings. Many trees beyond its medicinal potency are symbols of great reminiscence. The leaves, barks and roots of *neem* tree can be used to cure forty diseases, giving it the name *mwarubaine*, meaning forty.

Some people hold that rocks are a manifestation of God. Outstanding mountains and hills are generally regarded as sacred and are given religious meaning. The Akamba believe that the first men were brought by God out of a rock, an area they have kept sacred to date. They claim that God left His footprints on Nvau. These are rocks considered to be sacred and are used for religious rites and observances. Sacred stories are often employed in rainmaking ceremonies. Many consider rocks and boulders to be the dwelling places of the spirits, the departed or the living dead. Clay is said by some communities to be or to have been used by God to form human beings. Therefore, the Wanga and the Bukusu use special clay during circumcision ceremonies. The initiates apply clay all over their bodies to symbolize unity with the ancestors. These beliefs are rooted in the ANET as well as the Scriptural all in one narratives with regard to creation with special reference to nature. People worship while facing these phenomena and it is the role of the community to preserve them. This is why the Gikuyu make prayers facing Mount Kenya, the chief of their sacred mountains. Mountains, hills and other high standing earth formations are in no way thought to be God; they simply give a concrete manifestation of his being and his presence. Furthermore, they are physically closer to the sky ' than ordinary ground and in that sense, it is easy to associate them with God. They are on earth

next to the sun and to a lesser extent the moon and stars are in heaven.

The sacred forest in a typical African community is a forest which have been mapped out as holy land or dreaded. Either ways such forests are kept in isolation and can only be entered by a particular group of individuals, in some communities used these sacred forest are believed to be the abode of spirits and at such are left unhampered. This practice of the ancient African communities was in no way intending to conserve natural resources but ended up achieving this fit. All around the world, people depend on natural resources and more particularly on forests, which are used for many different purposes. This dependence is notably due to the fact that tropical forests shelter a great biodiversity.

According to the Beninese Ministry of Environment, Habitat and Urbanism (MEHU), biological resources represent at least 40% of world economy and 80% of poor people needs (MEHU). Forests provide essential resources for the local rural economy such as valuable food supplements, construction materials, medicines, organic fertilisers, fuel wood, and religious items. These products are collected frequently for traditional and commercial purposes (Altieri & Gbaguidi, 1998). Forests contributions are “vital in many developing countries for the subsistence, and sometimes survival, of the poorest rural population groups” (Montalembert, 1991:2). It is no wonder today that African still holds an impressive record as regards to forestation all over the world. The continuous deforestation Africans practice in a bid to imbibe the western development and brace up to trends will have short- and long-term consequences on the population in the near future.

Evolution of Eco-spirituality

Eco-spirituality has a history. It cannot go beyond proper appreciation of nature as an auxiliary to man's being. Finding a kind of relationship with man, nature becomes something that is God-given and from this point of view is graded thus within the purview of spirituality. Most people follow and are influenced by some kind of spiritual faith. We examined two ways in which religious faiths can in turn influence biodiversity conservation in protected areas.

First, biodiversity conservation is influenced through the direct and often effective protection afforded to wild species in sacred natural sites and in semi-natural habitats around religious buildings. Sacred natural sites are almost certainly the world's oldest form of habitat protection. Although some sacred natural sites exist inside official protected areas, many thousands more form a largely unrecognized shadow conservation network in many countries throughout the world, which can be more stringently protected than state-run reserves. Second, faiths have a profound impact on attitudes to protection of the natural world through their philosophy, teachings, investment choices, approaches to the land they control, and religious-based management systems. We considered the interactions between faiths and protected areas with respect to all 11 mainstream faiths and to a number of local belief systems.

The close links between faiths and habitat protection offer major conservation opportunities, but also pose challenges. Bringing a sacred natural site into a national protected-area system can increase protection for the site, but may compromise some of its spiritual values or even its conservation values. Most protected-area managers are not trained to manage natural sites for religious purposes, but many sacred natural sites are under

threat from cultural changes and habitat degradation. Decisions about whether or not to make a sacred natural site an official protected area therefore need to be made on a case-by-case basis. Such sites can play an important role in conservation inside and outside official protected areas. More information about the conservation value of sacred lands is needed as is more informed experience in integrating these into wider conservation strategies. In addition, many protected-area staff needs training in how to manage sensitive issues relating to faiths where important faith sites occur in protected areas.

Conclusion

African people have strong belief in the love and respect for the *spirit* of the nature, as reflected in their lifestyle and wisdom. The way of life and traditional ecological knowledge of the indigenous people of Africa have been based on the belief in the spirit, which led to the creation of the sacred areas. Traditional spiritual beliefs in ancestral spirits are closely related to various aspects of environmental management in Africa. The assertion that a traditional community's reverence to the natural habitat is a significant factor contributing to sustainable local nature resource management has been established in this work. Having critically analyzed the concept of African *sacrarity* in relation to eco-spirituality, it is proper then to say that sacred African practices can be upheld for a revolution of eco-spirituality. That notwithstanding it is important that the aspect of these practices that encourages worshiping of the ecosystem be eradicated. Rather the ecosystem deserves to be explored then exploited and this is the underlying fact with regard to eco-spirituality.

References

- Altieri, & Gbaguidi, (1998). *Sacred forests: a sustainable conservation strategy*. Wagemngen.
- Bourdillon, M. F. C. (1987). *Shona peoples*. Gweru: Mambo Press.
- Byers, B. A., Cunliffe, R. N. and Hudak, A. T. (2001). Linking the conservation of culture and nature: A case study of sacred forests in Zimbabwe. *Human Ecology* 29(2): 187-218
- Chavunduka, G.; (2001). *Dialogue among civilizations: The African religion in Zimbabwe today*. Crossover communications, Harare
- Chemhuru & Masaka, D. (2010). The Proverb: A preserver of Shona Traditional Religion and ethical code. *The Journal of Pan African Studies*, 6(5): 132-143.
- Mbiti, J. (1999). *Introduction to African Religion, 2nd ed*. Nairobi: EAEP.
- Kanu, I. A. (2013). The Dimensions of African Cosmology. *Filosofia Theoretica: Journal of African Philosophy, Culture and Religion*. 2. 2. 533-555.
- Kanu, I. A. (2015a). *A hermeneutic approach to African Traditional Religion, philosophy and theology*. Augustinian Publications: Nigeria
- Kanu, I. A. (2015b). *African philosophy: An ontologico-existential approach to classical and contemporary issues*. Augustinian Publications: Nigeria
- Kazembe, T. (2009). The relationship between God and people in Shona traditional religion. *The Rose Croix Journal* 2009, 6:51-79.
- Ranger, T. (1985). *The invention of tribalism in Zimbabwe*. Gweru: Mambo Press.
- Taringa, N. (2006). How environmental is African traditional religion? *Exchange* 35 (2): 191-214.
- Machoko, C. G. (2013). Water spirits and the conservation of the natural environment: A case study from Zimbabwe.

International Journal of Sociology and Anthropology 5(8): 285-296.

Mhaka (2015). *Traditional taboos defined: Conflict prevention myths and realities*. Harare, IDA.

Montahembert (1991: 2) *Sacred forests: a sustainable conservation strategy*. Wagemngen

Lovelock, James. (1988). *The Ages of Gaia*. Oxford: Oxford University Press.

Rockefeller, Steven, and John Elder, eds (1992). *Spirit and Nature: Why the Environment Is a Religious Issue*. Boston: Beacon Press.

Tucker, Mary Evelyn, and John Grim, eds. (1993). *Worldviews and Ecology: Religion, Philosophy and the Environment*. Lewisburg: Bucknell University Press.

Chapter Four

IGWEBUIKE AS THE OPERATIVE CONDITION OF AFRICAN ECO-SPIRITUALITY

Ikechukwu Anthony KANU, OSA, PhD
Department of Philosophy and Religious Studies
Tansian University, Umunya, Anambra State
ikee_mario@yahoo.com
ORCID iD: 0000-0003-1977-202X

Executive Summary

While there are a few papers written on African eco-spirituality, there is hardly literature that discusses its operative condition in a profound manner in relation to the African worldview. The questions, therefore, looming at the horizon of this research is: what is the operative condition or underlying principle of African eco-spirituality? By operating condition, it is meant that which animates from within and differentiates African eco-spirituality from other eco-spiritualities, and, therefore, gives it its identity, or makes it unique in relation to other thoughts on eco-spirituality. The operative condition defines the nature, shapes, determines the direction, and the end of thoughts on African eco-spirituality. The operating condition of African eco-spirituality can also be referred to as the spirit of African eco-spirituality. It is strongly connected to the African worldview and cannot be discussed outside of this parameter. This explains why it is able to animate, determine, shape, define and direct. The concept of African worldview used in this work in relation to the operating condition of African eco-spirituality, is the African theory of the universe, which include the manner of conceiving the world and the place of humanity in this world in relation to other realities. The African worldview forms a 'life

system' that the African holds on to consciously or unconsciously which serves as an interpretative framework for the interpretation and conception of reality as a whole. Worldview is, therefore, at the center of the African thought and expressions, and stands as the operative condition of reality: the human action and thought. Since there is a co-relation between *Igwebuike* and the African worldview, this work understands *Igwebuike* as the operative condition of African eco-philosophy. For the purpose of this study, the philosophical and complementary approaches were employed.

Keywords: *Igwebuike*, African, Worldview, Underlying, Operating Condition, Relationality

Introduction

This work investigates the operative condition for or the underlying principle at the base of the operation of African eco-spirituality. It is this operating condition that differentiates African eco-spirituality from other eco-spiritualities, and, therefore, gives it its identity, makes it unique in relation to other thoughts on eco-spirituality. It defines the nature, animates its operations, determines the direction, and the end of thoughts on African eco-spirituality. The spirit or operating condition of African eco-spirituality is strongly connected to the African worldview. This explains why it is able to animate, determine, define and direct.

This operative condition is connected to the African worldview. The concept worldview has a very specific meaning for Freud (1933). He defines it as "an intellectual construction which solves all the problems of our existence uniformly on the basis of one overriding hypothesis, which, accordingly, leaves no question unanswered and in which everything that interests us finds its fixed place" (p. 158). This definition was to aid his distinction

between rational or scientific worldview from religious or philosophical worldview. Dilthey (1954) and Rickman (1988) understand worldview as hermeneutical constructs, conveying the meaning of the world, thus, the interpretation of worldviews help us to get at the meaning of reality just as the interpretation of language helps to understand a text.

African worldview refers to the African theory of the universe, which includes the manner of conceiving the world and the place of humanity in this world in relation to other realities. The African worldview forms a 'life system' that the African holds on to consciously or unconsciously which serves as an interpretative framework for the interpretation and conception of reality. Nwala (1985) defines worldview as:

The complex of beliefs, habits, laws, customs and traditions of a people. It includes the overall picture they have about reality, the universe, life and existence; their attitude to life and things in general; what they do and think of; what life is; what things are worth striving to attain; what man's place is in the scheme of things; whether or not man has an immortal soul; whether or not life has a meaning and purpose, etc... worldview is enmeshed in the practical life of the people; in particular in the economic, political, social, artistic and religious life (p. 26).

Worldview is, therefore, at the center of our thoughts and expressions through actions and the institutions of society like education, politics, fender, sense of family, religion, arts, social interactions, health care, etc. Within the African context, the worldview stands as the operative condition of reality: the human action and thought. This notwithstanding, since there is a co-relation between *Igwebuike* and the African worldview, such

that *Igwebuike* becomes the articulation of the African worldview, this work understands *Igwebuike* as the operative condition of African eco-philosophy. This study will begin with an understanding of African eco-spirituality and *Igwebuike* as a complementary philosophy. This will be followed by an effort to show how ontologically and cosmologically, *Igwebuike* is at the base of African eco-spirituality.

Theoretical Framework

The theoretical framework used for this study of the spirit of African eco-spirituality is the *Igwebuike* theoretical framework which is an Igbo-African proverb translatable as *there is strength in number*, which philosophically speaks of the interdependence and complementarity of reality. It holds for a humane, respectful and polite attitude towards other human beings and realities within nature- knowing fully well that every reality has a purpose determined by the creator; and that there is a strong relationship between the physical and spiritual worlds to such an extent that the physical world is considered a manifestation of great spirit forces. *Igwebuike* presents a worldview in which single individuals or communities cannot unilaterally define and pursue their purposes without recognizing their mutual foundedness, their complementary natures. The refusal to understand the wholeness, interconnected and complementarity of reality and to act outside of its principles will have resounding consequences on the human world in terms of disharmony and disbalance. *Igwebuike* understands wholeness as the regulative principle of the African world since what is asserted is that the single individual is incomplete without the other (Kanu 2017). This has implications for the development of an African eco-spirituality. It has to be developed within this framework of interrelatedness of reality, both physical and spiritual realities. This is the category that the African understands and responds to.

The principle of wholeness in *Igwebuike* forms the basis for the relationship between human beings and nature or the environment. Thus, to care for one another as human beings is not enough; there is the need for caring for physical nature as well since there is a relationship between the human person and the physical world that constitutes his or her home- together the whole is constituted. It is by such care and respect that harmony and balance is achieved in the universe between human beings and the physical world or spiritual world. The human person has a responsibility to pursue harmony so as to maintain a comprehensive but specific relational condition among organism and entities (Kanu 2016). This responsibility is the prerogative of the human person given his or her nature as a rational being.

Understanding African Eco-Spirituality

African eco-spirituality is a contextualized form of eco-spirituality, which was borne out of the need to establish a connection between spirituality and the earth or ecology and a reaction to the Western emphasis on the material, consumerism, technological and economy which lacked the spiritual depth required for a more humane approach to the problem of ecological crisis (Delaney 2009). Aurelie (2017), therefore, defines eco-spirituality as:

A wide range of discourses, whose common interest is in showing that the current ecological crisis is an essentially spiritual crisis of values, so that answers to it should not be merely technological or material but should be sought on a spiritual level, through the foundation of an 'inner ecology' and an enlightened reflection about the meaning of life, the Other, the sacred (p. 7).

Pope Francis (2015) asserts that: "If we are truly concerned to develop an ecology capable of remedying the damage we have done, no branch of the sciences and no form of wisdom can be

left out, and that includes religion and the language particular to it" (no. 63). It is from this perspective that African eco-spirituality has emerged.

What then is African eco-spirituality? It refers to ecological discourses or reflections that are anchored on the African fundamental belief in the sacredness of the natural world and in the connection between human beings and nature, with the aim of finding solutions to emerging ecological crisis. This reflection is done in such a manner that it respects the African patterns of life or culture as its starting point. African eco-spirituality also holds as fundamental the need for reconnecting oneself with the African natural world, people and the cosmos as a whole, rooted in the manner in which the African understands the world around him or her. African eco-spirituality, in the contention of Uwineze (2021) is a call for a return to our African origins.

The Essential Character of *Igwebuike*

Igwebuike, is employed as a unifying concept of African thought, especially, that aspect concerning the human person's conception of the spiritual and material universe in which he or she lives. It is an explanatory theory or principle that interprets the puzzle of our complex relationship with the non-corporal world and human social life, that is, major social institutions that ensure social continuity and group identity, and further, underpins the epistemological manifestations of the human person's universe (Kanu 2021).

Kanu (2021) avers that it is essentially, a transcendent complementary comprehensive systematic quest to penetrate the structure and dynamics of reality ultimately for the purpose of giving honest answers to fundamental questions or opinions to questions that arise within the arena of asking questions and questioning answers, selfless enlightenment and furthering of

human happiness. In this search for truth, *Igwebuike*, within an integrated systematic framework, strives beyond all forms of particularities, peculiarities, paradoxes and contradictions and espouses the path of complementation, therefore, showing how realities can relate to one another in a mutually harmonized non-absolutistic mode. Thus, *Igwebuike* explores methods and principles for the mediation, coalescing and comprehension of the different units of reality: ideal and real, universal and particular, progressive and conservative, necessary and contingent, transcendent and immanent, essential and inessential and other units of reality within the same framework. It treats all units, fragments or components of reality, no matter how minute as units and combinations, or missing links that are necessary for the conceptualization of reality as a whole.

Igwebuike in the Theatre of Being

In Igbo-African ontology, reality is subsumed into the following categories: *Muo* (Spirit), *Madu* (Human Being), *Anu* (Animal), *Ihe* (Thing), *Ebe* (Place), *Oge* (Time) and *Uzo* (Manner, Modality or Style of being). Everything is in relation to the other, except the creator (Kanu 2017c). As subjects in the horizon of perception and realization of their existential ends, beings depend on each other for their temporal flourishing. The dependence here is a positive dialectics resulting from their physical and spiritual limitations. Human beings are not ontologically creators of themselves, they are essentially limited, and their existence and action, in the midst of communication, are limited by time, place, perception and knowledge, their being is existentially complimentary (Kanu 2017d&e). Hence they are naturally candidates for company and co-operations. This modality of being in relation to the other is what *Igwebuike* conceptualizes.

***Igwebuike* in its Literal and Linguistic Setting**

Igwe bu ike is an Igbo proverb and also a typical Igbo name. Igbo proverbs and names are among the major traditional vessels where African philosophy, religion and culture have continued to be preserved. Mbiti (1970) writes that: “It is in proverbs that we find the remains of the oldest forms of African religious and philosophical wisdom” (p.89). They contain the wisdom and experience of the African people, usually of several ages gathered and summed up in one expression. Proverbs spring from the people and represent the voice of the people and express the interpretation of their beliefs, principles of life and conduct. It expresses the moral attitudes of a given culture, and reflects the hopes, achievements and failings of a people (Kanu 2018a). This is to say that beyond the linguistic expression lies a deeper meaning, that is, the spirit of the letter. It is at the philosophical level that *Igwebuike* is understood as providing an ontological horizon that presents being as that which possesses a relational character of mutual relations (Kanu 2016c).

The expression, *Igwebuike* is a combination of three Igbo words. It can be understood as a word or a sentence: as a word, it is written as *Igwebuike*, and as a sentence, it is written as, *Igwe bu ike*, with the component words enjoying some independence in terms of space. Literally, *Igwe* is a noun which means number or multitude, usually a large number or population. The number or population in perspective are entities with ontological identities and significances, however, part of an existential order in which every entity is in relation to the other. *Bu* is a verb, which means *is*. *Ike* is a noun, which means *strength* or *power* (Kanu 2016a&b). *Igwe*, *bu* and *Ike* put together, means ‘number is strength’ or ‘number is power’ (Kanu 2017f). However, beyond the literal sense of *Igwebuike*, it means *otu obi* (one heart and one soul) – *cor unum et anima una*. Beyond the literal understanding of *Igwebuike*, it concatenates Igbo forms, symbolism, signs, media, meaning,

anthropologies, universal cosmic truths, functions, semantic powers, physics, phenomena, faculties, and Igbo environmentalities. In a metaphoric sense, *Igwebuike* is used within the Igbo linguistic setting to refer to relational engagement in the world, accomplished in solidarity and complementarity, and the powerful and insurmountable force therein (Kanu 2017g). The closest words to *Igwebuike* in English are complementarity, solidarity and harmony.

***Igwebuike* and African Eco-Spirituality**

What qualifies African eco-spirituality as a particular kind of eco-spirituality is the pivot on which its moral and religious dimensions revolves. African eco-spirituality takes its life from the ontological and cosmological foundations of the African worldview.

1. Ontological Contribution of *Igwebuike* to the discourse on African Eco-spirituality

The mutual relations and complementarity that *Igwebuike* conceptualizes is anchored on the following ontological human conditions (Njoku 2015):

- a. The world in which we live is one in which we encounter several needs, however, with very little resources to take care of the needs. This limitation calls for the mobilization of other forces outside of the self, a social fellowship for the satisfaction of particular needs.
- b. Nature has placed in us the likeness for fellowship. This is based on the fact that we were created by God in His own image and likeness.
- c. Although we are equal essentially, we have different gifts and abilities. What I may be able to do another may not be able to do, meaning that my relationship with the other completes what is lacking in me.

- d. Collaboration with the other is ground for becoming, as everything takes a bit of another to make itself. It is a ground for staying alive and transforming the universe.

Human fellowship and cooperation is a reality that is rooted in the human nature and to keep away from relating is to place a limitation on our being. It is, therefore, a unit of order inscribed in the human nature for survival. The more a person relates the more he or she lives out his or her being to the full. Mutual cooperation and fellowship in the society increases protection, assistance, etc. Being in the company of the other reduces the burden that nature imposes on a person as an individual.

This ontological foundation distinguishes African eco-spirituality as one that is based on the understanding of the relationality of the different elements of nature as a basis for the survival of the universe. This kind of relationship is not based on the principle of utilitarianism or consumerism, but a profound and spiritual understanding of the world that promotes the healthy being of the earth.

2. Cosmological Contribution of *Igwebuike* to the discourse on African Eco-spirituality

Igwebuike is an African cosmological idea that shapes the African cultural, religious and social world. It is symbolic of the African universe of particularities where every creature as an independent entity must negotiate another's existential highway for mutual survival. It is a dependent, interdependent and combinational universe. Negotiation is very important in the African universe because it is a world that one shares with the other in an atmosphere of inter-subjective relations (Kanu 2018b). These inter-subjective relations only play out without chaos when the individual is able to skillfully bridge his or her interiority with the individuality of the other.

The African universe has physical and spiritual dimensions. In the spirit realm, God represents the Chief Being, and sits at the apex of power. In the physical world, human beings dominate, occupying the central position in the scheme of God's creation. The structure of the African universe can be illustrated in three levels: the sky, the earth and the underworld: the sky is where God *Chukwu* or *Chineke* and angels reside; the earth where human beings, animals, natural resources, some devils and physical observable realities abide; and the underworld where ancestors and bad spirits live (Kanu 2013). These worlds interact in spite of their peculiarities, and persist because of a healthy inter-subjective relation. There is really no wall between the physical and spiritual worlds, between the visible and invisible, the sacred and profane; as there is a cooperate existence of reality. Thus, certain elements can move from one structure to another to commune with other elements. In this interaction, human beings commune with God, the divinities, the ancestors and vice versa.

This cosmological dimension of *Igwebuike* that presents the African world as a world of spirits, forwards an understanding of the earth as the abode of the spirits or the physical manifestation of the spiritual presence of great spirits with whom the human person must continue to live with and negotiate his or her own existence with. This introduces the concept of sacredness and respect in the human person's relationship with the environment. The environment is, therefore, not only a dimension of the human world that is present to serve the needs of the human person, but a dimension that the human person must care for so as to preserve his or her own existence. *Igwebuike*, therefore, presents an understanding of the world in which the human person is a being-with-the-other, be they animate or inanimate, spiritual or unspiritual.

Conclusion

The foregoing has studied the underlying principle of African eco-spirituality, which it articulates as *Igwebuike* a concept that captures the nature of the African universe. The *Igwebuike* connection is in reference to its ontological and cosmological character which speaks heavily of relationships in the African universe. The African world is a world of relationships: relationships between the living and the dead, the spiritual and non-spiritual, the divine and human, the animate and the inanimate. These relationships are shaped by the category of forces that are involved (Tempels 1959 and Maurier 1985). This relationship captures the nature of the African universe. This is the level of relationship where the whole relates with the whole, gives meaning to human existence or existence in general.

What distinguishes African eco-spirituality from other eco-spiritualities is the relational character of the universe in which every reality is understood as a part of the other reality. This understanding of the intricate web of the being of the earth helps further a more humane and respectful relationship within the African universe, knowing fully well that whatever a person does to the other form of reality or a reality of its own specie, he or she does it to himself or herself, and that whatever a person does in relation to the other being, has a resounding effect on the being of all. In this world of inter-subjective relations, *Igwebuike* introduces the concept of negotiation. This negotiation is non-negotiable, and therefore, a very important factor in the African universe. This is because the African universe is a world that one shares with the other in an atmosphere of inter-subjective relations. This inter-subjective relations only plays out without chaos when the individual is able to skillfully bridge his or her interiority with the individuality of the other. In this case, when the human person walks through the natural tracks of nature in

such a manner that it does not cause a dis-balance that will eventually dis-balance his or her own existence.

Recent events also unveils the *Igwebuike* nature of not only the African eco-spirituality but also the consequences of the mismanagement, misuse and abuse of the environment. It is becoming obvious that the destruction of the environment in any part of the world will also affect other regions of the world. This, therefore, calls for supportive roles in ensuring that the environment is protected and respected in every part of the world. If there is a universal consequence, the protection of the environment calls for a universal effort or approach. It is in this regard that Pope Francis (2015) refers to the environment as our common home for common development and future:

When we speak of the “environment”, what we really mean is a relationship existing between nature and the society which lives in it. Nature cannot be regarded as something separate from ourselves or as a mere setting in which we live. We are part of nature, included in it and thus in constant interaction with it. Recognizing the reasons why a given area is polluted requires a study of the workings of society, its economy, its 83lobaliz patterns, and the ways it grasps reality. Given the scale of change, it is no longer possible to find a specific, discrete answer for each part of the problem. It is essential to seek comprehensive solutions which consider the interactions within natural systems themselves and with social systems. We are faced not with two separate crises, one environmental and the other social, but rather with one complex crisis which is both social and environmental. Strategies for a solution demand an integrated approach to combating poverty, restoring dignity to the excluded, and at the same time protecting nature (no. 139).

This calls for concerns for the management of ecological crises project and the need for the elimination of the elements of monopolistic tendencies of development and the politics of diplomatic suppression and subjugation of weaker nations by the economic and military treaties.

References

- Dilthey, Wilhelm. *The Essence of Philosophy*. Trans. Stephen A. Emery and William T. Emery. Chapel Hill: The University of North Carolina Press, 1954.
- Echekwube, A. O. (2005). The basic principles of African philosophy. *Essence- Interdisciplinary International Journal*. 2.
- Francis, pope (2015). *Laudato si*. Social encyclical on the environment as our common home. Vatican City: Libreria Editrice Vaticana.
- Freud, Sigmund (1933). New introductory lectures on psychoanalysis. *SE*, 22: 1-182.
- Gyekye, K. (1987). *An essay on African philosophical thought: The Akan conceptual scheme*. Philadelphia: Tempel University Press.
- Iroegbu, P. (1994). *Metaphysics: The kpim of philosophy*. Owerri: IUP.
- Kanu, I. A. (2021). *Igwebuiké: An operative condition of African philosophy, religion and culture. Towards a thermodynamic transformative ontology*. Maiden Inaugural Lecture delivered on 22nd February at Tansian University, Umunya. Autograde: Abuja
- Kanu I. A. (2017d). *Igwebuikéconomics: Towards an inclusive economy for economic development*. *Igwebuiké: An African Journal of Arts and Humanities*. Vol. 3. No. 6. 113-140.

- Kanu I. A. (2017e). Sources of *Igwebuike* philosophy. *International Journal of Religion and Human Relations*. 9. 1. Pp. 1-23.
- Kanu, A. I. (2016a). *Igwebuike* as a trend in African philosophy. *IGWEBUIKE: An African Journal of Arts and Humanities*. 2. 1. 97-101.
- Kanu, A. I. (2017a). *Igwebuike* as an Igbo-African philosophy of inclusive leadership. *Igwebuike: An African Journal of Arts and Humanities*. Vol. 3 No 7. Pp. 165-183.
- Kanu, A. I. (2017b). *Igwebuike* philosophy and the issue of national development. *Igwebuike: An African Journal of Arts and Humanities*. Vol. 3 No 6. Pp. 16-50.
- Kanu, A. I. (2017c). *Igwebuike* as an Igbo-African ethic of reciprocity. *IGWEBUIKE: An African Journal of Arts and Humanities*. 3. 2. Pp. 153-160.
- Kanu, I. A. (2013). African identity and the emergence of globalization. *American International Journal of Contemporary Research*. Vol. 3. No. 6. Pp. 34-42.
- Kanu, I. A. (2016b). *Igwebuike* as an Igbo-African hermeneutics of 85lobalization. *IGWEBUIKE: An African Journal of Arts and Humanities*, Vol. 2 No.1. pp. 61-66.
- Kanu, I. A. (2016c). *Igwebuike* as the consummate foundation of African Bioethical principles. *An African journal of Arts and Humanities* Vol.2 No1 June, pp.23-40.
- Kanu, I. A. (2018). African philosophy, globalization and the priority of 'otherness'. *Journal of African Studies and Sustainable Development*. Vol. 1. No. 1. Pp. 40-57.
- Maurier, H. (1985). *Philosophie del'Afrique Noire*. Saint Augustine: Anthropos Institute.
- Mbiti, J. S. (1970). *African religions and philosophy*. Nairobi: East African Educational Publishers.
- Njoku, F. O. C. (2015). *The philosophical grid of Igbo socio-political ontology: Ibu anyi danda*. 147th Inaugural Lecture of the University of Nigeria, Nsukka.

- Nwala, T. U. (1985). *Igbo philosophy: The philosophy of the Igbo speaking peoples of Nigeria*. Ikeja-Lags: Lantern Books.
- Rickman, H. P. (1988). *Dilthey Today: A Critical Appraisal of the Contemporary Relevance of His Work*. New York: Greenwood Press.
- Tempels, P. (1997). Bantu Philosophy. In E. Chukwudi Eze (Ed.). *African Philosophy: An anthology*. Oxford: Blackwell Publishers.

Chapter Five

THE HUMAN PERSON, TREES AND SPIRITUALITY IN IGBO COSMOLOGY

Ifeanyi J. Okeke, PhD

Department of Philosophy/Religion

ALEX Ekwueme Federal University

Ndufu-Alike, Ikwo, Ebonyi State, Nigeria.

chilurumogu@gmail.com

Executive Summary

This work argues that the human person in Africa interacts with ecology (trees, animals, groves and others) in his or her daily living. The ecology for him or her (is not just existing on its own), but has a lot of relationship which enhances the interactions for the betterment of man and the society.

The researcher is advocating for planting sacred trees will no doubt improve the environment and make it more conducive for human habitation.

Keywords: Man, Person, Trees, Spirituality, Igbo, African Society

Introduction

The central implication of the meaning of society as rightly observed by Awolalu and Dopamu (1979) is that there can be no society without man. In other words, the society is made up of the individual persons, and without these individual persons, there will be no society in existence. In furtherance to that, man in order to survive needs companionship and company. African man is not solitary, and life is meaningless for him if he lives in solitude. He needs fellowship with other men; he wants wholeness, solidarity and tenacity of purpose; he also needs

deliverance and protection from the dangers and troubles of the world. He may not be able to achieve this without the co-operation and assistance of his fellow men and other natural forces. Thus, man's spiritual and physical needs and elements become one that cannot be separated, making him to engage other natural creation like trees in his daily life.

Turaki (2000) describes this relationship of man and society (including his environment) as Holism or Organism – the law of harmony. According to him, the law of harmony simply means “a state of agreement or peacefulness”. The traditional African seeks to live in harmony and to balance his life in a harmonious and peaceful existence with his entire world, the spiritual and other natural phenomena, like tree which also serve his spiritual and physical needs (Kanu 2015).

Stayne (1990) uses this term to further describe a world that interacts with itself. The sky, the spirits, the earth, the physical world, the living and the deceased all act, interact and react in consort. From this conception, the African man stands face to face with the ‘physical’, the ‘material’ and the ‘spiritual’ dimensions of his world. He interacts with them and they in turn interact with him. Stayne observes that man feels at one with his world and his world mystically and naturally reciprocates. Man does not differentiate strictly speaking between the physical and the spiritual. They are but knit together in a whole. The spirit world is all the same tacitly understood as inclusive in nature. African traditional world-view is a unity, not a confused world of non-integrated parts, holistic, mysterious and putting into use natural objects for the full realization of all the potentials of life.

Interaction of Beings in African Traditional Religion

The interaction of beings in African world-view is best seen against the background of the African concepts of being and

African concept of time (Metuh, 1987). Generally speaking, in contrast to modern western outlook, being in African thought is dynamic not static, it is animated and not mechanical. It is like the concept of time in Africa which is cyclical and not lineal. Referring to many aspects of the Bantu philosophy of vital force, Tempels (1969), elaborates such vital force content of the African world-view which most African societies have in common. The second international congress of Africanists in Dakar, 1967, proposed the philosophy of NTU, which they chose after taking it as a philosophy which covers all Africa. Most of the ideas which reflect the African art of living are contained in the NTU philosophy (Secretarius Pro non-christianis, 1969).

According to Tempels as quoted in Metuh (1987), the concept of being in Bantu though is essentially active, is at all times acting and being acted upon by all other beings. No being is completely static, not even a stone or a piece of metal. A being that does not act is a non-being. It does not exist. Secondly, being is alive, it is seen, as a "He rather than an it". Being is capable of being strengthened or weakened through interaction with other beings. Being maintains an intimate ontological relationship and constantly interact with one another, transcending mechanical, chemical and psychological interactions although such interactions or forces either strengthened or weaken one another. In these interactions, there is an ontological hierarchy of beings, from God to the least elements. They form a chain, through the links of which the forces of the vital force come in contact with all the forces, animal, vegetable and mineral. All creatures are found in a relationship according to the laws of the hierarchy. Temples puts it this way "Nothing moves in the universe of forces without influencing others by its movement. The world of forces is held like spider's web of which no single thread can be caused to vibrate without shaking the whole network".

The Interactions of Man and Trees

It was Adibe (2008) who said that in the Igbo individual thinking cap, ideas and spirituality must conform to what the Igbo society cherishes and respects as true and beneficial to the entire Igbo persons and for the advancement of their well-being. Enekwe (1987) agrees to this fact when he says that even though Igbo individualism is highly developed, however, that must not negate the Igbo concept of communal humanism that is found in most of Africa. The Igbo like his African brothers live as a group, see things as a group, and do things as a group. The Igbo life style would never tolerate any individual venture. The Igbo man is very well down to earth with sharp but acute thinking. His perception goes beyond natural environment to metaphysical realm. Vegetation is just not vegetation but something beyond nature. Some animals are classified as sacred or non-sacred. Ede (1985), alludes to this fact when he asserts that Igbo people's close attachment to the soil and nature stems from their personal relationship with nature extending to anything that gives life. He observes this natural interaction of all beings in Igboland when he posits that supra sensory entities- Plants, trees, animate or inanimate realities can possess human attributes, for instance, Appetites, Vitues and Vicas. Animals and spirits are involved in competition like human beings. The human and non-human beings like animals and trees interact and communicate in a lively way. Indeed, Igbo metaphysical life is consistent with the concept of natural religion. Everything and everything is connected: The secular and the sacred, the natural and the supernatural, are a continuum (Enekwe, 1987). Mbiti (1970) is emphatic when he asserts that nature (including trees) is not an empty impersonal object as it has religious significance for the Africans and the entirety of human existence and societal survival. Africans see God in and behind nature and its phenomena. This invisible world manifests itself in the visible and concrete phenomena and objects of nature including the

trees. The African believes in spirits as self-existing entities who however could also inhabit material objects (Nwala, 1985). The good value of nature could lead to many speculations, hence Nnabuchi (1987) would say that trees live in season and possess various functions as spark of life from the divine. They therefore possess spiritual as well as material relevance (Adibe, 2008). Adibe gives a vivid account of Nnabuchi who is an Igbo 'dibia' of repute who alleges that "Anunu-ebe" which is a rare tree has both spiritual and physical selves;; a tree which no bird dares fly over or perch on it. In the same vein, no animal walks under it nor stay under it when its spiritual forces are at home with physical counterpart. But when there is a separation between the physical and the spiritual bodies, birds and animals can get near it. However, on the return of the spiritual counterpart, those things in, on or under it become dead. Nnabuchi (1987) states further that if by chance a person touches 'njuofi' (another type of mysterious plant), he automatically loses his senses and therefore strays into the jungle and would remain missing until a search party is organized. Fishes also possess varying spiritual qualities and attributes.

Obianika et al (2015) observe that every society, however, primitive or remote in history, has a philosophy that underlies and guides her definition of reality, direct her actions and interactions and inspire her epistemology, giving rise to certain practices like the giving of living names to certain objects in the natural environments. Some of these natural objects include but not limited to trees, groves, lands, animals, rivers and even public places. In traditional Igbo society, the practice of interaction of beings has led to the practice of giving special names to certain trees, besides a philosophical base of defining Igbo cosmology, such practice also serves as a means of defining the economic nature and structure of the primitive and even the

present Igbo society. Being an agrarian society, Igbo consider nature and natural environment as part of their economy.

Nwosu (2014) observes that in Igbo (African) culture, plants possess magical and or mysterious powers, which are believed to have been endowed by their Chi (god). Thus, traditional religion is intertwined with the culture and lives of these indigenes. Therefore, the health and progress of every individual is predestined by his or her Chi (god) and further predicted on it. Plants feature prominently in the Igbo religious ceremonies. Nwubani (2013) adds his voice that trees in Igbo society are important in her spirituality as symbols of life and channels to the earth force. Trees are symbols of life and channels to the earth force and are often at the centre of shrines. Ohia (2019) posits that Igbo culture extends significance to trees. These trees feature in representing the mystic, giving longevity and also serving as traveling portals. Most of these trees are perennial in nature – having the ability to survive adverse conditions and to live for a very long time. Mbiti (1969) observes that in Africa, mythical trees feature in a number of stories. For example, the Herero speak of their ‘tree of life’ said to be located in the other-world (spiritual) and believed to be the source from which all life emanates. Some, like the Nuer and Sandave, hold that man originated from a tree. Others narrate about the forbidden tree whose fruit God forbade the early men to eat. When man broke the law and ate the forbidden fruit, death came into the world and God withdrew Himself from man. The wild fig tree is considered sacred by many African societies and people make offerings, sacrifices and prayers around or under it. There are also sacred groves and other trees, including the sycamore and the baobab used for religious purposes or associated with God and other spiritual beings. Some societies like the Maqsai, Meru and Mao, use grass in performing rituals, saying prayers and making offerings to God.

We have seen from the discussions that the man of Africa and indeed the Igbo society interact with ecology (trees, animals, groves and others) in his daily living. The ecology for him (is not just existing on its own), but has a lot of relationship which enhances the interactions for the betterment of man and the society. No wonder Nnabuchi observes that in this all important interaction of man and ecology (trees) that all trees or herbs have mystical powers. In his opinion, some trees are commonly referred to as symbolic representation of mystical or spiritual beings or powers. He writes that some herbs are associated with Lunar movement, while some are more powerful when the moon is not visible. For him:

Certain herbs are removed at a time when the nearest market is in full session or active. Some are removed on particular days. Also certain periods such as 6.00am, 9.00am and 12.00noon, 3.00pm, 6.00pm, 9.00pm and 12.00 midnight are vital times when herbs are removed. The first cock crow heralds the most active period of some very destructive herbs as well as reminding certain beings that it is time to begin a backward march to their respective homes. A sizeable percentage of herbs are nevertheless alert and active at every moment of the day, season or climate condition (Adibe, 2008).

In Igbo cosmology, man articulates the fact of spiritual entities of reverence from his interactions with nature, forming the core of his world-view. Then through an abstraction from the phenomenal objects within his active life experiences, he comes up with concepts for day-to-day life in the society (Nwala, 1985). In Igbo land as we shall soon observe, some trees serve some religious/Spiritual purpose for the people. The use of such object of ecology for religious practices is aimed at attracting the mystical power inherent in them. They therefore serve as great religious symbols and healing balms.

Trees, man and their Spirituality in Igbo World-view

Spiritually means so many things to a lot of people. There exist various definitions of the term spiritually. But for the purposes of our discussions here, three definitions have been identified as relating to the theme of our concern. Puchaslk (2001), agrees that “Spiritually is the aspect of humanity that refers to the way individuals seek and express meaning and purpose and the way they experience their connectedness to the moment, to self, to others, to nature, and to the significant or sacred”. This is very relevant given the interest of this work which anchors on the relationship between the Igbo man (African) trees (nature) in the expression of meaning and purpose which is basically for man’s safety and all-round well being. Denyse and Mario (2007) posit that “Spirituality means any experience that is thought to bring the experiencer into contact with the divine (in other words, not just any experience that feels meaningful). Like wise when we talk about trees, Spirituality and the African man, we are referring to their contact with the divine and not just any form of relationship. Murry and Zentner (1979) add that the Spiritual dimension tries to be in harmony with the universe, and strives for answers about the infinite, and comes into focus when the person faces emotional stress, physical illness or death. This, in line with the reviewed definitions, the interactions and interrelatedness of humans and sacred or spiritual trees are are clear cut manifestations of the inability of one to survive with the other. Hence trees depict a great degree of prominence in Igbo society as symbols of life, spirituality and channels to the earth.

They are conduits to the earth force, often at the centre of shrines and sacred places (Nnabugwu, 2021). In Igbo culture, a child’s umbilical cord is buried with a newly planted fruit tree (94abelin); this becomes the child’s ‘tree of life’ which secures lands, confirms the child’s blood relation to the patrilineage, and forms a bond between the child and the mother earth, ala. ‘Palm

tree' and 'Uha' tree are believed by the people to have a life of longevity spanning over a hundred years. The 'Uha' tree otherwise known as African Rose wood leaves (*Pterocarpus mildraedii*) has about 60 species. Apart from its commercial values, it is believed among the people in reference here that it has a spiritual connection with the spiritual world which makes it live longer than most of the vegetable trees. The tree is one of the two where several umbilical cords are buried to attract longevity to the new born.

The researcher observes that a particular cite was cleared quite recently in Ikperere community of Ihitte/Uboma LGA for building purpose. In the process a retired Secondary School Headmaster from the neighbourhood refused the owner of the land under construction from pulling down a particular 'Uha' tree arguing that his umbilical cord was buried at the foot of that tree, insisting that cutting or pulling down that tree meant cutting his life short. The palm tree (*Ecaeis guineensis*) even in Zambia were used in prayers before administrating a drug to ensure the effectiveness of medicine and successful recovery of a patient. Smith and Dale (1920) argue that the Ba - Ila healer used a rattle made of round palm fruits on a handle during ritual therapies. To the Lunda in Zambia, the red colour of the mesocarp oil from palm tree symbolizes power, but it is also interpreted as a sign of murder and witchcraft (Turner, 1967). On Mfangano Island in Kenya, the Suba and Luo still use the fruits to alleviate skin rash associated with HIV/AIDS. The disease - locally known as 'chira', and its ethnology is related to transgression of principles governing sexuality or seniority. These include adultery committed during a wife's pregnancy, having sexual intercourse during the harvest, or failure to observe the proper separation of sexuality between generations (Nagata, M, et al, 2011).

In Nigeria, to prevent miscarriage, Yoruba people used to roast a tortoise with a mixture of a bottle of palm oil from palm tree, after which the mixture is grounded to powder, then consumed in a corn flour pudding, taken every morning and evening during ones menstrual period, followed by sexual intercourse five days after finishing menstruating (Maclean, 1977). In Liberia, the Mano used red palm oil in the treatment of mysterious diseases. To awake a patient in coma, red palm oil was mixed with a burned knot of the parasite *Loranthus micranthus* and rubbed on the patient's cheeks towards the mouth in order to make him talk (Harley, 1970). Even the 'Omunkwu' (tender leaves of the palm tree) is a religious/mystical symbol of the presence of ancestral spirits and Ala deity in their mediatorial roles as peace makers, for seclusion, and as power brokers. It could be used for all Igbo traditional sacred rituals, even without the priests officiating (Adibe, 2008). The Ogirishi tree (*New Bouldia Leavis*) in Igbo land is often used for the deceased; the tree is regarded as the converging point of ancestor. Its use controls religious presence of the mystical power of the ancestors. As a very prominent ritual tree in Igbo culture, and perennial in nature, it is further used to indicate land boundaries, headsides of graves, and to handle ritual cleansing like washing of hands after handling corpses, digging of graves and burial of corpses. Oha (2019) reports that perhaps, Ogirishi tree is the most visible sacred tree in Igbo culture. The graves of those men who die outside marriage (i.e as bachelors) are traditionally symbolized with the Ogirishi "holding" the kitchen knife for them. The knife in question is therefore representing lack of fulfillment and is placed in Ogirishi on the grave to mark the absence of a wife (to hold it, to mourn him).

'Anunuebe' tree literarily means that "no bird perches on it" or no bird has the courage to sit on it to rest'. This may be frightening as it has tremendous magical/spiritual powers. It is

a tree that can transform and cause to transform. It is a tree that can do things in Igbo cosmology. It is, therefore not only social but also very sacred. In Igbo land, the mere mention of 'Anunuebe' tree is scary. Thus, the tree is descriptively named to warn and frighten, indirectly. The warning is analogical, if birds avoid it, which other warning does one need again; the tree is sacred because of the religious role it plays in the 97abeling97al Igbo society.

The 'Ngwu' tree (*Albizia Adcantifolio*) has many mystical meaning given to it. The tree is often seen alone in the large compound with no other tree nearby. It is regarded as unnatural tree. It is believed in Igbo culture to have mystical power of repelling other vegetation. In some areas like Nkpor (Adibe, 2008), it is believed that spirits abundantly reside in it. When activated, it is the symbol of Agwu deity. Naturally, it has many myths and even mystical in action. It could serve for many mystical functions for a knowledgeable traditional medicine man (*dibia*). As it is considered as a sacred tree in Igboland, Oha (2019) posits that it is not to be cut down and used for fuelwood at all. Infact based on a folklore, there is a strong point to the sacredness of Ngwu tree warning that it must not be cut down. It was observed in Black Orpheus of 21st April 167 as follows: "The Ngwu tree sacred and mystic; it is a symbol of magic and supernatural power". In some parts of Igbo land (Etiti Province), living near the Ngwu tree is total security. One near the 'Ngwu' tree has a protector, a shield of shields. The resident has no worries, for 'Ngwu' is safety, not just that it guarantees it. The tree in real social life is also revered. It is used in marking off land boundaries, partly because it is perennial as a plant. It is also used in other serious rituals. The human being is also metaphorised as 'Ngwu' or seen as being linked to Ngwu.

Oji tree is special and connotes some content and quality of spirituality in Igbo cosmology. The nut is used in so many rituals and ceremonies. Oji (the Kolanut) is highly revered and so its tree. In most parts of Igboland, Oji tree (*Cola Acuminata*) is a symbol of hospitality; it serves for mystical/religious communion with the spirit forces; it conceptualizes life and affirms it; enemies cannot share from same Kola-nut; it is food for the spirits; it could serve as the only sacrificial contact between a poor person and his elements of worship. It is a prayer point that links the living and the dead. It is classified as animate object because it must be fresh before ritual use (Adibe, 2008). One person is not understood as the owner of Oji tree, although one person can plant it. It is always communally owned in some parts of Igboland, making many people share in its wealth. It therefore stands as the people's bond, just as the nut is used for traditions and spiritual communion. The branches of the tree are not normally cut for fuelwood, even if the tree could be pruned. The tree is not the only tree around, but is seen as symbolizing the connection of the past of the ancestors and the present of their survivors. It is the present that inherits the past, that continues the past and its narratives. In Igbo cosmology, the spirituality of the Oji tree manifests in its presence of the womb of life, the continuity of the narratives introduced in the distant past.

There is another type of Oji tree, most commonly known by the Yoruba name Iroko and known botanically as *Milicia 98abeli*. The Iroko tree in Igbo culture is linked to reincarnation of certain individuals. It is a general belief that a reincarnated individual buries his or her Iyi – uwa (a special kind of stone, which forms the link between an Ogbanje and the spirit world) with which his or her reincarnation was made possible under such trees. It ought to be noted that Iyi – uwa is an object from Igbo mythology that binds the spirit of a dead child (known as Ogbanje) to the world, causing it to return and be born again by the same mother

(Okonkwo et al 2016). Nwaubani (2018) notes that Iroko tree is very large and considered to have many mystical power. The tree is always planted near shrines to give the same impression as a cathedral. It also stands as a metaphor for strength, mobility and resilience. Its wood is used for titled men's stools, compound doors/gates, and large Iroko slit drums, as well as other important rituals items. Iroko tree is about 186 feet in height, and is adored by Igbo people. Igbo in reverence to the tree bear names after the tree because of what it represents. Such names as Oji, Nwoji, and the likes are all treatment to true significance of the tree to Igbo people (Nnabugwu, 2021).

The Ofo tree (*Detranium macrocapun*) is the tree from which the staff of justice of the same name is hewn from. It is generally forbidden to cut or place a knife against a living Ofo tree or use its branches for firewood. Therefore, the Ofo branches had to naturally fall off in order to be used as a staff of justice, such sticks would have to be consecrated through a ritual known as 'Isa - ofo'. The Ofo serves as a connection between the living and the ancestors and the spirit world. The Ofo tree also serve as shrine in most Igbo communities. According to a South East Voice report of Vanguard News Nigeria, Ofo stands for truthfulness, justice and sincerity. It is a symbol of spirituality that connects people with the spirit of their ancestor. It is the most unique tree in Igboland providing antidote for poison. It is a defender of the innocent and the oppressed. Like the Christian Bible, one does not carry it carelessly. Its spirituality manifests in its use to call on the Almighty God to intervene on issues before men. As a symbol of spirituality of the Igbo nation. From time immemorial Igbo people had close relationship with the God head, the Supreme Being. Each Igbo group had a symbol that connects them with the God head, that symbol is the Ofo. The Ofo can be ritualized as an item of prayer by speaking to it

activate the efficacy inherent in it. As a mystical symbol of truth, purity, justice and authority, it has a spiritual dimension attached to it.

The 'Akpu' or 'Apu' tree known as silk cotton in English Language with its botanical name as *ceiba Petandra* (Okonkwo et al., 2006) or *Bombas Buonopozense* (Adibe, 2008) is another sacred tree in Igbo world-view. It is a tree of fertility due to the large expanse of its roots, trunk and branches. When it is ritually consecrated, it serves symbolically for religious mystical contact with the spirit world for seeking protection and progress in life. Even without consecration, it is regarded as abode of the spirits. In some Igbo localities, the trunk is covered with white cloth. Beneath the trunk, votaries offer sacrifices through priest agents for mystical communication with patron spirit for security and welfare. Simeon Okeke an indigene of Ikpenweafor community in Ihitte/Uboma Local Government Area of Imo State told the researcher in the year 2010 that during the Nigerian Civil War that lasted for about 30 months, natives of the area were running under the tree to take cover at the hearing of the sound of any aircraft or shooting of the gun. According to him, the community shrine known as 'Ihu-Ala' was cited at the foot of the big Akpu tree and it later formed a thicket which covered about half a plot of land with a huge opening under the tree that can house the entire villagers. He recalled with pride that every living thing - goats, chickens, sheep, humans - ran to take cover under the tree at the sound of a gun or aircraft and that nobody under it was hurt nor hit by a bullet until the war ended in 1970. While writing about this tree, Nwaubani (2018) agrees that the tree is a sacred silk cotton which is a way to the unseen world of ancestors and spirits. It is where spirits of children stay and sitting under this tree is said to increase the chances of pregnancy. The leaves resemble cassava leaves, so it is possible the name was loaned to cassava when it was imported into Nigeria by the Europeans in

the last 500 years. The tender leaves of the tree and its flowers are edible. The researcher recalls that soon after the Nigerian Civil War and up to the late 80s, the tender leaves and the flower served as sauce for yam and cocoyam delicacies in many communities in Ihitte/Uboma LGA of Imo State. Nnabugwu (2021) adds that in Igbo towns like Igboukwu people refer the tree as the “Oghomgbo (bullet shield), in the ancient times, it is believed that any warrior that hugs the tree before going to war, would come back unscathed.

The ‘Achi’ tree is noted for its size and the amount of shade it provides. It has similar symbol to the Oji (Iroko) tree in terms of spirituality and ritual, but it is mostly prized for its fruit. Like many large trees, it houses spirits and is a portal for ancestors. It is a symbol of resilience, strength and virility. The Achi seeds are used for cooking and it’s still highly prized in the modern Igbo society.

‘Uburu’ or ‘Ubulu’ is a totemic tree which used to be central to many Igbo settlements and has lent its name to several people such as Ubulu Uku (the big Ubulu). The tree is highly revered in Delta state and it is reported that the original tree which the town is named after still stands in the middle of this town from where the first families spread out from hundreds of years ago.

Another major Igbo tree endowed with spirituality is the Udara tree also known as *chrysophyllum Albidum*. Adibe writes that it is a special fruit bearing plant. If fruitful, it has many adoring fruits on the branches. For its yearly yields, it is regarded as sacred tree with natural fertility. When it ritually consecrated, it serves symbolically for the religious mystical contact with the spirit world, while seeking for fertility. In some Igbo localities, the trunk is covered with white cloth. Beneath the trunk votaries

offer sacrifices through priest agents. The fruits are never clubbed or plucked. It is left to fall on its own when ripe. It is sweet to suck. Religiously, it is often called mother, it must not be cut or felled without a ritual of appeasing the deity of fertility. Once the tree is consecrated, it serves as a symbol of fertility.

The 'Ube' tree (*Dacryodes edulis*) is another spiritual tree in Igbo world-view. It is used in the carving of Ikenga, Agwu, masquerade masks, royal stools and drums (Kramer, 2006). This tree is important to the people under study because it further affirms the people's support for African cosmology and preference in carved objects which are used for religious and cultural purposes. The tree is also a source of many herbal medicines. It has long been used in the traditional medicine of some African countries to treat various ailments such as wounds, skin diseases, dysentery and fever. The extracts and secondary metabolites have been found to show antimicrobial and antioxidant activities (Conrad and Uche, 2013). Conrad (2014) writes that in Amichi village (Nnewi South) and its adjoining clans, a man dissatisfied with his wife would commence his divorce intensions with Ube leaves by taking along with his wife a keg of palm wine to his father - in-law and covering the keg with the leaves upon reaching his in-laws. Where the woman commits adultery and the husband is unwilling to continue with the marriage, he sends her with a keg of palm wine stuffed with Ube leaves to her father, accomplishing 'Ubebelu' in the process, a condition of "never to return to her matrimonial home.

'Aboshi' tree also known as *Baphia nitida* is a sacred tree in Igbo land. The researcher's discussion with Eugene Nwokenna and Nduemenchie Ukaigbaisie in Uboma and Ihitte revealed that spirits are believed to be attracted to this tree. No wonder the tree features prominently in locations of shrines especially in market places. Observing the Duruonina deity shrine and Dirimo shrine,

the aboshi trees were seen amongst the trees that gave the location a feeling of awe and sacredness. One Amos Anyanwu who had a discussion with the researcher recalled when around the early part of the 60's, his wife was accompanied to a local birth attendant for the delivery of a baby. As it were then, Amos who did not join the wife initially, later prepared to visit the expectant wife at the birth place about twelve kilometers away from his home. On his way, he told the researcher that he approached the Ihu-ala deity, cut a leaf of the aboshi tree, placed it on his folded left palm and hit it hard with his right palm. When the leaf exploded, he spoke to the shrine, informing it that he was on his way to visit his wife who was about to put to bed. That if it turns out a baby boy, he would offer to the shrine a cock and if a female, he would offer a hen. He then asked that the deity ala would grant him safe journey. When the woman put to bed a female child, Amos brought a hen before the shrine, tied it at the foot of the aboshi tree and left. On further inquiring on while he chose the leaf of aboshi tree, Amos emphasized that the tree and leaves attract the attention and presence of the spirit beings with its special odour and as a perennial tree.

As can be observed from the discussion so far, it is manifest that in African world-view, there exist an interaction of forces with the sole essence of the survival and betterment of all the parties and entities. The African society and world is one of active engagements and symbiotic relationship ensuring harmony between the human beings and nature, a totality of free, continuous, inclusive and interdependence (Onyeocha, 1997). This interaction further affords the African to see humanity as in harmony with nature and in the task to love, nurture, protect and maintain it, since the African sees human survival as tied up with nature's own survival and without nature's survival the question of the fittest would be irrelevant.

Spiritual Trees and the Agents of Change

The colonization of Africa by the West and the accompanied missionary activities of Europe and other allies, modernism and so called white man's development in no small measures devastated the interaction of beings and the African Traditional Religion. Egbucha, (2007) agrees that the traditional religions of Africa have witnessed series of revolutionary changes, and that every aspect of the religion is involved. The New Encyclopedia Britannica (1981) explains change from the social point of view as an alteration of mechanism within the social structures characterized by change in cultural symbols, rules of labeling or value system. If this change is therefore applied to religious traditions of Africa, the consequences are tremendous. Though Beatie (1964) sees social change as a continuous process of events occurring over time and space resulting in modification, displacement and replacement of systems within a particular society, the type that affected the interaction of beings and spirituality of trees in Africa cosmology have done Africa no good. This externally induced religious change in Igboland according to Onwubiko (1991) made ancient law and custom not exist side by side nor intermingle with the principles of British Government and the missionary religions.

By the combined efforts of the missionaries and colonial government on the presumption of their responsibility of a superior culture/religion over an 'inferior' (African culture), the sacred trees soon witnessed demolitions and abandonment. It did three things in African cosmology.

- It changed the physical environment
- The thought patterns of the people and therefore,
- Changed the behavioral pattern of the African people.

In their quest to win converts, the missionaries religions attacked frontally traditional religious practices and belief system of the

people labeling them as heathen, idol worship or juju. This was apparent because most of the early religious teachers of that time were not natives and therefore did not understand the exact practices and involvement of the spiritual belief linked to these trees and pants. The Churches in some areas engaged in a revolution against belief on deities who were thought to inhabit the trees. Consequently, these trees were cut down and destroyed. It is further in evidence that as the Churches continue to expand and win converts, they were given land in areas housing the shrines and by extension these trees where they cleared to erect structures or building for Church services. For members of the new faith to be fully admitted into the Church and to partake in their services, natives must renounce their traditional beliefs and practices prompting them to uproot such trees from their locations.

As the attack from the missionary religions were going on, modernism was attacking frontally too. The culture of erecting modern houses made of corrugated iron sheets and blocks made of cement was gaining prominence among the Igbo people. As thatched houses were pulled down and replaced with concrete houses, the trees were brought down further to provide for their roofing needs. The researcher recalls that the Akpu tree that was standing with the Ala deity shrine in his village was brought down and used to roof the village hall. The same have been the fate of other trees in this category. In all the ecosystem has greatly been affected adversely. The modern day road construction and expansion of already built roads encourages the going into extinction of the sacred trees. The felling of such trees has been quite unprecedented as there seem to be no remedy or replacement of such sacred trees. In all of these, the Igbo man has been left and disconnected from the spiritual side of life and societal orderliness. The result being the uprooting of the

traditional African from his religion and culture without an alternative as, the incidences of missionary religions and modernism are alien to the African soil.

Conclusion

In all, the Igbo including every African people and culture are in a dilemma of cultural decimation. Colonialism and its vestages had paved the way for today's cultural globalization by leaving Africa and indeed Igboland in a state of cultural disorientation and vulnerability to an unending cultural inversion. Western culture fuels globalization just as it did during the age of colonialism and imperialism. Similarly, globalized cultural structures and tendencies have taken over the traditional forms of creation, dissemination and preservation of culture (trees inclusive). This globalization had Westernised African cultural adjustment template- cloths, music, food, art, images, religion, spiritually and by extension social life. Under this predicament, Africa's indigenous culture's roles including the roles of spiritual and sacred trees as a spontaneous and integral part of people's life is eroded, ceasing it from serving as the means of constructing social values, reproducing the all important group identity, and thus building social cohesion, peace and stability. This predominant Western influence stifles the culture and traditions of Africa, forcing Africa to abandon her cultural Identity.

It will be proper to state here that granted that every society is dynamic, such dynamism should not be to the detriment of the people or against their survival. It is not in doubt given the place and the enormous benefits, spiritually and economically these trees afford the African, that we can't afford to continue to destroy our ecosystem in the name of foreign religions, modernity or development or globalization.

A time to beat a retreat and consider the health benefits of the people by planting such trees has come. The researcher does not advocate that people should revert to worshipping these trees. Rather, planting such trees will no doubt improve the environment and make it more conducive for human habitation. The time to do the right thing is now.

References

- Adibe, G.E. (2008). *Igbo Mysticism: Power of Igbo Traditional Religion and Society*. Onitsha, Mid-Field Publishers Limited.
- Amos Anyanwu (88years). Interview conducted at Ikpenweafor on the 14th of September, 2006.
- Awolalu, J.O. and Dopamu, P.A. (1979). *West African Traditional Religion*, Ibadan, Onibonije Press of Brook Industries Nig, Ltd.
- Conrad, A.O. (2014). Ethnobotany of *Dacryodes edulis* (G. Don) H.J. Lam in Southern Nigeria 2: Practices and applications among Igbo – Speaking People, *Journal of Plants, People and Applied Research*, vol. 12, No. 1.
- Conrad, O.A. and Uche, A.I. (2013). Assessment of In vivo Antioxidant Properties of *Dacryodes edulis* Land *Ficus exasperate* as anti-malaria plants; *Asian Pacific Journal of Tropical Disease* 3(4).
- Denyse, O’L and Mario, B. (2007). *The Spiritual Brain: A Neuroscientist’s Case for the Existence of the Soul*, Kensas, HarperOne.
- Ede, M.P. (1985). *Towards an Igbo Metaphysics*. Chicago, Layola University Press.
- Enekwe, O.O. (1987). *Igbo Masks: The Oneness of Ritual and Theatre: Lagos: Department of Culture, Federal Ministry of Information and Culture*.
- Eugene Nwokenna (90 years). Interview conducted in Umuejere in the 30th day of April, 2015.

- Harley, G.W. (1970). *African Medicine with Special Reference to its Practice in Mano Tribe in Liberia*, London, Frank Cass and Co Ltd.
- Kanu, I. A. (2015a). *A hermeneutic approach to African Traditional Religion, philosophy and theology*. Augustinian Publications: Nigeria
- Kanu, I. A. (2015b). *African philosophy: An ontologico-existential approach to classical and contemporary issues*. Augustinian Publications: Nigeria
- Kramer, J.T. (2006). *The Traditional Way: The Importance of Wood*. International Woodworking Magazine – www.kramers.org.
- Maclean, U. (1977). *Magical Medicine, A Nigerian Case-study*, London: The Penguin Press.
- Mbiti, J.S. (1970). *African Religions and Philosophy*. New York. Anchor Books.
- Murry, R.B and Zentner, P.J (1979). *Nursing Concepts for Health Promotion*. www.philpapers.org
- Nagala, J.M. et al (2011). *Medical Pluralism on Mfangano Island; use of Medicinal Plants among Persons living with HIV/AIDS in Suba District, Kenya, J. Ethnopharmacol.*
- Nduemenchieh Ukagbaihe (80 years). Interview conducted in Umuihi on the 28th of December, 2004.
- Nnabuchi, N. (1987). *The Conscience of God*, Enugu, Life Printing Press.
- Nnabugwu, I. (2021). *The Sacredness of Trees in Igboland – Achara, Ihechiowa: Ahara, Mbauzie; Uga, Aguata in* www.nwanemnew.com.
- Nwala, T.U. (1985). *Igbo Philosophy*, Ikeja, Lantern Books.
- Nwaubani, C. (2018). *Trees in Igbo Society*. www.blog.ukpuru.org.
- Nwosu, O.M. (2014). *Plants used in Traditional Religious Ceremonies by Igbos of South Eastern Nigeria*. www.unn.du.ng.

- Obianika, C.E. et al (2015). *Economic Trees in Igbo Culture: A Morphosemantic Analysis and Socio-philosophical and Economic Interpretations*; Sch. J. Arts, Humanit. Soc. Sci. 3(3C).
- Oha, O. (2019). *Some Sacred Trees in Igbo Culture: Squirreling One's way through their Mysterious Branches*, www.oha.blogspot.com.
- Okonkwo, E. et al (2016). *A Documentation of some Traditional Aspects of Wood Consumption in Amocha, Nigeria*, Sage open sgo. Sagepub.com.
- Onyeocha, M.I. (1997). *Africa: The Question of Identity*, Washington DC: The Council for Research in Values and Philosophy.
- Puchaslki, C.M (2001). "The Role of Spirituality in Health Care, Baylor University Medical Center Vol. 14. No. 4.
- Secretarius Pro non – (1969). *Christianis – Meeting African Religions*, by Secretariatus Pro Non-Christianis.
- Simeon Okeke (90 years). Interview conducted in Umuejere on the 27th of December, 2010.
- Smith, E.W. and Dale, A.M (1920). *The Ila Speaking People's of Northern Rhodesia*, London: Macmillan and Co.
- Stayne, P. (1990). *God's of Power: The Challenge of animism today*, Tacoma; Wash. Evangelical Theological Society. www.worldcar.org.
- Temples, P. (1969). *Bantu Philosophy*, Presence Africaine, Paris.
- Turaki, Y. (2000). *African Traditional Religions System as Basis of Understanding Christian Spiritual Warfare*, www.litelausanne.org.
- Turner, V. (Ed) (1967). *The Forest of Symbols: Aspects of Ndembu Ritual*. USA, Cornell University Press.

Chapter Six

AFRICAN MYTHOLOGIES AND ECO-SPIRITUALITY

Ikechukwu Anthony KANU, OSA, PhD
Department of Philosophy and Religious Studies
Tansian University, Umunya, Anambra State
ikee_mario@yahoo.com
ORCID iD: 0000-0003-1977-202X

Executive Summary

African myths are invented stories about the African gods in which they behave like human beings, however, with superhuman powers. Closely associated with this sense of the word is its usage to refer to the stories which may accompany and allegedly form the basis of religious rituals in African traditional religion. African myths are thus symbolic stories about the origins and destiny of human beings and their world. They relate human beings to whatever powers they believe ultimately govern their destiny, and explain to them what those powers expect of them. Unlike the contemporary English use of myth to indicate an untrue story, African myths convey the eventual truths of life. They not only provide the symbolic categories by which Africans understand the organization of their universe, but also suggest patterns by which they try to maintain the balance and the harmony of the world. They define the nature and the powers of beings in the universe and their relationships; they suggest rituals by which the human person tries to relate with them and the universe as a whole. While there are a few papers written on African mythologies, there is hardly literature that discusses its relationship with the eco-system or its ecological relevance. This understanding, therefore, formed the background of this work studying the following African

mythologies in relation to African eco-spirituality: the Nri myth of the Igbo, Ife myth of the Yoruba, Efe myth of Congo, the Basare and Wassa myths of Ghana, Nyanweze myth of Tanzania and the Abaluyia myth of Kenya. The purpose is to study the relationship between these African mythologies and ecological spirituality as they form the basis or source for African eco-spirituality, with the aim of finding alternative solutions to the emerging ecological crisis in Africa and beyond. Its concern borders on how African mythology can contribute or have contributed to the understanding of the African environment and the preservation of the same. The phenomenological and analytical methods of inquiry were patronized for the achievement of the purpose of this study.

Keywords: African mythologies, Eco-system, Eco-spirituality, Cosmogonies, Creation

Introduction

Most African mythologies are stories which were articulated by African ancestors as responses to questions bordering on the nature and origin of the universe, the origin of the national god, origin of the world, the origin of humanity, its place in creation, the deity that governs the land, the temple, the cult, etc. These responses are articulated and preserved in myths so that they might continue to be a source of knowledge for generations to come. In using these myths, these traditional African thinkers attempted to explain historical institutions and developments by appeal to non-historical factors and forces within and outside the human world (Kanu 2021; 2015 a&b).

Because of the nature of the African worldview that is deeply religious, responses to the questions bordering on the relationships in the universe through mythologies are largely religious. God, gods, ancestors, spirits, religious figures, etc., are

always at the centre of these mythologies. Thus, Marshall (1988) refers to them as the stories of the gods: “The word ‘myth’ is used to refer to stories that are fictional, and hence, it has come to have a pejorative sense. Traditionally, it refers to invented stories about the gods in which they behave like human beings with superhuman powers. (p. 449). Contrasting them with legends, Gunkel (1901) posits that they are “Stories of the gods in contradistinction with legends (better, sagas) in which the actors are men” (p. 14).

While discussing the Yoruba myth, Idowu (1962) speaks of the capacity common to all myths, “... Odu myths enshrine the theological and philosophical thoughts of the Yoruba” (p. 45). The implication is that myths are veritable sources of African philosophy and theology, and in this case, African eco-philosophy and eco-theology. Kanu (2013a-c) also holds that myths are a veritable mine of materials on African philosophy and theology. Gyekye (1995) describes them as “vehicles for abstract thought” (p. 14), and further advises that “To get at the full philosophical import of myths, however, requires detailed examination” (p. 15). This examination will involve penetrating the world of the African people from which they emerged. It is only at this level that one understands, contrary to some understandings, that mythologies are not untrue stories but the embodiment of the eventual truths of life.

The burden of this piece is to study the relationship between African mythologies and African ecological spirituality. That is, to see how African mythology can contribute or have contributed to the understanding of the African environment and the preservation of the same. To achieve this, some myths from different geographical and cultural areas in Africa will be studied. The purpose is to first introduce the reader to the overall outlook, common features and characteristics of African

mythologies from which ecological significances or implications will be drawn.

African Creation Myths

Before analysing the ecological values and implications of African mythologies, cosmogonies, that is, myths that explain the origin and organization of the universe from the simplest possible elements or from some first principle will be discussed. The presentation of these mythologies is very important because as Metuh (1987) writes:

African mythologies not only provide the symbolic categories by which Africans understand the organization of their universe, but also suggest patterns by which they try to maintain the balance and the harmony of the world... By defining the nature and the powers of beings in the universe and their relationships, they suggest rituals by which man tries to relate with them and the universe as a whole. (p. 41).

These mythologies, will relate what should constitute the nature of African eco-spirituality based on the understanding of the relationships between the different dimensions of the created universe. Thus, the Nri myth of the Igbo, Ife myth of the Yoruba, Efe myth of Congo, the Basare and Wassa myths of Ghana, Abaluyia myth of Kenya and Nyanweze myth of Tanzania will be presented below. The beauty of these myths is that they go beyond the creation of the human person to relate to the creation of the moon, stars, sun, land, water, trees, animals and other realities of the African universe.

1. The 'Nri' Myth (Nigeria)

Nri myth occupies a fundamental place in the Igbo story (Madubuko 1994). Tracing this history, Afigbo avers that Eri clan originated from the regions of Omumbala River, in Aguleri; from there they fanned eastward and

established various communities (Afigbo 1981). Uzuoku describes Eri as the father of all Nri; and tradition says that he came from *Chukwu* (Uzuoku 1994). It is reported that the earth was not firm when he came into it. To solve the problem of flood, he employed blacksmiths from Awka to use their bellows to dry the flooded land. There was also no food for people on earth to eat. To provide food, he prayed to God and God demanded that he should sacrifice his first son and daughter to him. After the sacrifice and burial of his son and daughter, yam and palm tree began to grow out of the place where he buried his first son, while vegetables and cocoyam grew out of the place where he buried his daughter. If yam germinated from where Eri's first son was buried, it means that yam is the resurrected son of Eri, given to man to sustain life. Yam is also regarded as life (Madu 2004).

In this myth, there is a cosmic drama between God, human beings, land and crops. Eri, the civilization hero enjoys a special relationship with *Chukwu*, and through Eri's sacrifice, humanity now enjoys a special relationship with the land which offers food for its sustenance. The ritual act performed by Eri established a covenant between Eri, his descendants and *Chukwu*. This explains why yam is very prominent in Igbo sacrifice and life, one which warrants its annual elaborate festival throughout Igbo land.

2. The 'Ife' Myth (Nigeria)

Very interesting is the Yoruba mythology of creation, which can serve as a basis for an African theology of collaboration. The myth holds that *Olodumare*, the Supreme God, originally lived in the lower part of heaven,

overlooking endless stretches of water. One day, *Olodumare* decided to create Earth. He sent an emissary, the *Orisha Obatalá* to perform this task, giving him what he needed to create the world: a bag of loose earth, a gold chain, and a five-toed hen (Vega 2001).

These different elements had their purposes. *Obatalá* was instructed to use the chain to descend from heaven to the water below. When he got to the last link of the chain, he poured the loose earth on top of the water and placed the hen on the pile of earth, and ordered it to scatter the earth with her toes across the surface of the water. When the hen was done, *Obatalá* climbed the chain to heaven to report his success to *Olodumare*, who then sent his trusted assistant, the chameleon, to verify that the earth was dry, after which *Olodumare* gave the earth as name: *Ile Ife*, the sacred house.

After the creation of the earth, *Olodumare* returned to the uppermost part of heaven. However, before his retirement, he distributed his sacred powers to *Obatalá*, the *Orisha* of creation, and *Yemayá*, the orisha of the ocean, who gave birth to a pantheon of orishas, each possessing a share of *Olodumare's* sacred power. *Olodumare* gave *Obatalá* the sacred power to create human life. *Obatalá* was the divinity that created our ancestors, endowing them with his own divine power.

3. Efe Creation Myth (Congo)

The Efe creation myth has it that God created the first human being with the help of the moon and kneaded the body of the human person out of clay. After this, God covered the body with skin and poured blood into the body. The name given to first human person by God was Baatsi. After the act of creation, God whispered into his

ear to beget many children, but to ensure that he impresses upon the children the following rule: from all trees you may eat, but not from the Tahu tree.

Baatsi had many children and he made them obey the rule. When he became old he retired to heaven. His children obeyed the rule and when they grew old they too retired to heaven. However, one day a pregnant woman was seized with an irresistible desire to eat the fruit of the Tahu tree. She asked her husband to break some for her, but he refused. However, when she persisted, the husband crept into the forest at night, picked the Tahu fruit, peeled it, and hid the peel in the bush. While he did all these, the moon saw him and told God what the husband of the pregnant woman had done. This made God very angry with human beings, and so he sent death as a punishment among human beings.

4. Nyamwezi Creation Myth (Tanzania)

The Nyamwezi creation myth has it that Shida Matunda created all things. After making the earth and water and plants and animals, he created two women and took them as his wives. His favorite wife, however, died. Then Shida Matunda buried her in his house and remained at her grave watering it every day. After some time, a little plant began to grow from the grave. Then he was glad, because he knew that the dead woman would rise again. He did not allow his other wife to come near the grave.

But one day when Shida Matunda had gone out, the other wife was overcome with curiosity and she stole into the house. When she saw the plant, she was jealous and cut it down with a hoe. The blood of the dead woman poured out of the grave and filled the house. When Shida

Matunda returned and saw the blood, he was much afraid and said: "You have killed your co-wife and thereby caused all men, animals, and plants to die." It was from Shida Matunda and the surviving woman descended all other humans.

5. Wassa Myth of Creation (Ghana)

The Wassa people of Ghana have a myth of creation that traces creation back to Onyankopon- the great God of fullness and satisfaction who, before creation, was the only being in existence. He created the world to become a companion to him, a wife. Added to the world which he created were also spirits who would also keep him company. He ensured that the world was beautiful and he asked the spirits to visit his wife from time to time. They will make their journey to the world using a long chain that springs from his throne. He also gave the spirits permission to inhabit realities that are on the earth. Their major responsibility was to run errands for him (Abanuka 1999).

6. Basare Myth of Creation (Ghana)

The Basare are of the Upper Region of Ghana. They believe that God created the world in several stages. The first stage was the creation of heaven supported with several pillars. This was followed by the creation of the world which was in the form of lightening and from which the moon and sun were made. However, the sun and the moon quarreled and the sun threw the moon into the mud. This explains why the moon is less bright than the sun and shines only at night for thieves and witches. The third stage was the creation of the clouds and a red cockerel that crows whenever it thunders. This was followed by the creation of the rain and a male and female

rainbow. The last stage was the miraculous creation of two assistants by God to whom he gave the earth as a place to work. This came into being before the creation of mountains and valleys and the sending of rain to form rivers and lakes. Then he created human beings and animals.

7. Abaluyia myth of Creation (Kenya)

This myth holds that the world was created by the Supreme Being by name *Wele Xakaba* who is the source of everything that does exist. First he made the heavens within two days in a mysterious way through lightening. The heavens was support by pillars, that is, where he dwells. He further created two assistants: *Wele Muxove* and *Wele Murumwa*. He also created the moon, stars, sun, clouds and rainbows and fixed them in their places in the sky. The clouds were to bring about rain and the rainbows to stop rain. Everything had its place and responsibility in the workings of nature.

The creation of heaven was followed by the creation of the earth. The earth was meant to be the abode and working place of his assistants and other things that he has created. In the earth were trees, mountains, valleys, depressions, etc. He then created the human person who will enjoy the beauty of the earth. The first man was Mwambu to whom he gave a wife called Sela. God created animals and asked the human person to eat animals with hoofs and avoid those that creep and the scavengers among the birds. Gradually human beings multiplied.

Implications of African Mythologies for Ecological Discourse

There are several implications that these mythologies have for the preservation of the eco-system. These implications are taken

from a profound understanding of the spiritual dispositions of the myths. These implications include:

1. Creation as sacred

In all the creation myths enumerated in this work, God is presented as the Creator of the universe and everything that is in it. This explains why some Africans refer to Him as the Creator, Originator, Carver, Inventor, Architect, Potter, Maker, Moulder, Constructor, Fashioner, etc. His being at the centre of all that has been created confers sacredness on creation itself. This has implications for the management of the eco-system. It echoes that creation must be treated with the respect it deserves. More so, if God is the Creator of the universe and all that it contains, it means that the human person cannot relate with creation without reference to the manual of the Creator. This respect given to the earth is based on the understanding that earth has a religious significance or religious values, thus, implying that humans have some religious obligations to care for the earth. Grim and Evelyn (2013) affirm that most religious traditions have developed attitudes of respect, reverence, and care for the natural world that brings forth life in its diverse forms. Consumerist, selfish, hedonist, among other modern approaches that excludes the creator in humanity's relationship with creation cannot but end in destruction. Enwereji (2004) avers that that sense of sacredness for creation is what the modern man lacks, and thus requires for the sustenance of the environment.

2. Creation as the home of the human person

In the Abaluyia myth of creation, after God had created the heavens where his home is, he created the earth that it may be the abode or the home of the human person and

the working place of his assistants (deities) and other things that he has created like trees, mountains, valleys, depressions, etc. There is an African proverb that says that: *a person does not begin to pursue rat when his house is on fire*. This means that the human person's priority is the care for his or her home and not what to eat or drink. The reason is simple, when the human person has gotten food and drink but has no home, it becomes a chase after the wind. The ecological implication for the modern man is that he or she must ensure that he or she preserves his or her home- the earth, before any other interests.

3. Man as a steward

In the myths of creation in world major religions according to Udodora (2011), man is created last and given the highest responsibility and authority to take care of and rule over all creatures including the earth surface (the land mass) on which he dwells. He is also to take care of the sea and all the creatures living in it. All religion teaches that the creator (God) is the owner of the world and everything that is in it including man. Therefore, man is only a steward given the authority to take care of what belongs to the creator.

The human person was not created to relate with the earth as he or she wants or outside of the intentions of God. The human person was created and placed in the earth to care for as the steward of the creation of God. His ability to account for what God has placed in his or her care will go a long way in determining the kind of contribution he or she makes to the creative act of God which ended in particular or specific days. The endowment of the human person with rationality is to ensure the maintenance of a

balance with other elements in the world. According to Pope Francis:

We human beings are not only the beneficiaries but also the stewards of other creatures. Thanks to our bodies, God has joined us so closely to the world around us that we can feel the desertification of the soil almost as a physical ailment, and the extinction of the species as a painful disfigurement. Let us not leave in our wake a swath of destruction and death which will affect our own lives and those of future generations (no, 65).

Focussing on the Christian responsibility in stewardship, Akullah (2018) avers that while God made man in his image, man is to carry the image of God in his assignment on earth as his ambassador protecting the forests which are part of his created work. As God's stewards over God's creation man is like a business manager in an organizational setting whose functions include those of planning, directing, organizing, supervising and controlling the assets and liabilities of the organization (the universe) for growth and profitability. It would therefore be absurd and meaningless for the shareholders (God the Father, Son and Holy Spirit) of the organization (the universe) after setting up their business concern, hire people to only come and mismanage the business let alone destroy it.

The human person was, therefore, created to care for the earth as God's ambassadors, and not to tyrannize, oppress, misuse, destroy or degrade the environment. He was created as a servant to service in a manner that is consistent with the powers of the servant, and with the place which is assigned to him or her.

4. The Human Person as a Being-with-others

In the Ife creation myth, the Supreme Being used different element in the work of creation, which include: a bag of loose earth, a gold chain, chameleon and a five-toed hen. As insignificant as any of these might look, God considered them very fundamental in his act of creation, and his use of them points to the fact that everything in nature has its place and its purpose just as the human person has his or her place and purpose. This helps the human person to understand that he or she is not the only being in the world, but a being with others which goes beyond physical realities but also encompasses spiritual forces, of which sometimes, the physical realities are manifestations of their presence and power. This understanding of the human person as a being-with-others and not the only being in creation requires that the human person treats other beings with respect and relates with them in manner that shows understanding of the rules of negotiation.

5. Ecological Crisis as a Consequence of Mismanagement

The presence of deadly reactions from the Supreme Being as a result of human disobedience points to the disastrous consequences of mismanaging God's creation. Herein, it is clear that God who is a kind Father can also manifest hostility through the use of non-rational dimensions of nature like lightening, rain, thunder, etc. The consequences of the human person closing his or her ears to God is always death, sickness, disorder, destruction, disharmony, etc. The present ecological crisis emerging from humanity's mismanagement of the earth's resources propelled by greed, consumerist/hedonist philosophies and modern technology is not very strange to the African

people. In the Nyamwezi myth, when the second wife of *Shida Matunda* destroyed the plant which symbolized the other wife and blood flowed, he said to her: "You have killed your co-wife and thereby caused all men, animals, and plants to die." The management or mismanagement of the plant had consequences for the future generation, so does the mismanagement of any dimension of the human world.

It is part of African traditional religious beliefs or teachings, that the human person is a component of the environment, which means that any harm carried out against the environment is invariably against the human person, because environment is the basis for the human person's existence. Any harm done on ecology will bring untold hardship and problems to mankind. The human person should, therefore, explore, develop and use with moderation all the available natural resources to enhance his being. Greed and destructive tendencies are condemned, while restraint and protection are affirmed by Africa Tradition Religions.

6. Personification of the Environment

In Nri myth, vegetation which includes Yam, Cocoyam, Plantain, etc., which also constitutes a part of the environment is personified as the resurrected son and daughter of Eri the proto ancestor of the Nri people- given to mankind for their sustenance. Within this context of personification of creation, creation is presented as deserving of respect and honour. This explains why every year, the Igbo celebrate the New Yam Festival. It is not only a celebration of the harvest but an honouring of the first son of Eri. This also explains why in some substitutionary sacrifices, the yam is brought as an

offering. At such offerings, what is presented is more than just tubers of yam. It is a person that is presented for the sacrifice.

Conclusion

The foregoing has studied selected African mythologies: the Nri myth of the Igbo, Ife myth of the Yoruba, Efe myth of Congo, the Basare and Wassa myth of Ghana, Nyanweze myth of Tanzania and the Abaluyia myth of Kenya, with the understanding of African myths as invented stories about the African gods in which they behave like human beings, however, with superhuman powers. The study of the relationship or implications of African mythologies for the preservation and management of the eco-system is because of the place that African myths occupy in the African's effort towards understanding the organization of his or her universe and the patterns by which he or she tries to maintain the balance and the harmony of the world. The definition of the nature and the powers of beings in the universe by African mythologies help the African know how to relate with the environment.

It is, therefore, not surprising that several implications often neglected by or lost in the agenda of the modern consumerist approach to the management of the environment have been derived from these myths. These implications include: the understanding of the universe as sacred, given that it was created by God; the understanding of the physical universe as a manifestation of spirit beings; the understanding of creation as the home of the human person, which must be preserved; the understanding of the human person as a steward and who must give an account of his stewardship; the understanding of the human person as a being-with-others. This calls for a high level of sensitivity to the being of others. These understanding

introduce a more profound and spiritual concept of the earth, and therefore, requires a more humane approach.

References

- Abanuka, B. (1999). *Myth and the African universe*. Onitsha: Spiritan Publications.
- Afigbo, A. E. (1981). *Ropes of sand: Studies in Igbo history and culture*. Ibadan: Heinemann
- Akullah, S. O. (2018). The Economic Importance of Forests: The Biblical and Church's Response in Forests Conservation. *Igwebuike: An African Journal of Arts and Humanities*. Vol 4 No 1 April 2018. pp 1-13.
- Esposito, J, Easching, D, and Lewis, T. (2006). *World religion today*. Oxford Unibversit oxford.
- Enwereji, S. O. (2004). *Ethics and Ecological Crisis in Nigeria*. (Ph.D) Thesis, Department of Religion and Philosophy, University of Jos.
- Grim, J. and Evelyn, M. (2013). The Emerging Alliance of World Religions and Ecology. *Carnegie Council for Ethics in International Affairs* 2013. Accessed from www.carnegiecouncil.org/publication
- Gunkel, H. (1901). *The legends of genesis*. Nashville: Nashville Agbingdom.
- Gyekye, K. (1995). *An essay in African philosophical thought: The Akan conceptual scheme*. Philadelphia: Temple University Press.
- Idowu, B. E. (1962). *Olodumare: God in Yoruba belief*. London: Longmans.
- Kanu, I. A. (2021). *Igwebuike: An operative condition of African philosophy, religion and culture. Towards a thermodynamic transformative ontology*. Maiden Inaugural Lecture delivered on 22nd February at Tansian University, Umunya. Autograde: Abuja

- Kanu, I. A. (2013a). *The place of Igbo Myths in Igbo-African philosophy*. A paper presented at the 6th Annual National Conference of the Association for Promoting Nigerian Languages and Culture (APNILAC), held at the Federal College of Education Technical, Umunze, Anambra State. 15th to 17th May, 2013.
- Kanu, I. A. (2015a). *African philosophy: An ontologico-existential hermeneutic approach to classical and contemporary issues*. Nigeria: Augustinian Publications.
- Kanu, I. A. (2013b). On the sources of African philosophy. *Filosofia Theoretica: Journal of African Philosophy, Culture and Religion*, Vol. 2. No. 1. pp. 337-356.
- Kanu, I. A. (2013c). The dimensions of African cosmology. *Filosofia Theoretica: Journal of African Philosophy, Culture and Religion*, Vol. 2. No. 2. pp. 533-555.
- Kanu I. A. (2017). Sources of Igwebuike philosophy. *International Journal of Religion and Human Relations*. 9. 1. pp. 1-23.
- Kanu I. A. (2015b). *A hermeneutic approach to African traditional religion, theology and philosophy*. Nigeria: Augustinian Publications.
- Madu, E. J. (2004). *Honest to African cultural heritage*. Coskan Associates, Onitsha
- Madubuko, L. (1994). Igbo world-view. *Bigard Theological Studies*. 1994, 14, 2. 13.
- Marshall, I. H. (1988). Myth. In S. B Ferguson (Ed.). *New Dictionary of Theology* (pp. 449-451). England: Intervarsity.
- Udodora, R. O. (2011). Religion and land use: A threat to global peace. In Adesewo, M. A. (ed). *Religion and Land Issue* (pp. 3140). Ilorin: NASRED.
- Uzukwu, E. E. (1988). Nri myth of origin and its ritualization: An essay in interpretation. In E. E. Uzukwu (Ed.). *Religions and African culture, Inculturation: A Nigeria perspective* (pp. 56-80). Enugu: Spiritan Publications.

Chapter Seven

AFRICAN TRADO-MEDICINE AND ECO-SPIRITUALITY

Jude I. Onebunne, PhD

Department of Philosophy

Nnamdi Azikiwe University Awka

juno.anyi@gmail.com

Executive Summary

The African continent is naturally endowed with various plant species and herbs with nutritional and medicinal benefits. This natural endowment as a result has contributed to her rich culture and practice of eco-spirituality. These species of plants and herbs are mostly used in Africa and often taken as food and medicine due to its availability, naturalness and cost effectiveness. Extensive research studies have been conducted on the medicinal uses of most African plants. However, the therapeutic potentials of some of these plants have remained unexploited. Over the years, several studies have revealed that some of these African floras and faunas are imbued with promising potentials for the development of novel drugs if the Africans revive the practice of eco-spirituality. Using the method of critical analysis, the researcher discovers that safety in the use of folk medicines has been a major public health concern over the years and suggests that relevant authorities should take measures in safeguarding the populace on the use of herbal mixtures through good policy formulations and implementation.

Keywords: African traditional medicine, Africa, African, environment, Eco-spirituality

Introduction

The African continent is magnificently endowed with different plant diversity and herbs, mainly due of the prevailing climatic conditions and this advantage has supported the richness of secondary metabolites in the plants for surviving under harsh environmental conditions. According to a report by the WHO (2005) about 80% of the people in developing countries rely on traditional herbal mixtures to treat different diseases. Most villages in Africa still depend solely on traditional herbal mixtures as a source of health treatments because of their beliefs and culturally acceptable indigenous knowledge, accessibility, and affordability. Many herbal mixtures are indubitably expedient for maintaining good health or treating diverse diseases. Africa is recorded as one of the continent with the highest use of traditional medicines.

Furthermore, traditional medicine (TM), variously known as ethno-medicine, folk medicine, native healing, or complementary and alternative medicine (CAM), is the oldest form of health care system that has stood the test of time. It is an ancient and culture-bound method of healing that humans Africans use to cope and deal with various diseases that have threatened their existence and survival. Hence, the most acceptable definitions of TM has been provided by the World Health Organisation (WHO). According to the World Health Organisation (2005) TM is “the sum total of the knowledge, skills and practices based on the theories, beliefs and experiences indigenous to different cultures, whether explicable or not, used in the maintenance of health, as well as in the prevention, diagnosis, improvement or treatment of physical and mental illnesses” (WHO, 2000). Herbal medicine on the other hand is naturally occurring, plant-derived substances that are used to treat illnesses within local or regional healing practices.

Today, plants are being used to treat a number of health concerns and conditions, including allergies, arthritis, migraines, fatigue, skin infections, wounds, burns, gastrointestinal issues and even cancer proving that it's true that food is medicine. These herbs are less expensive and safer means of treatment than conventional medications, which is why so many people are choosing to go back to this traditional method of medicine (Tembo 2016).

Since ancient times, African traditional herbal medicine has been used by many different cultures throughout the world for many treatments like malaria, warts, bowel disorders, heart conditions and chronic pain, come from pharmacists and doctors learning about folk knowledge. About 25 percent of the drugs prescribed worldwide are derived from plants? Of the 252 drugs in the World Health Organization's essential medicine list, 11 percent are exclusively of plant origin. In fact, about 200 years ago the first pharmacological compound, morphine, was produced from opium extracted from the seed pods of the poppy flower. Since then, scientists have been studying plants to create the pharmaceutical products we know today. But after years of overmedicating, facing resistant bacteria in the micro-biome and treating the illness rather than the root of the problem, people are beginning to pay more attention to natural, herbal medicine. These herbal medicine, contributes a lot to maintaining the physical health of individual and with the turn from pharmaceutical products to natural medicine, more attention is now being paid to the ecosystem and the concept of Eco-spirituality. As this would be the only sustainable way to conserve medicinal plants.

African Traditional Medicine

African Traditional Medicine is a complex mixture of organic chemicals that may come from any raw or processed part of a

plant. Herbal medicine has its roots in every culture around the world. Traditional medicine has been used for centuries to improve well-being and it continues to play a central role in health care. It draws on the continent's rich and unique biodiversity of aromatic and medicinal plants. It is also a promising industry that African countries can do more to export internationally. Traditional African medicine is a range of traditional medicine disciplines involving indigenous herbalism and African spirituality, typically including diviners, midwives, and herbalists (Kanu 2015, 2013).

Practitioners of traditional African medicine claim to be able to cure a variety of diverse conditions including cancer, psychiatric disorders, high blood pressure, cholera, most venereal diseases, epilepsy, asthma, eczema, fever, anxiety, depression, benign prostatic hyperplasia, urinary tract infections, gout, and healing of wounds and burns and even Ebola. In the 21st century, modern pharmaceuticals and medical procedures remain inaccessible to large numbers of African people due to their relatively high cost and concentration of health facilities in urban centers. Herbal medicines in Africa are generally not adequately researched, and are weakly regulated. There is a lack of the detailed documentation of the traditional knowledge, which is generally transferred orally. Serious adverse effects can result from mis-identification or misuse of healing plants.

History of Traditional Medicine

Early medical traditions include those of Babylon, China, Egypt and India. The Greeks introduced the concepts of medical diagnosis, prognosis, and advanced medical ethics. The Hippocratic Oath was written in ancient Greece in the 5th century BCE, and is a direct inspiration for oaths of office that physicians swear upon entry into the profession today. In the medieval age, surgical practices inherited from the ancient

masters were improved and then systematized in Rogerius's *The Practice of Surgery*. Universities began systematic training of physicians around the year 1220 in Italy. During the Renaissance, understanding of anatomy improved, and the microscope was invented. The germ theory of disease in the 19th century led to cures for many infectious diseases. (Lai, Roy 2004).

Military doctors advanced the methods of trauma treatment and surgery. Public health measures were developed especially in the 19th century as the rapid growth of cities required systematic sanitary measures. Advanced research centers opened in the early 20th century, often connected with major hospitals. The mid-20th century was characterized by new biological treatments, such as antibiotics. These advancements, along with developments in chemistry, genetics, and radiography led to modern medicine. Medicine was heavily professionalized in the 20th century, and new careers opened to women as nurses (from the 1870s) and as physicians (especially after 1970).

The pharmacological treatment of disease began long ago with the use of herbs (Chavunduka). Methods of folk healing throughout the world commonly used herbs as part of their tradition. Some of these traditions are briefly described below, providing some examples of the array of important healing practices around the world that used herbs for this purpose. One of the most important advantages of these supplements is that they come from various natural sources. As these supplements come from various foods, the body has a better chance of balancing them out in the system. The body in turn absorbs all the essential nutrients and has no side effects like the chemical medicines. Every artificial element or supplement found in the regular chemicals do not make the body better and very often make the body go through a lot more pain that it already has.

People are often worried about the side effects most medications have and have in turn done a lot of research before swallowing anything. Most medications come in all kinds of colors which can be harmful to the body.

Most vitamins and supplements are filled with all kinds of binders and fillers that are synthetic. A lot of the vitamins and supplements based foods are little more expensive but are better in quality and far more superior. Herbal vitamins and herbal nutritional supplements are eaten and bought all over the globe in large amounts and quantities. The natural supplements are used over the years by various cultures and societies all across the world from China to Africa. In the recent years, herbs have gained a lot more importance and a lot more perspective and have begun to flourish all over the world. The body needs its nutrients and herbs that are always received from all the liquids and the food we eat. There great range of the lists of African-trado medicine as: Turmeric (*Curcuma longa*), Curcumin, Ginger,

Appreciation of Eco-spirituality

The concept of Eco-spirituality is a vital one which is meant to be critically looked into by every spiritual, social, and activist movement all over the world. Eco-spirituality is a practical term that is based on the belief of the sacredness of the environment, it sees humans as one with the environment and tries to reorient the idea of human seeing themselves as superior to the environment, such orientation has brought more harm than good to the physical ecosystem. The view of the world as sacred has been a culture upheld by the African since time immemorial in fact, the ancient African man worshiped the earth and its inhabitant (this though, isn't encouraged) and this has set them well above other continents in natural richness.

With development in the different aspects of the environment the idea of eco-spirituality is gradually being forgotten. The practices of humans and their over bearing acts on the environment is quite alarming. The fact that man has failed to consider the environment as a sacred entity which needs to be upheld and respected above all other ambition is born out of greed and the need to meet up with trends. Eco-spirituality understands the position of human being to be inextricably related to all other life form. The activity of one form directly or indirectly affects the other forms. Scientists say; science is the mother of all invention, which is true, but we should remember that nature is the mother of all things even the Bible stated that man was made of sand and to sand shall man go back to after death. Such spiritual truth create a real and critical religious imperative that encourage believers to develop congruity through act of spiritual love and care for all conscious beings now and for future reference.

The idea of eco-spirituality evolution should be embraced with both hands the true relationship of man and its environment should always be born in mind even as we actively try to meet up with trends. The pollution and over exploitation of our eco-system would one day bring us to doom, medically, spiritually physically and other wise, if nothing tangible is done today to avert it. The beautiful nature and the universe, would be but a memory represented on pictures and paintings and this, of course would be an express death to traditional medicine

Practice of African Trado-medicine and Environment

In African traditional medicine, the curative, training, promoting, and rehabilitative services are referred to as clinical practices Clinical practice can also be viewed as the process of evaluating conditions of ill-health of an individual and its management. These traditional health care services are provided

through tradition and culture prescribed under a particular philosophy, in which the norms and taboos therein are strictly adhered to and form the basis for the acceptability of traditional health practitioners in the community they serve (Mahomoodally 2013).

According to the World Health Organization (WHO), health is defined as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity” (Bodeker 2004) and views health as one of the fundamental rights of every human being. The combination of physical, mental/emotional, and social well-being is commonly referred to as the health triangle. The recognition of disease and illnesses in traditional Africa meant that every society needed to devise means of containing its problem. Worldwide, different societies have different herbal traditions that have evolved over a long period of time. Similar to modern day Western treatment patterns, African traditional societies also involved herbalism, surgery, dietary therapy, and psychotherapy, in addition to traditional exorcism, rituals, and sacrifice (Mhame, Busia, Kasilo 2010).

These medical technologies had evolved even before the coming of the “white man” (Arabs and Europeans). Successful treatments became formalized, sometimes with prescriptions of correct methods of preparation and dosage. In addition, the ingredients and the manner of preparation varied with the ailment but were also dependent on various factors such as geographical, sociological, and economic, but the significant point was that in many cases, patients were cured of their physical or psychological ailments.

Classification of Traditional Herbal Medicine according to the Usage

According to Mbele, Hull and Dlamini (2006) The herbs are classified in four parts: Medicinal herbs, Culinary herbs, Aromatic herbs and Ornamental herbs.

- Medicinal Herbs have curative powers and are used in making medicines because of their healing properties like marigold, lemon balm, lavender, johnny-jump-up, feverfew etc.
- Culinary Herbs are probably the mostly used as cooking herbs because of their strong flavours like oregano, parsley, sweet basil, horseradish, thyme etc.
- Aromatic Herbs have some common uses because of their pleasant smelling flowers or foliage. Oils from aromatic herbs can be used to produce perfumes, toilet water, and various scents. For e.g. mint, rosemary, basil etc.
- Ornamental Herbs are used for decoration because they have brightly coloured flowers and foliage like lavender, chives, bee balm, lemongrass etc (Okafor and Ham 1999).

Relevance of Traditional Medicine on African Society

Using medicinal herbs can sometimes be better than using medical drugs. Here are some reasons why medicinal herbs are better.

- Consuming herbs may help to prevent and manage heart disease, cancer and diabetes. It may also help to reduce blood clots and provide anti-inflammatory and anti-tumor properties. Research is ongoing but studies have shown that: Garlic, linseed, fenugreek and lemongrass may help lower cholesterol.
- They cost less: The rising cost of prescription drugs have led the people to look for alternatives. While medicinal

herbs may not be as strong or as fast acting as conventional medicine, there is a growing body of scientific evidence that shows their efficacy and in what doses.

- They may have fewer side effects: While the side effects of any herbal medication depend on the drug in question, many have fewer side effects than conventional medicine. For example, St. John's Wort, which is used for mild to moderate depression, has fewer side effects than most other prescriptive antidepressants.
- There is a choice on how to use them: Medicinal herbs can be used in a variety of ways, depending on the kind of herb that is to be used. Some herbs can be mixed with food. Some can be made into tea, and there are some that are available in capsule or tablet form.
- They are good for more than one condition: Most prescriptive drugs are designed for one specific health problem. By contrast, many herbal medicines act on several parts of the body at once. For example Ginko (Ginko biloba) is good for circulatory disorders, but it also helps enhance memory.

Adverse Effects of Trado-Medicine

In African communities, the introduction of herbal mixtures to the market is a norm even without scientific evaluation to ascertain their safety. There is also a belief that herbal products are safe. Besides, traditional healers lack regulatory control to guide their products, all these factors have worked together to misinform millions of people, resulting in the death of people (Kayombo and Mahunnah 2013).

Apart from microbial contamination, heavy metals have been reported to be contributors to the toxicity of herbal products that have led to life-threatening situations or death (Oshikoya,

Njokunma, Chukwura, Ojo 2007). Several plants contain toxic bioactive compounds that can disturb, numerous African rural dwellers believe that since their ancestors used herbal mixtures/concoctions for their wellbeing in the past and with no side effect, they habitually assume that because the herbal mixtures are natural, therefore their safety is guaranteed. Unfortunately, this assumption has led to several damages and death of the users (Omonzejele 2008).

In addition, traditional healers are very secretive about their indigenous practices handed down from their ancestors to the new generation and this makes their treatment prescriptions vague, often resulting in overdoses of the mixtures by their patients since no regulatory body controls the usage of herbal medicines. Sadly, some people ignorantly combine herbal mixtures with orthodox medicines without a doctor's prescription and perhaps, not considering their adverse interactions. It is important to note that uncontrolled consumption of herbal mixtures could lead to liver damage, kidney failure and stomach upsets, diarrhea, etc. Therefore, knowledge is key in preventing overdoses or abuse (Parmer 2005).

Factors Influencing the Use of African Traditional Herbal Medicines

Over the years, the patronage of people towards herbal medicine has been increasing tremendously because of several reasons: According to Hemphill, Cobiac et al (2006) he stated the following:

The belief of rural dwellers and their indigenous cultures: Numerous rural dwellers have strong convictions that their beliefs and cultural practices for treating diseases are far better than modern medicine. Some even have a strong phobia towards

orthodox medicines. As a result, nothing can make them opt for orthodox medicine even if the government is willing to pay their medical bills. They prefer consulting their gods and searching for a practical solution by sacrificing animals to please their gods. Different African traditional healers have their unique ways of consulting their oracles and communicating their findings to clients on their health-related issues and the possible solutions. In addition, these patients are more comfortable in expressing their health problems to the traditional healers in their local dialects than to a professional medical doctor (Adusi-Poku 2010).

A perception that herbal medicines are natural and safe: Most herbal medicine users believe that herbal medicines are safe because they are products of plant naturally found in the environment and thus, they assume that being natural implies safety with no adverse effect compared to those reported from the use of orthodox medicine. **Accessibility and cost-effectiveness:** Herbal medicines have been the only option source of treatment in some African communities because they are cheap and the raw materials for preparing the mixtures are easily available. Besides, their cost- effectiveness cannot be compared with orthodox medicines, as most people living in these areas are poor and unable to afford the cost of modern treatments. These salient reasons have mitigated the rural dwellers towards the use of herbal medicines.

Superior efficacy of herbal medicines: Many people believe that herbal medicines are more potent than orthodox medicines and the failure of orthodox medicines to treat some complicated health problems has diverted people's attention in seeking herbal mixtures as an alternative source. Herbal mixtures contain several bioactive compounds that are believed to work together in synergy and thus enhancing their potency over orthodox medicines to treat some complicated health problems has

diverted people's attention in seeking herbal mixtures as an alternative source. Herbal mixtures contain several bioactive. Confidentiality of health problem information: Most people are not comfortable when information regarding their health problem is revealed to many people other than their doctor. All patients have files containing their health information and the medical record clerks are responsible for handling these files. However, local people who use herbal medicines feel safer and prefer to discuss their health problem with the traditional healers to a modern health system where their files will be handle by different people on duty.

Self medications: This habit is common among the people living in the rural and semi-urban communities in African countries since the plant materials are easily accessible coupled with the little knowledge they acquired from generation about herbal concoctions, they tend to prescribe herbs preparations for people around them with similar kind of illnesses. The assumption is that since the concoctions have worked for other people, they would also serve the same purpose for any sick person with related symptoms.

Fear of erroneous diagnosis: Most people prefer to opt for traditional medicines because of the fear of the wrong diagnosis from the modern health system. There are several reasons why a patient can be wrongly diagnosed in the hospital and such factors include unskilled medical operators (lack of advanced training of medical operators on the usage of new medical equipment), failure of old medical equipment, over the labour of medical staff, underpayment of medical staff, the inexperience of medical staff, mismanagement of patient's file, inconsistency/changing of the medical doctor in charge of a patient. Long waiting period and queue involved to see a

medical doctor: The queue involved, and time spent in seeing a medical doctor at the hospital is unbearable for most people in Africa, most especially, people without medical aid that patronize the government hospitals. Most hospitals in Africa are understaffed, so the population of patients overwhelms the capacity of these hospitals, and consequently, patients often seek an immediate alternative to solve their health problems. In some cases, sick people in the village might need urgent attention, with no ambulance available in the villages to convey them to the modern hospital in the town or city.

In addition, a bad road network in the villages has been a huge challenge for the rural dwellers to get proper medical treatment. Besides, even the so-called mobile clinics are always frustrated or unwilling to go to the villages to attend to the poor people because of the poor road network, consequently, the villagers tend to opt for the most available alternative treatment (White 2015). Advertisement of herbal products: Over the years, the market strategies of herbal mixtures or products in different ways have captured people's attention in testing the efficacy of these products. Some traditional healers go on the street advertising their products by sharing handbills, pasting their posters everywhere in the town, or even employing marketing agents that will help them display their products on the television, different social media platforms. Marketing promotes business because of the awareness it creates for people and the visibility of a product is usually enhanced with an advertisement (Kofi-Tsekpo 2004).

Limitations of African Traditional Medicine

There are, however, still disadvantages to the practice of traditional medicine which borders more on the functional diagnosis and proper medication. Others are effective treatment, its inaccessibility to people living in urban areas, high abuse

possibilities, lack of regulation and dosage instructions but as herbal medicine becomes more popular, it is becoming easier to find trained professionals and even naturopathic doctors who can advise on the safest and most effective ways to use herbal medication.

Beyond these as well as training of personnel especially when most people believe that Trado-medicine is a kind of gift endowed to someone or a natural inheritance favored one receives from one's lineage. Trado-medicine beyond these are circumscriptive in line with the fact that *nku din a mba na eghere mba nri*. Malaria for example was curable within our environment using plants that have quinine extracts. Our natural environment in this regards provided for itself and heals itself. This is why many African traditionalists believe that African nature provides for itself. COVID-19 pandemic and its much projection-brouhaha in African with unfathomable mortality rate was completely shattered due to primarily our African trado-medical nature as many African herbs have been proved to efficacious against COVID-19.

African Traditional Medicine and Western Medicine

Medicine is the art, science, and practice of caring for a patient and managing the diagnosis, prognosis, prevention, treatment or palliation of their injury or disease. Medicine encompasses a variety of health care practices evolved to maintain and restore health by the prevention and treatment of illness. According to Angell and Kassier (2007) Western Medicine is "the conventional approach to medicine in western societies, based on the diagnosis and explanation of illness as a malfunction of the body's biological mechanisms." It encompasses a range of health care practices evolved to maintain and restore health by the prevention and treatment of illness (Sofowora 1982).

WHO defines Traditional medicine as “the sum total of knowledge, skills and practices based on theories, beliefs and experiences indigenous to different cultures that are used to maintain health, as well as to prevent, diagnose, improve or treat physical and mental illnesses.” Traditional medicine that has been adopted by other populations outside its own culture is often termed alternative or complementary medicine (WHO, 2008).

WHO claimed that primary healers in traditional African medicine are midwives, herbalist and diviners. Diviners are responsible for determining causes of sickness by the ancestral spirits (WHO, 2008). Midwives use herbs and indigenous plants in aiding pregnancy and childbirth (WHO, 2008). Herbalists use animal, plants and mineral based medicines to cure diseases (WHO, 2008). Herb market and herb trading is a very common practice in many African countries (Okpako, 2006)

The use of western and African traditional medicine depends on an individual’s beliefs and culture. It also depends on the availability of funds to seek treatment. In Africa most people cannot afford to source western medicine mainly because it is very expensive and so they resort to their traditional medication mainly because it is cheaper (Oreagba, Oshikoya, Amachree 2007).

Safeguarding Quality and Safety of African Trado-products

Several challenges affect the quality of herbal products, which could result from the following:

Insufficient knowledge or information about the plant species: Most people that practice traditional medicine in Africa do not have good knowledge about the plants used in the treatment of different ailments since they strongly believe in the information

passed to them from one generation to another. They do not know the scientific information about the toxicity of one plant to another when used in combination. Besides, the collection or harvest time for medicinal plants is one of the significant factors that affect the potency of the plant for their therapeutic usages and when the traditional healers lack the basic information about the plant, there is a high possibility of misidentification or the use wrong plant species that could result in the toxicity of the herbal mixtures or products (Bury et al. 2011).

Lack of quality control on the herbal products: The preparation of most herbal products in the market or those used by the people in the villages are devoid of quality control assessment and the chances of their toxicity or adverse effect on human are very high, though some have been proven to be promising. There is no regulatory or standard set aside for the preparation of herbal products in the village in Africa, hence, microbial contamination from the harvesting stage, production, and packaging is common in these products. Hence, the quality of materials used for the preparation of the herbal products determines the level of their safety.

Lack of standard preparation methods: Different communities in Africa have their ways of preparing herbal mixtures and the method used in the preparation influences the extraction of the bioactive compounds in these plants, which are significant to their therapeutic values. Lack of standard methods may indirectly affect the difference in the efficacy of plants from various communities.

Complex nature of the plant extracts: Several researchers have reported that the plant extracts contain many bioactive compounds and the complex nature of the method used in

isolating and purifying individual bioactive compounds is critical and such analysis might not be possible in a local setting.

Overdose prescription: The prescription of herbal mixtures/products by traditional healers in the African communities is one of the factors that have resulted in many deaths in this region. Most herbal mixtures contain several bioactive ingredients and adequate knowledge about the pharmacokinetics and the mechanism of actions of these products is lacking, hence, the prescription about the dosage used by the patients is not evidenced-based, which consequently leads to liver or kidney damage. Equally there is lack of scientific proof: Most herbal products in African countries lack any scientific validation. However, this why it's traditional medicine. It's just true to its name as such.

Conclusions

It is unequivocally clear that traditional medicines helps to prevent diseases and minor illness like headaches, stomach aches, fractures, sprains and a lot more. People very often have had herbal massages and herbal baths. It makes them feel better and a lot more relaxed after a tiring day of work and long hours of pressure and strain. Herbal medicines are very cheap in comparison to the conventional form of medication. It's something which every pocket can afford, unlike other forms of medications.

Traditional herbal medicines can be consumed without the aid of any kind of prescription. They can be found very easily from a local drug store. Herbal medicines are known to be more productive in comparison to other forms of medication in curing certain conditions. Unless mixed with other chemical components, they are known to be all natural (Ayodele 2002). Unfortunately, there are still several gaps that are needed to be addressed, especially concerning the safety of these herbal

mixtures or products to public health on the African continent. Therefore, there is every need to introduce African traditional healers and traditional herbal medicines to modern scientific practices.

References

- Abd El-Ghani MM. Traditional medicinal plants in Nigeria: An overview. *Agriculture and Biology Journal of North America*. 2016;7(5):220-247
- Abdullahi AA. Trends and challenges of traditional medicine in Africa. *African Journal of Traditional, Complementary, and Alternative Medicines*. 2011;8(5 Suppl):115-123. DOI: 10.4313/ajtcam.v8i5S.5 [Accessed: November 12, 2017]
- Adusi-Poku Y, Okire LKN, Lortsi-Akakpo FK, Fleischer TC, Mensah MLK, Arhin P, et al. Assessing herbal medical practitioners in professional qualifying examination in Ghana, a model. *African Journal of Traditional, Complementary, and Alternative Medicines*. 2010;7(1):85-87
- Angell M, Kassier JP. Alternative medicine – The risk of untested and unregistered remedies. *New England Journal of Medicine*. 1998; 339:839-841
- Ayodele SJ. *The Yoruba cultural construction of health and illness. Nordic Journal of African Studies*. Nigeria: University of Ibadan Press; 2002;11(3):322-335
- Bodeker G. Traditional herbal medicine for malaria. *British Medical Journal*. 2004;13:1156-1159
- Bury RW, Fullinfaw RO, Barraclough D, Muirden KD, Moulds RF, Anghie T. Problem with herbal medicines. *Medical Journal of Australia*. 1987;146:324-325
- Chavunduka EL: *Christianity, African Religion and African Medicine in World Council of Churches*. 1990. Available from:
<http://wcc.coe.org/wcc/what/interreligions/cd33-02.htm> [Accessed: November 18, 2017]

- Kanu, I. A. (2013). The Dimensions of African Cosmology. *Filosofia Theoretica: Journal of African Philosophy, Culture and Religion*. 2. 2. 533-555.
- Kanu, I. A. (2015a). *A hermeneutic approach to African Traditional Religion, philosophy and theology*. Augustinian Publications: Nigeria
- Kanu, I. A. (2015b). *African philosophy: An ontologico-existential approach to classical and contemporary issues*. Augustinian Publications: Nigeria
- Kayombo EJ, Mahunnah RLA, Uiso FC. Prospects and challenges of medicinal plants conservation and traditional medicine in Tanzania. *Anthropology*. 2013;1:108. DOI: 10.4172/2332-0915.1000108
- Kofi-Tsekpo M. Institutionalization of African traditional medicine in healthcare systems in Africa. *African Journal of Health Sciences*. 2004;11(1-2):i-ii
- Lai PK, Roy J. Antimicrobial and chemopreventive properties of herbs and spices. *Curr. Med. Chem*. 2004; 11(11):1451-60.
- LC, Hemphill I, Cobiac L et al. Health benefits of herbs and spices: the past, the present, the future. *Med. J. Aust*. 2006; 185(4):S4-24. PMID 17022438.
- Mahomoodally MF. Traditional Medicine in Africa: An Appraisal of Ten Potent African Medicinal Plants Evidence Based Complementary and Alternative Medicine. *Epub December 3, 2013*. DOI: 10.1155/2013/617459 [Accessed: October 30, 2017]
- Mbele M, Hull R, Dlamini Z. African medicinal plants and their derivatives: Current efforts towards potential anti-cancer drugs. *Experimental and Molecular Pathology*. 2017;103:121-134
- Mhame PC, Busia K, Kasilo MJK. Clinical practice of African traditional medicine. *The African Health Monitor*, 1 August.
- Mokgobi MG. Understanding traditional African healing. *Afr J Phys Health Educ Recreat Dance*. 2014;20(Suppl 2):24-34.

- Okafor JC, Ham R. *Identification, utilization and conservation of medicinal plants in Southeastern Nigeria. Issues in African Biodiversity. The Biodiversity Support Program 1999. No. 3.*
- Omonzejele PF. African concepts of health, disease and treatment: An ethnic inquiry. *Explorer*. 2008;4(2):120-123. DOI: 10.1016/j.explore.2007.12.001
- Oreagba IA, Oshikoya KA, Amachree M. Herbal medicine use among residents in Lagos, Nigeria. *BMC Complimentary and Alternative Medicines*. 2011;11:117-124. DOI: 10.1186/1472-6822-11-117.
- Oshikoya KA, Njokunma OF, Chukwura HF, Ojo OI. *Adverse drug reactions in Nigerian children. Paediatric and Perinatal Drug Therapy*. 2007;8:81-88
- Parmer V. *Herbal Medicine: Its Toxic Effect and Drug Interactions. The Indian Anaes-thetics' Forum*; 2005. pp. 1-9
- Sofowora EA. *Medicinal Plants and Traditional Medicine in Africa*. 1st ed. Somerset, New Jersey: John Wiley and Sons Ltd; 1982. pp. 55-62
- Tambwe M. *Tanzania: Traditional medicine has place in health. Tanzania Daily News (Dar-es Salaam)*. Available at: allafrica.com/stories/201211040038.html [Accessed: November 4, 2017
- Tasha D. *Traditional African Healing*. 2012 12.07.2015. Available at: www.africanholo-caust.net/news-ah/trad/healing.html [Accessed: November 2, 2017
- Tembo M. *Principles and Methods of African Traditional Medicine*. 2016. Available at: www.hungerforculture.com [Accessed: November 6, 2017]
- White P. *The concept of disease and healthcare in African traditional religion in Ghana. HTS Theological Studies*. 2015;71(3):5
- World Health Organization. *Legal Status of Traditional Medicine and Complementary/Alternative Medicine: Worldwide Review*. Geneva: WHO; 2008

Jude I. Onebunne, PhD

World Health Organization. *National Policy on Traditional Medicine and Regulation of Herbal Medicine: Report of a WHO Global Survey*. Geneva: WHO; 2005.

Chapter Eight

THE AFRICAN FORESTS IN THE FACE OF THE CORONAVIRUS (COVID 19) PANDEMIC

Emmanuel Osewe AKUBOR, PhD

Department of History,

Obafemi Awolowo University, Ile -Ife

oseweakubor@gmail.com

Executive Summary

Extant studies particularly lessons and notes of medical historians have established that man in his quest to dominate and take over his environment has in the course altered the original arrangement of the earth crust and its components, thereby disturbing the original configuration of ecosystem. In this process, other organisms were exposed, resulting in health risk, disease, epidemic and later pandemics. In the case of Africa, it has been established that man over the years have been able to bring this disease under control through the use of trees, roots and herbs (traditional medicine). However, despite records of proven efficacy and efficiency of Africa's roots and herbs, the West, World Health Organisation and their allies still show disdain to Traditional Medical practices and their products and as such there exist some form of hostility harboured by the modern medical practitioners against the use of traditional medicine. This in the opinion of this research could prevent Africa and Africans from contributing meaningfully to the fight against COVID 19 pandemic in modern history. This research is, therefore, an attempt at counting possible economic and health losses the world would incur by neglecting herbs and roots products of Africa traditional medical system during this period of Coronavirus (Covid 19) Pandemic. From the perspective of

Economic History, data obtained from primary and secondary sources were deployed to carry out the study with an analytical and narrative historical approach (evidence gathering). The primary source for this research is based on field investigations conducted in the area and surrounding territories. Among other things, the data collection process includes semi-structured interviews with individuals. The research also uses historical documents from the national archives, relying on previous research conducted on issues of the history of disease and spread, in addition to documentary data taken from newspaper accounts, diaries, letters and verbal reports.

Keywords: COVID 19, Traditional Medicine, Africa, Health, Forests

Introduction

Lessons of history have established that man in his quest to dominate and take over the environment has in the course altered the original arrangement of the earth crust and its components, thereby disturbing the original configuration of ecosystem. In this process, other organisms were exposed, resulting in health risk called diseases. Thus, it is safe to argue that the history of disease (and later epidemics) is as old as man¹. It is in light of this that scholars have argued that infectious and communicable diseases existed during humankind's hunter-gatherer days, but the shift to agrarian life 10,000 years ago created communities that made epidemics more possible. The spread of disease is associated with Man's quest for community life and expansion associated with civilized livings, expansions

¹ Akubor E. Osewe, (2012) The Role of Esan Traditional (Herbal) Health System in Attaining the Millennium Development Goals: A Neglected Theme, in Ukago V and Akubor, E.O (2012) A Diminishing Past-A Rescued Future: Essays on the Peoples, Traditions and Culture of the Esan of Southern Nigeria: Goldline and Jacobs, New Jersey. Pp 107-122

of settlements, building cities and forging trade routes to connect with other cities, and waging wars with them², leading to pandemic situation.

In the case of Africa, it has been established that man has been able to bring this disease under control through the use of roots and herbs, hence the reference to Africa's Forests in the title of this paper.

Historicizing World Pandemic and its Impact on World Economy: A Brief Reflection.

The earliest of such recorded in history is associated with the city of Athens in 430 B.C, during the Peloponnesian War³. There was also the Antonine Plague of 165 to 180 AD, also known as the Plague of Galen. The total death count has been estimated at 5 million, and the disease killed as much as one third of the population in some areas and devastated the Romans⁴.

Similarly, between the end of 249 and 250 A.D, the world experienced the emergence of Cyprian Plague⁵. In 444 A.D., it hit Britain and obstructed defense efforts against the Picts and the

² Muhammad Ahmedullah (2014), Ibn Khaldun and Karl Marx: Five Centuries of History and Two Civilisations Apart, Yet Remarkably Similar; <https://alochonaa.com/2014/10/21/ibn-khaldun-and-karl-marx-five-centuries-of-history-and-two-civilisations-apart-yet-remarkably-similar/>

³ Cartwright, Frederick C. (2014), *Disease and History*, Sutton Publishing, 2014; Dobson, Mary (2007), *Disease: The Story of Disease and Mankind's Continuing Struggle Against It*, Quercus, 2007.

⁴ Chester G. Starr, *A History of the Ancient World* (Oxford, 1991) 328; Smith, Christine A. (1996). "Plague in the Ancient World". *The Student Historical Journal*.

⁵ Kyle Harper (1 November 2017). "Solving the Mystery of an Ancient Roman Plague". *The Atlantic*. Retrieved 2 December 2017; Kyle Harper (2017). "Chapter 4: The Old Age of the World". *The Fate of Rome: Climate, Disease, and the End of an Empire*. Princeton University Press. ISBN 978-0691166834.

Scots, causing the British to seek help from the Saxons, who would soon control the island⁶.

In the year 541 A.D, there was the Plague of Justinian, which continued to recur until the middle of the 8th century. Extant studies opined that first plague pandemic was one of the deadliest pandemics in history, resulting in the deaths of an estimated 25–100 million people during two centuries of recurrence, a death toll equivalent to as much as half of Europe's population at the time of the first outbreak⁷. In the 11th Century, A.D, the world was to officially witness symptoms of what later became known as Leprosy. Till date, leprosy (Hansen's disease), is still ravaging that world afflicting tens of thousands of people yearly⁸.

There was the emergence of the Black Death in 1350, argued to have its origin in Asia and was declared the second largest outbreak of the bubonic plague. Over the next five years, the Black Death killed more than 20 million people in Europe – almost one-third of the continent's population⁹. In 1492, the world was confronted with The Columbian Exchange. Research in 2019 even concluded that it claimed some 56 million people mostly Native Americans.

In 1665, it was The Great Plague of London, argued to have killed an estimated 100,000 people – almost a quarter of London's

⁶ Ibid

⁷ Maugh, Thomas. "An Empire's Epidemic". www.ph.ucla.edu. Retrieved 20 March 2020; Rosen, William (2007). *Justinian's Flea: Plague, Empire, and the Birth of Europe*. New York City: Viking Adult. p. 3. ISBN 978-0-670-03855-8; "The Plague of Justinian". *History Magazine*. 11 (1): 9–12. 2009.

⁸ Singh, Kunwar Sahab; Pandey, Bam Deo (March 2012). "Leprosy—Hidden Disease?". *Science Reporter*. 49 (3). ...Ibid

⁹ Black Death...Ibid.

population – in 18 months¹⁰. In 1817, the world also experienced what historians have described as the first of seven cholera pandemics over the next 150 years. It is on record that since it first emerged, seven cholera pandemics have occurred in the past 200 years, with the first pandemic originating in India in 1817¹¹. The casualty figure is estimated at 150,000 people. A vaccine was created in 1885, but pandemics continued. The Third Plague Pandemic was to emerge in 1855, claiming 15 million victims. There was also the Fiji Measles Pandemic of 1875, which is associated with expansion and conquest. At the end, one-third of Fiji's population, a total of 40,000 people, died.

Table A: Other World Pandemics¹²

Date	Name	Description	Effect
1889	Russian Flu	The first significant flu pandemic started in Siberia and Kazakhstan, travelled to Moscow, then into Finland and Poland, where it moved into the rest of Europe. By the following year, it had crossed the ocean into North America and Africa	By the end of 1890, 360,000 had died

¹⁰ Ibid

¹¹ Tatem, A.J.; Rogers, D.J.; Hay, S.I. (2006). "Global Transport Networks and Infectious Disease Spread". *Adv Parasitol. Advances in Parasitology*. National Institutes of Health. 62: 293–343. doi:10.1016/S0065-308X(05)62009-X. ISBN 9780120317622. PMC 3145127. PMID 16647974

¹² Compiled by author from various sources including Klein I. (1988), *Plague, policy and popular unrest in British India.*, *Mod Asian Stud.* 1988;22(4):723-55. doi: 10.1017/s0026749x00015729.PMID: 11617732; Dobson, Mary (2007), *Disease: The Story of Disease and Mankind's Continuing Struggle Against It*, Quercus, 2007; Joseph P. Byrne (2008), (ed)*Encyclopedia of Pestilence, Pandemics, and Plagues*, Greenwood Press, 2008; Logan Clendening (1960), *Source Book of Medical History*, Dover Publications, 1960.

1918	Spanish Flu	The flu was first observed in Europe, the United States and parts of Asia before swiftly spreading around the world. At the time, there were no effective drugs or vaccines to treat this killer flu strain. Wire service reports of a flu outbreak in Madrid in the spring of 1918 led to the pandemic being called the "Spanish flu." By October, hundreds of thousands of Americans died and body storage scarcity hit crisis level. But the flu threat disappeared in the summer of 1919.	The avian-borne flu that resulted in 50 million deaths worldwide
1957	Asian Flu	Starting in Hong Kong and spreading throughout China and then into the United States, the Asian flu became widespread in England. A second wave followed in early 1958. In 1957 England lost (over six month), 14,000 people. By 1958, an estimated total of about 1.1 million deaths globally, with 116,000 deaths in the United States alone	An estimated 1.2 million people died of the disease between 1957 and 1958

1981	HIV/ AIDS	AIDS destroys a person's immune system, resulting in eventual death by diseases that the body would usually fight off. AIDS was first observed in American gay communities but is believed to have developed from a chimpanzee virus from West Africa in the 1920s. The disease, spreading through certain body fluids, moved to Haiti in the 1960s, and then New York and San Francisco in the 1970s. Symptoms include fever, headache, and enlarged lymph nodes upon infection. When symptoms subside, carriers become highly infectious through blood and genital fluid, and the disease destroys t-cells.	An estimated 35 million people worldwide have died of AIDS since its discovery, and a cure is yet to be found.
2003	SARS	After several months of cases, Severe Acute Respiratory Syndrome was associated with bats, spread to cats and then to humans in China, followed by 26 other countries. SARS was seen by global health professionals as a wake-up call to improve outbreak responses, and	It infected 8,096 people, with 774 deaths.

		lessons from the pandemic were used to keep diseases like H1N1, Ebola and Zika under control.	
--	--	---	--

In counting the economic losses, scholars have argued that apart from the direct loss of lives, these pandemics also hindered the spread of civilization and fast integrations of world civilizations. It must, however, be noted that it led to situations in which man had to interact meaningfully with the environment to develop the necessary vaccines and medicines to cure these epidemics turned pandemics¹³. This led to situations in which those that had the knowledge dominated those to whom they had to share such with. This in the view of the paper could be described as the first step to colonialization of different parts of the world. Thus apart from the physical use of forces through arms and ammunitions, knowledge has always ruled that world. However, oral testimonies exist in most African societies on how most of these plagues were countered using the forest resource of roots, leaves and herbs¹⁴.

Africa and the Emergence of COVID 19

Although towards the end of 2019, there were rumours of epidemic ravaging some parts of Asia with specific reference to Wuhan, China. The first reported case in China appeared November 17, 2019, in the Hubei Province, but went unrecognized. Eight more cases appeared in December with researchers pointing to an unknown virus. This epidemic was later identified as COVID 19, an abbreviation for Corona Virus 2019. To tackle this, the government of the affected area first

¹³ Rodney Walter 1973, *How Europe Underdeveloped Africa*, Bogle-L'Ouverture Publications, London:8-10, see also Ukaogo V and Akubor E.O, (2012), ...Op.cit.

¹⁴ Ibid

converted an exhibition centre into a hospital in Wuhan, China's central Hubei Province. The epidemic then gradually gained popularity, when ophthalmologist Dr. Li Wenliang defied government orders and released safety information to other doctors. The following day, China informed WHO and charged Li with a crime. Li died from COVID-19 just over a month later. The inability of the World Health Organisation to curtail it and the lackadaisical attitude with which the world handled the case, led to a situation in which the virus escaped the Chinese border, such that by mid-March, it had spread globally to more than 163 countries. On February 11, the infection was officially christened COVID-19. However, on March 11, 2020, the World Health Organization announced that the COVID-19 virus was officially a pandemic after barrelling through 114 countries in three months and infecting over 118,000 people.

The current Coronavirus Disease (COVID-19) is one of the largest respiratory disease outbreaks affecting several countries simultaneously and a novel strain of Coronavirus (SARS-CoV 2) has been identified as the causative agent. Sequel to the advice of the International Health Regulation Emergency Committee, the Director-General of WHO declared the COVID-19 outbreak a Public Health Emergency of International Concern (PHEIC) on 30 January 2020 and characterized it as a pandemic on 11 March 2020. Since the first recorded case, Africa has continued to experience an increase in the number of cases, which has spread across several countries in the continent. While majority of the initial cases were imported, most of the new cases have no travel history or contact with such people. In the case of Nigeria, as of 14 September, 2020, a total of 56, 256 cases of COVID-19 were recorded in 34 of Nigeria's 36 states, as well as in the Federal

Capital Territory (FCT), with Lagos state recording the highest figure. The total number of death was 1082, total number recovered 44,152, with 11,022 active cases¹⁵.

COVID 19, African in Cure and Disease Control: Forest Resources

As noted earlier, the history of diseases is as old as the history of human civilization. Thus, at various times in various ways, societies have been able to tackle these diseases based on the provision of the environment. In the case of Africa, the immediate environment has always provided the much needed cure as it has been established that Africa has forest and bush has about 30,000 medicinal recipe¹⁶. It is therefore not surprising that she has been able to control pandemic using resources from these forests. For instance, Okoduwa (2012) opined that some African societies south of the Sahara have engaged the natural resources of their forests to produce the necessary preventives and cures for diseases. On the Indigenous treatments, with specific reference to the Esan people of southwest Nigeria (West Africa). Okoduwa (2012) writes:

The Esan has rich vegetation made up of the moist deciduous forest. It has timber and other forest woods. In some parts of the plateau and the lowlands, forests were thickly wooded and inspired awe from the Esan people. The forest and its products were highly valued for their innumerable contributions to everyday living. The forest was vital to the life and culture of the Esan. There were medicinal preparations from the forest for leprosy,

¹⁵ Adie V. O. (2020), "COVID-19: When a governor believes it's a hoax and ordinary flu" Leadership Style, Abuja, Jun 3, 2020

¹⁶ Stanley, Bob (13 February 2004). "Recognition and Respect for African Traditional Medicine". Canada's International Development Research Centre. Retrieved 5 June 2020.

gonorrhoea, loose teeth, fevers, abscesses, black tongue, childbirth and purgatives ¹⁷.

Among the tribes in Zambia, the first principle is diagnosis followed by complex treatment procedures using plants from the bush, followed by many rituals, the ultimate aim being to cure disease¹⁸. Serious or chronic illnesses require “chizimba,” which means sealing a disease or illness away forever. In preparing the medicine, plants may be used singly or in combination with other plants. The plant parts are harvested fresh, pulverized, and left to dry first, then soaked in water or other solvents like local gin. Some plant materials are burnt as charcoal and used as powder. Scholars have identified six major types of treatment common to the 72 or more ethnic groups in Zambia include drinking, eating, drinking as porridge, making small cut on skin and applying, bathing with herbs, dancing to exorcize spirits, and steaming with boiling herbs. The Zambian traditional healer is called *Nga’nga*¹⁹

In the case of the tribes in Ghana, scholars have argued that although a large percentage of the population fully accept modern science-based medicine, but traditional medicine is still held in high regard. They believe in the physical and spiritual aspects of healing. Herbal spiritualists collectively called “bokomowo” indulge in occult practices, divinations, and prayers and are common all over the country. Tribal vernacular names of traditional healers include “gbedela” (Ewe), “kpeima” (Dagomba), “odunsini” (Akan), and “isofatse” (Ga).

¹⁷ Ibid

¹⁸ Ezekwesili-Ofilu J and Okaka, C, (2017), Herbal Medicines in African Traditional Medicine; Submitted: May 20th 2017Reviewed: July 17th 2018Published: January 30th 2019. DOI: 10.5772/intechopen.80348

¹⁹ Ibid

In some Ghanaian communities, especially in the Akan communities, traditional healers and practitioners are of the opinion that disobeying taboos is one of the ways that could lead to severe illness to the person(s) or community involved. In all cases, the major ingredient for the preparation of the medicines comes from the forests, basically roots, tree barks and leaves. Traditional medicine features in the lives of thousands of people in South Africa every day. In fact, it is estimated that 80% of the population uses traditional medicines that are collectively called *muti*. *Muti* is a word derived from medicinal plant and refers to traditionally sourced plant, mineral, and animal-based medicines. In addition to herbs, traditional medicine may use animal parts and minerals²⁰.

COVID 19 Pandemic, African and African Medicine: An Interrogation

Even before the emergence of Covid 19 pandemic in world health history, Africa's engagement in the medical science has been well documented by scholars, who believe that the major impediment to her development was colonialism, the introduction and manipulation of the doctrine of two major religions of the world, which demonised her adventure in the medical field. Documenting some of this, Adodo²¹ opined thus:

The very first scientist in recorded history was an African named Imhotep, who was an adviser to the Pharaoh Djoser of the 3rd dynasty, and builder of the world's first pyramid. The idea of a blood bank was pioneered by Dr Charles Richard Drew (1904-1950), an African born in America. His approach brought a great revolution in the

²⁰ Ibid

²¹ Adodo Anslem (2017), *Integral Community Enterprise in Africa* Routledge

medical world and saved millions of lives. The first person to operate on the human heart was Daniel Williams (1856-1931) son of African slaves brought to America. Daniel Hale Williams made history by performing the first successful open-heart surgery in 1893. Long before the advent of colonialism, medicine was well advanced not only in Egypt but also in western and eastern Africa, especially in present-day Nigeria and South Africa and many others. Medical procedures such as vaccination, autopsy, limb traction and broken bone setting, bullet removal, brain surgery, skin grafting, filling of dental cavities, installation of false teeth, Caesarean section, anaesthesia and tissue cauterisation were performed in ancient Africa before they became known in Europe. An African, Garret Augustus Morgan invented the traffic light in 1923. Morgan was also the inventor of the gas mask. McCoy Elijah, (1843-1929) an African, invented the steam engine lubricator which allowed locomotive engines to be lubricated while in motion in 1872²².

Apart from the above, there are documents revealing the continent's success in Ancient Egypt and surrounding territories. In spite of the fact that history has continually pointed to Africa as the home of the development of medicine, the Western world has continued to deny this fact and this became even more glaring with the emergence of the Coronavirus Pandemic in 2019/2020. They have described Africa and her response to health issues in the modern times as unscientific, illogical and unacceptable. This could be seen in the various prediction that

²² Ibid

greeted Africa immediately the pandemic surfaced. There were specifically fears that Africa will be blown apart by the virus. World Health Organization (WHO) Director General Tedros, Adhanom Ghebreyesus issued a chilling warning to African countries: "The best advice for Africa is to prepare for the worst". Similarly, Microsoft founder, Bill Gates predicted it could claim about 10 million lives in Africa. His wife and co-chair of the Gates Foundation, Melinda Gates, added that without drastic actions, COVID-19 could lead to dead bodies lining the streets of Africa²³. Melinda Gates was quoted as saying, "I am worried.... I see dead bodies in the streets of Africa." Gates is not the only one to be predicting total doom in Africa. A report released by the United Nations Economic Commission for Africa (UNECA) in April stated: "Anywhere between 300,000 and 3.3 million African people could lose their lives as a direct result of COVID-19."²⁴.

These predictions according to scholars were drawn from a racialized history of objectifying black bodies, and a despondency frame in which Africans are cast as defenseless victims, lacking autonomy and agency and needing a saviour. Thus, while the menacing spread of Covid-19 is treated with shock elsewhere, in Africa, the onslaught of Covid-19 is considered inevitable²⁵. Omanga and Ondigo (2020) argued that it was based on the thought that:

²³ Paul Adepoju (2020), COVID-19: The Sky Hasn't Fallen Yet in Africa Health Policy Watch. Pandemics & Emergencies, Geneva Switzerland, <https://info@healthpolicy-watch.org>, 15/08/2020

²⁴ Caleb Okereke, Kelsey Nielsenby Caleb Okereke & Kelsey Nielsen (2020), The problem with predicting coronavirus apocalypse in Africa; OPINION /CORONA VIRUS PANDEMIC, © 2003 -

2020, Al Jazeera Media Network Live, 07 May 2020 GMT+3

²⁵ Duncan Omanga and Bartholomew Ondigo, (2020)COVID-19 AFRICA: Sub-Saharan Africa Will Most Likely Ride Out the Covid-19 Storm, Kujenga Amani (ed) Social Science Research Council, Brooklyn, NY 11201 • USA, May 14, 2020

... There is no denying that sub-Saharan Africa would, given a full-blown pandemic, be overwhelmed. On the surface, the odds are stacked against the region. For a disease that often requires treatment in intensive care units (ICUs), many sub-Saharan African countries lack the capacity to deal with a surge in cases. In Kenya, for instance, there are only about 518 ICU beds countrywide. The Central African Republic (CAR) has only eight. Uganda has only fifty-five ICU beds, while Nigeria has less than 500. Meanwhile, vast populations are thought to be immunocompromised with a host of ailments²⁶.

On the confusions in the prediction, Okereke et al argued thus: While there have been multiple projections in regards to the number of COVID-19 deaths that the African continent will see, the recent estimate from the UNECA might be the most confusing. This is especially because the prediction of millions of COVID-19 deaths in Africa is difficult to reconcile with the present growth rate and the reality on the ground. As of publication time, there were a total of 50,996 COVID-19 cases on the continent and 1,998 deaths reported. To put this into perspective, based on the lowest projection from UNECA and at the present growth rate, African nations would need to see at least 7.6 million confirmed infections to be able to reach 300,000 deaths; 84 million people will have to be infected

²⁶ Caleb Okereke, Kelsey Nielsenby Caleb Okereke & Kelsey Nielsen (2020), The problem with predicting coronavirus apocalypse in Africa; OPINION /CORONAVIRUS PANDEMIC, © 2003 - 2020, Al Jazeera Media Network Live, 07 May 2020 GMT+3

continent-wide for the UNECA projected 3.3 million deaths to happen²⁷.

As it is presently, the progression of Covid-19 infections and fatalities in the region appear to be upsetting earlier epidemiological predictions and mathematical models. Africans are not dying in the streets, and the chances of widespread deaths are decreasing with time. Although the most optimistic scientists are cautious, the Covid-19 crisis on the African continent is more in the economic and political space. Not only are hospitals virtually empty, even the everyday emergencies and medical procedures that surgeons and physicians encounter are few and far between. Months after recording their first cases, we see images of clean and glossy makeshift isolation centers for sick Covid-19 patients in Addis Ababa, Lagos, Accra, Kigali, and other parts of sub-Saharan Africa still yawningly empty.

In South Africa, which has the most sophisticated health infrastructure in Africa and some of the highest infection rates, doctors have been waiting for gravely ill patients to present themselves in hospitals with flu-like symptoms for weeks. The expected torrent has been more of a trickle since the first case was reported on March 5, 2020. With low Covid-19 testing capacity, there is a high possibility that infections are far higher than reported, but few seem to require hospitalization. The two hardest-hit countries in continental Africa, Cameroon and South Africa, still have low ratios of both critically ill patients and fatalities. In Kenya, where there are over 700 infections, there are only a handful of critically ill patients, with most showing mild symptoms. Several countries, like Uganda, Namibia,

²⁷ Caleb Okereke, Kelsey Nielsenby Caleb Okereke & Kelsey Nielsen (2020), The problem with predicting coronavirus apocalypse in Africa; OPINION /CORONAVIRUS PANDEMIC, © 2003 - 2020, Al Jazeera Media Network Live, 07 May 2020 GMT+3

Mozambique, Rwanda, and Burundi, have yet to record a single death. The data is still evolving, but the latest statistics show that, compared to other regions, sub-Saharan Africa has one of the lowest fatality rates, with the ratio of deaths per 1 million people in the minutest of decimals. In addition, South Africa has flattened its coronavirus curve and is already easing restrictions. The rates of fatalities do not reflect a crisis that even comes close to the usual killer diseases Africa faces, such as malaria. In 2018, for instance, malaria killed nearly 200,000 people in Nigeria, the Democratic Republic of the Congo, Uganda, Côte d'Ivoire, Mozambique, and Niger alone.

While Africa seems to enjoy some form of immunity against the disease, there have been records of severe casualty in the most advanced countries of the world. For instance, reports have linked a wave of infections and deaths of elderly people in Seattle to caregivers and staff who worked while sick at multiple long-term care facilities. In a similar facility in the Seattle area, residents began dying in late February from a coronavirus outbreak that would eventually take forty-three lives. In New York, the epicenter of the pandemic in the US, a 360-bed facility in an upscale section of Brooklyn listed over fifty-five deaths within a short time in March. Most nursing homes around the city recorded an average of forty deaths each. In Cranford, a small town in New Jersey, two-thirds of the deaths recorded were in one long-term care facility. Most of the infections are thought to have been from staffers who went to work sick.

The bias against Africa has also manifested in various attempts to silence the development of a vaccine. This has been the case of Madagascar, where the President Andry Rajoelina said that the WHO offered \$20m bribe to poison COVID-19 cure (the local African 'cure' for the virus), which the country had produced.

The herbal remedy called COVID-19 Organics made from Artemisia can cure COVID-19 patients within ten days of infection. The remedy, COVID 19 Organics, is made from Artemisia, a plant imported into Madagascar in the 1970s from China to treat malaria. Artemisia has had proven success against malaria and related diseases including COVID 19.

Andry Rajoelina also raised the question that if it was a European country that had actually discovered this remedy, would there be so much doubt?. The president of Madagascar believes the only reason the rest of the world has refused to treat Madagascar's cure for the coronavirus with urgency and respect is that the remedy comes from Africa. Expressing his disappointment and bias against Africa, he argued that this stems from usual condescension toward Africans. He opined:

I think the problem is that (the drink) comes from Africa and they can't admit... that a country like Madagascar... has come up with this formula to save the world;... If it wasn't Madagascar, and if it was a European country that had actually discovered this remedy, would there be so much doubt? I don't think so;; What is the problem with Covid-Organics, really? Could it be that this product comes from Africa? Could it be that it's not OK for a country like Madagascar, which is the 63rd poorest country in the world... to have come up with (this formula) that can help save the world?²⁸

Although the WHO has criticized such natural therapeutic measures against the coronavirus as blind faith, a host of other African countries including, Tanzania, Guinea-Bissau, DR Congo and Niger, have imported the Madagascan made recipe.

²⁸ "WHO Offered \$20M Bribe To Poison COVID-19 Cure" - Madagascar President Rajoelina; <https://www.zambianobserver.com/w-h-o-offered-20million-bribe-to-poison-covid-19-cure-made-by-madagascar-president-andry-rajoelina-claims/>

While the imperial capitalist world considers it right that Africans and their forest resources (fruits and herbs) cannot be part of the medical world, they have always seen that people and their region as guinea pigs for medical experimentation, resource exploitation, market for sub-standard goods as well as ideology. In early March 2020, as coronavirus cases began an exponential growth curve, some people asked why African countries were not recording higher numbers of COVID-19 cases. It was therefore not surprising that at the heat of the COVID 19 pandemic, a French doctor caused controversy when he proposed that vaccines for the COVID-19 pandemic be tried on Africans because they lack masks and other personal protective equipment. This according to scholars is nothing new as it is part of a trend that for generations has seen the dehumanising of some people because of the superiority complex of others. In response, Karsten Noko (2020) wrote:

The dehumanisation of people from the Global South was one of the driving forces behind the slave trade and colonialism. It is inconceivable that anyone could fathom the thought of trading in human beings unless they regarded that person as inferior.;... Joseph Conrad, in his book *Heart of Darkness* writing in 1899, grappled with the question of whether the people he had met in Africa were really human. He opines: "No they were not inhuman. Well, you know, that was the worst of it - this suspicion of their not being inhuman."...It is the naturalness of someone even posing such questions that cements these ideas; the acceptance of a "second-class humanity" that allows the dispossession and trade in human lives to be so easily explained away²⁹.

²⁹ Karsten Noko (2020), *Africa Coronavirus pandemic Health Colonialism slavery: Remarks about testing coronavirus drugs on Africans part of pattern where some bodies are dehumanised, others protected* © 2018 Al Jazeera Media Network, 08 Apr 2020 GMT+3

Similarly, in the 2014 West Africa Ebola outbreak, for instance, more than 250,000 blood samples were collected from patients by laboratories in France, the UK and the US among others - often with no informed consent - as patients underwent testing and treatment for Ebola, to help researchers create new vaccines and medicines. Today, South African, French and American researchers refuse to disclose how many of these samples they still hold, citing "national security" as an excuse. As one patient remarked, "They are using it to make research, make billions of dollars ... That medicine they produce will not be free. It will be something that you will sell." Because the affected communities are poorer and people lack the information that will help protect them from such researchers, their samples are taken, and used at will to produce medicine for people who will pay for treatment - often without their knowledge.

In the case of Nigeria, it is on record that in 1996, Kano State (Nigeria) was the epicentre of a huge meningitis outbreak. At the time, Pfizer, one of the largest research pharmaceutical companies in the world, decided to conduct clinical trials to test a drug it was developing. Pfizer neglected to acquire informed consent from the parents of the patients, who were, anyway, too stressed to make rational decisions. It was only in 2009 that Pfizer settled out-of-court and paid \$75 million to the Kano State government and \$175,000 to the parents of four of the children who had died during the outbreak and clinical trials. Although Pfizer argued in its legal defence that the children had been killed by the disease and not their drugs, the out-of-court settlement robbed the world of an opportunity to have the medical facts established before a court of law.

Similar trials and tests were conducted in Zimbabwe in 1994 with the drug AZT - projects funded by the US-based CDC and NIH resulted in adverse effects for patients. In Namibia in the early 1900s, sterilisation tests were done on Herero women by German doctors who sought to provide "scientific" backing to ban mixed-race marriages. In response to these cases, Karsten Noko opined:

Researchers know only too well that conducting such research in the Global North is more onerous and has too much red tape. In the Global South, big pharmaceuticals, often with the complicit support of bribed government officials, have it easy. As they chase huge profits, the lives of often uninformed patients are far from a main consideration. For many people from the affected communities, the work of researchers is clearly meant to serve the financial interests of those who pretend to be kind-hearted or philanthropic³⁰.

Although the practice of using people as guinea pigs without their consents is common in Africa, but not peculiar to her. For instance, In 2011, the CIA, under the cover of an international NGO, collected DNA samples in Pakistan in a fake vaccination campaign as they trailed Osama bin Laden. The move had the impact of straining an already complicated relationship between the US and Pakistan, but it also had the much wider impact of providing proof to the sceptics who always suspected there was a hidden agenda in the delivery of medical services from the Global North³¹.

³⁰ Karsten Noko (2020),

³¹ Ibid

Africa in the face of COVID 19: Advantage of the Challenge for the Continent

The situation of the world presently and the imbalance in the field of medicine, should be seen as an advantage in the challenge as presented by the COVID 19 pandemic. This is because Africa cannot continue to depend on the West for all eternity, which has taken the form of neo-colonial dependency. For instance, it is obvious that treatments and vaccines for almost all diseases are developed outside Africa and take years to arrive in low-income countries, which cannot initially afford them. When they do arrive there may be other problems, such as lack of infrastructure to distribute the treatments and deliver vaccines and lack of skilled health workers to provide the care. The people in need may not take up the available services widely. Modern and traditional healthcare provision aren't always integrated in ways that enhance health-seeking behaviour.

In line with the above, history of pandemic or epidemic diseases is not encouraging. It shows that treatments and vaccines have been accessible to African countries only after the loss of millions of lives and typically years – sometimes decades – after developed nations have benefited from them. This is mainly because the treatments and vaccines for most diseases are produced in Western countries and are too expensive for African countries. This largely remains in place as the chief barrier to accessibility of treatments and vaccines. Some of the cases represented in the table below exposed this.

Table A: Vaccine Aid and Delay to Africa

Disease	Care/prevent date	Year Africa received treatments	Death in Africa
----------------	--------------------------	--	------------------------

<p>Mycobacterium tuberculosis (the bacteria that causes TB), 1882</p>	<p>TB treatment in the US and Europe was introduced in 1944</p>	<p>Early 1970s, nearly three decades later</p>	<p>By 2016, there were 2.5 million infections and 420,000 deaths.</p>
<p>BCG for babies</p>	<p>European and American babies started receiving it in the 1920s</p>	<p>South Africans had to wait more than 50 years</p>	<p>Several babies in Africa died because the vaccine was too expensive and international donors needed several years to rally support for political and economic reasons</p>
<p>HIV</p>	<p>A strategy of testing for and treating HIV was launched in the US in 2010, and only six years later in parts of Africa.</p>	<p>antiretroviral therapy (ART) for HIV came to Africa in the early 21st century, roughly a decade after it was available in the</p>	<p>The death rate in the 1990s was 100-200 per 100,000 in Africa but only 5-10 per 100,000 in Europe. As of 2018, HIV infected 25.7 million and killed 0.47 million</p>

		developed West	Africans. Test-and-treat programmes are still not available in all African countries because of poor infrastructure, shortage of trained professionals and other reasons. ART is still expensive for African countries but has been supported by international donors.
--	--	----------------	--

While it is true that African countries are making their own efforts to fight the pandemic, this seems not to be enough. For example, the Democratic Republic of Congo (DRC) is building on its Ebola response to tackle COVID-19; Namibia is working hard on a “test-isolate-treat” strategy; and Nigeria is turning hospitals into COVID-19 treatment centres and calling on volunteer nurses to close the gap in health professionals, there is the need to look inward for salvation.

Traditional Medicine and African Forest/Bush: The Route to Health and Economic Recovery

By the World Health Organisation (W.H.O) definition, traditional medicine is the sum total of all knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental or social imbalance and relying exclusively on practical experience and observations handed down from generation to generation, whether verbally or in writing³². With these descriptions, various forms of medicines and therapies such as herbal medicine, massage, homeopathy, mud bath, music therapy, wax bath, reflexology, dance therapy, hydrotherapy, mind and spirit therapies, self-exercise therapies, radiation and vibration, osteopathy, chiropractice, aromatherapy, preventive medicine, radiant heat therapy, therapeutic fasting and dieting spinal manipulation, psychotherapy, etc. are a few elements of traditional medicine³³. It does show that a large continent of the size of Africa, with diverse cultures and traditions, should be rich in traditional medicine and should have eminent and respected traditional healers to take care of the teeming population³⁴.

³² World Health Organisation (W.H.O 1976)

³³ Adegoke, E.A., A. Akinsanya and S.H.Z. Nagvi, 1968. Studies of Nigeria medicinal plants IA: Preliminary survey of plant alkaloids. *J.W. African Sc. Assoc.*, 13: 13-33; Daodu, Tunde, 2000. *Aloe Vera, The Miracle Healing Plant*. Healthfield Publication, Ilasamaja, Lagos; Omorodion F (1993) The socio-cultural context of health behaviour among Esan communities, Edo State, Nigeria in *Health Transition Review* Vol. 3 NO. 2 1993; Omorodion, F.I. 1990. Socio-cultural factors affecting production of rice by Esan women, Bendel State, Nigeria, *Benin Journal of Social Sciences* , 5, I. Okoegwale, E.E. and J.U. Omefezi, 2001. Some herbal preparations among the people of Isoko Clan of Delta State, Nigeria. *J. Appl. Sci.*, 4: 2350-2371; Oliver, B., 1990. *Medicinal plants in Nigeria*. 2nd Edition, University of Ibadan Press Ltd; Ibadan, pp: 305; Osifor, N.G.A., 1988. *System of traditional health care*. Volume 1. Ethiope Publishing limited, Benin-City, Nigeria; Sofowora, A., 1993. *Medicinal Plants and Traditional Medicine*. WHO, Document No. 30.

³⁴ World Health Organisation (1976),

Extant studies have established that Herbal medicine is a part and parcel of and sometimes synonymous with African traditional medicine and it is the oldest and still the most widely used system of medicine in the world today. It is used in all societies and is common to all cultures. Herbal medicines, also called botanical medicines, vegetable medicines, or phytomedicines, as defined by World Health Organization (WHO) refers to herbs, herbal materials, herbal preparations, and finished herbal products that contain whole plants, parts of plants, or other plant materials, including leaves, bark, berries, flowers, and roots, and/or their extracts as active ingredients intended for human therapeutic use or for other benefits in humans and sometimes animals

Herbal medicine is a special and prominent form of traditional medicine, in which the traditional healer, in this case known as the herbalist, specializes in the use of herbs to treat various ailments. Their role is so remarkable since it arises from a thorough knowledge of the medicinal properties of indigenous plants and the pharmaceutical steps necessary in turning such plants into drugs such as the selection, compounding, dosage, efficacy, and toxicity. The use of herbal medicines appears to be universal in different cultures. However, the plants used for the same ailments and the modes of treatment may vary from place to place. The plants used for medicinal purposes are generally referred to as medicinal plants, i.e., any plant in which one or more of its organs/parts contain substances that can be used for therapeutic purposes, or in a more modern concept, the constituents can be used as precursors for the synthesis of drugs.

The traditional Health Care system in Oto Esan revolves around what the author refers to as Herbalism. This is a system where by the practitioner (herbalist) cures mainly with plants which he

gathers fresh or dry. When seasonal plants have to be used, these plants are collected when available and are preserved usually by drying to eliminate moisture. Such herbal preparations may be offered in the form of (i) powder, which could be swallowed or taken with pap (cold or hot) or any drink, (ii) powder, rubbed into cuts made on any part of the body with a sharp knife, (iii) preparation, soaked for some time in water or local gin, decanted as required before drinking; the materials could also be boiled in water, cooled and strained (iv) preparation pounded with native soap and used for bathing; such "medicated soaps" are commonly used for skin diseases, (v) pastes, pomades or ointments, in a medium of palm oil or shea-butter, or (vi) soup which is consumed by the patient³⁵.

COVID 19 and the Voice of African Traditional Medicine: Practical Examples

Although the World Health Organization (WHO), claimed that there is currently no treatment specifically approved for COVID-19 as treatments and vaccines are currently under study, however, the emergence of COVID 19 as a world pandemic has led to the reinvigoration of the Traditional Health Services in most African states, with African traditional medical practitioners arguing that the area and its forest has the capability of producing the needed drugs for curing the pandemic. For instance, during this period Pax-herbals developed a novel drug, called CVD PLUS specifically for the treatment of COVID-19. The drug "contains herbs and active phytoconstituents with documented scientific evidence based on clinical reports of their efficacy and safety"³⁶. It was developed by working with scientists from other institutions of higher

³⁵ Ibid

³⁶ Jude Atemanke (2020) How a Nigeria-based Catholic Medical Centre is Responding to COVID-19 Search for Cure, ACI Africa Newsletter, 02 May, 2020 / 7:09 AM (ACI Africa)

learning, including those from the University of Benin, the University of Lagos and Irrua teaching hospital in Nigeria's Edo State. Making further clarity on the safety and efficacy of the drug, the establishment wrote:

To enhance its research capabilities, Paxherbals created a research team, bringing together exogenous (pharmacists, botanists, pharmacologists, microbiologists, laboratory scientists and plant scientists) and the indigenous (traditional birth attendants, bone setters, local taxonomists, village historians, and chemists). These herbs have been used in several therapeutic formulations of Paxherbals over the past 25 years for the treatment of hepatitis C, Tuberculosis, HIV/AIDS, Bronchitis, Pneumonia, and Malaria," "Some bioactive constituents of CVD PLUS are potential antiviral agents and immunomodulatory agents that can stimulate antibody production against Coronavirus related diseases³⁷.

This drug was celebrated by Nigerians and Africans especially when it got the backing of the National Agency for Food, Drug Administration and Control (NAFDAC). Acting on pressure from World Health Organisation, NAFDAC later distances itself from the claims. In reaction to the position of the nation's drug control agency, Adodo opined thus:

... every country should look inwards to find solution to their problems. They do not need WHO's validation. I still find it difficult to understand why African countries are always looking to international agencies to validate everything they do, in economics, agriculture, politics and health. Have you ever seen the EU or USA waiting to get validation from African countries on any topic? That is

³⁷ Jude Atemanke (2020) How a Nigeria-based Catholic Medical Centre is Responding to COVID-19 Search for Cure, ACI Africa Newsletter, 02 May, 2020 / 7:09 AM (ACI Africa)

why I like what is happening in Madagascar. They said they have discovered a cure, based on their own knowledge and validation system. And they are making use of what they have discovered³⁸.

Before the Pax Herbal Covid 19 drug was made public, earlier on March 30, Seyi Makinde, Governor of Oyo State tested positive for coronavirus, though he was asymptomatic. After spending five days in isolation, the governor came out on April 5 and tested negative. He claimed to have taken a mixture of black-seed and honey (herbs and roots). He declared

My body temperature is 36.4 degrees. My very good friend and brother, Dr Muyideen Olatunji. He is the one in charge of the Primary Healthcare for Oyo State. He came to me and said, look, I am going to send to you this blackseed oil, it boosts immunity so I mixed it with honey and take one teaspoon in the morning and one in the evening. So, there are local solutions to boost immunity. So, our people should not fret. They shouldn't fret. Just as I have been able to get the virus out of my system, so will it be for majority of our people.

Testifying further the governor argued that there are other reported cases of patients who recovered from the deadly virus after the use of herbs. People began to wonder why despite heavy funding on alternative medicine, the government is yet to explore its potentials.

Similarly, Joseph Akpa, a professor and Provost of Luminar International College of Alternative Medicine, Enugu, also claimed to have a cure for the deadly coronavirus. The Nigerian professor who challenged health institutions and agencies to bring any known case of Covid-19 to him and see how it would

³⁸ Tony Agbugba (2020), We Must Look Inward For Solutions To Our Health Challenges; Rev. Fr. Anselm Adodo of Pax Herbal Centre, Ewu, Interviews, NEWS, © 2020 Catholic Diocese of Warri Catholic Diocese of Warri. May 10, 2020

disappear in days claimed that he had already made energy health medicines superficially meant to boost the human immune system and others meant to directly attack the virus to ensure 100 percent successful cure³⁹.

In a related development, the traditional ruler of Ile-Ife, also disclosed that he was currently working with a popular Nigerian herbal doctor, Yem Kem international for packaging and distribution around the world of herbal solutions for the cure of COVID19⁴⁰. He explained in the videos, how to put the elements together as well as mentioning their local and botanical names:

The elements to be mixed together include: Ewe-akoko (boundary tree, botanical name: *Newbouldia laevis*), Dogoyaro (nim tree or Indian lilac, botanical name: *Azadirachta indica*), Alubosa (Onion ,botanical name: *Allium cepa*), Ogirisako (Forest anchomanes/Blume, botanical name: *Anchomanes difformis*), Aidan (Aridan fruit, botanical name: *Tetrapleura tetraptera*), Eeru or Erinje (African pepper, Guinea pepper, botanical name: *Xylopia aethiopica*), Ewuro (Bitter leaf, botanical name: *Vernonia amygdalina*), Iyin ojo (Sulfur)⁴¹.

Although, sceptics saw the solutions of the traditional ruler as unrealistic, but among the Esan people of Edo state, the traditional medical practitioners have been able to catalogue herbs and their uses for various ailments. These are found in the table below.

³⁹ Samad UTHMAN (2020), REPORT: Why alternative medicines may offer cure to Covid-19, International Center for Investigative Reporting, On Apr 15, 2020

⁴⁰ Samad UTHMAN (2020), REPORT: Why alternative medicines may offer cure to Covid-19, International Center for Investigative Reporting, On Apr 15, 2020

⁴¹ Samad UTHMAN (2020), REPORT: Why alternative medicines may offer cure to Covid-19, International Center for Investigative Reporting, On Apr 15, 2020

Table: Herbs and their usage⁴²

Specie	Local Name	Part Use	Tradition use	Applicati on
Abrus precatorius	Empo	Leaf	Cataract	Leaf extract is applied on the eyes
''	''	''	Asthma	Leaf is chewed
Acacia sieberiana	Alughan	Leaf	urinary tract disorder	Consumed orally
Aframomum melegueta	Uriema / Usiedo	Seed	low sperm count	Seed is chewed during breakfast.
''	''	Fruit	menstrual pain	Fruits with the seeds are chewed together

⁴² Traditional Medicine World Health Organisation Fact Sheet, No. 134, December 2008, Omorodion F (1993) The socio-cultural context of health behaviour among Esan communities, Edo State, Nigeria in Health Transition Review Vol. 3 NO. 2 1993; Omorodion, F.I. 1990. Socio-cultural factors affecting production of rice by Esan women, Bendel State, Nigeria, Benin Journal of Social Sciences , 5,1;Otite O, (1977)'Historical Aspect of the sociology of Bendel State of Nigeria'' in JHSN, Vol 9;Okoegwale, E.E. and J.U. Omezezi, 2001. Some herbal preparations among the people of Isoko Clan of Delta State, Nigeria. J. Appl. Sci., 4: 2350-2371. Oliver, B., 1990. Medicinal plants in Nigeria. 2nd Edition, University of Ibadan Press Ltd; Ibadan, pp: 305;Osifor, N.G.A., 1988. System of traditional health care. Volume 1. Ethiope Publishing limited, Benin-City,Nigeria.

Ageratum Conyzoide ss	Okhekhe	Leaf	dressing wound	applied on wound surface
''	''	Root	For rheumatism	Orally
''	''	Leaf	Skin rashes	Leaf extract is applied on affected parts
Alchornea latiflora	Obieyba	Leaf	For stopping vomiting	The leaf is blended with pepper and taken orally
Azadirachta indica	Dogoyaro	Leaf, and Bark	Malaria	taken orally or bath with
Boerhaavia diffusa	Ebe- Ukpokodo	Leaf	For fertility	Leaf is used for making soup which is taken orally.
		''	For menstrual pain	Leaf is pounded with pepper (Capsicum)

				annuum), salt is added and taken orally.
Bryophillu m pinnatum	Ogbodog ho	Leaves	For cough	Leaves are passed over the fire for a minute, fluid produced is taken orally
Caesalpina pulcherrim a	Eko- omode	Leaf/bar k	As purgative	taken orally
		Seed	For nervous ailment	Seed powder is taken orally
Cajanus cajan	Olene	Root	Frequent stooling	Root is grinded and taken orally
		Leaf	Toothache and chicken pox	extract is used as mouth wash and is taken orally

Calotropis procera	Tofiafia	Leaf	stomach pain	Leaf extract is taken orally
Cocos nucifera	Uvin	Bark/Root	For scabies, uterine diseases, urethritis, bronchitis, liver ailment and dysentery	Taken orally
Dityandra involucrata	Ebeughegbe	Roots	For bone fractures	Scrapings from the outer covering of the roots are mixed with ground fruits of Xylopiya aethiopicana, oil added, the mixture is made warm over the fire. It is applied on

				affected area.
Elaeis guineensis	Udin	Kernel oil	As anticonvulsant	The extract is applied all over the body
Ficus exasperata		Leaves	For boils	Leaves are ground and applied directly on the boil.
Garcinia kola	Adu	Root bark	For asthma	taken orally after food
''	''	bulb/seed	For tuberculosis	''
Gongronema latifolium	Utezi	Leaf	Diabetes	Eaten raw or as vegetable in soup as spice
Musa sapientum	Oghedenikhere	Leaf	For eczema	The leaves are burnt, and the ashes are rubbed in the

				affected area
Nicotiana tabacum	Itaba	Fresh leaf	For epilepsy	taken orally
Phyllanthus amarus	Ikekeebe	Whole plant	For bleeding	taken orally
Saccharum officinarum	Uriekhue	Matured stem	For typhoid fever	Juice extract is taken orally
Talinum triangulare	Ebodondon	Tuber	For schistosomiasis	Tuber extract is taken orally
''	''	Leaf	For scabies and fresh cuts	Leaf extract is taken orally.
Triumfetta rhomboides	Uwerientan	Leaf	To induce fertility and make womb receptive to implantation of foetus	Infusion is taken orally
Xylopiya aethiopica	Erierie	Fruits	For bone fractures	Fruits are mixed with scrappings from the outer roots of Dityandra involucra

				te and oil. Then mixture is made warm over fire and applied on the fractured site.
Zingiber officinale	Agio	Rhizome	For tuberculosis	taken orally

Even with the above, there still exist some sceptics as the traditional system has been demonized by most people, who would ordinary have sought ways of modernizing it. Internationally, it has been established that both traditional medicines and methods of social control were making great advances before the colonial invasion of Africa. The traditional medicines have been proven even in present day world to be so efficacious that the World Health Organization (WHO) is virtually begging Africans to encourage researchers into traditional medicines and their uses. According research, the traditional health system has been so effective that the Regional Director of World Health Organisation in 2004, posited African traditional medicine is an integral part of the people’s culture, and that it can only be developed in a way that is best suited to the African people⁴³. The Regional Director also argued that, contemporary medical science should

⁴³ Anyacho E.O and . Ugal David B (n.d) Modernization and Traditional Methods of Social Control in Southeastern Nigeria F.C.E.,Obudu, C.R.S and Dept of Sociology, University of Ibadan, Nigeria

enhance and enrich the traditional health culture so that the people can feel comfortable with it. The table below which is an outcome a field survey from four Esan communities, namely, Ekpoma, Egoro- Naoka, OkhuEsan and Ubiaja shows that despite the existence of modern medical facilities a lot of people would still prefers to administer traditional (herbs) to cure some ailment⁴⁴.

Types of treatment preferred first for certain types of conditions

Treatment preferred

Condition	Traditional	Modern
Convulsions	85	15
Tetanus	75	25
Pneumonia	65	35
Vomiting	11	89
Diarrhoea	10	90
Measles	14	86
Fever	5	95
Miscarriage	91*	65*
Heamorrhage	70*	50*
Obstructed Labour	68*	46*

Adds to more than 100 because many women believed in both types of treatment simultaneously

The position of result of the research is that although there seems to be low patronage in some area of tradition medicine, this does not imply that traditional treatment has been abandoned. Rather,

⁴⁴ Omorodion, op.cit.

as Table shows, traditional treatment is more often employed as a first step in treating children. For example, palm kernel oil with herbs are often given to children orally to cleanse either the stomach or the circulatory system. Such medication is less expensive than modern medicines. Scholars have also argued that since modern drugs are made out of roots, leaves and other forest resources, Africa should be given the opportunity and world recognition to pursue this noble course. Ezekwesili-Ofilu J and Okaka, C, specifically noted thus:

The curative properties of herbal medicine are validated through scientific investigations, which seek to understand the active chemistry of the plants. The therapeutic activity of a plant is due to its complex chemical nature with different parts of the plant providing certain therapeutic effects. Chemical components or phytochemicals found in plants that are responsible for the various therapeutic effects include alkaloids, glycosides, tannins, acids, coumarins, sterols, phenols, etc. Many modern pharmaceuticals have been modeled on or were originally derived from these chemicals, for example, aspirin is synthesized from salicylic acid derived from the bark of *Salix alba* and the meadowsweet plant, *Filipendula ulmaria*. Quinine from *Cinchona pubescens* bark and artemisinin from *Artemisia annua* plant are antimalarial drugs. Vincristine and vinblastine are anticancer drugs derived from Madagascar periwinkle (*Catharanthus roseus*), used for treating leukemia. Morphine and codeine, derived from the opium poppy (*Papaver somniferum*), are used in the treatment of diarrhea and pain relief, while digitoxin is a cardiac glycoside derived from foxglove plant (*Digitalis*

purpurea). Medicinal plants are also important materials for the cosmetic industries⁴⁵.

Despite the above and records of proven efficacy and efficiency, the West, World Health Organisation and their allies still show disdain to Traditional Medical practices and their products and as such there exist some form of hostility harbored by the modern medical practitioners against the use of traditional medicine. An example is found behind the card of the Edo State Hospitals Management Board in which it warns its patients in these words: “Attend the clinic REGULARLY, and follow our advice. Do not use any Native Medicine”⁴⁶.

This is not encouraging and does not in any way suggest further and future collaboration between modern medicine and traditional health system. It is rather ironical, that while the medical system demonise herbal medicine, the same people go about patronizing Chinese herbal products like *Tianshi*, *Ever-living Products* among others, which have been established to be herbs refined overseas and imported into the country.

COVID 19, Traditional Medicine and the Way Forward: Experts Views

In line with the above, scholars have argued that one major impediment to Africa’s rise against COVID 19 and its eventual cure, is the fact that most of her leaders have shown little or no will in implementing the recommendation proffered by experts despite its huge financial commitment and heavy funding on research on alternative herbal medicine, especially considering

⁴⁵ Ezekwesili-Ofili J and Okaka, C, (2017), Herbal Medicines in African Traditional Medicine; Submitted: May 20th 2017 Reviewed: July 17th 2018 Published: January 30th 2019
DOI: 10.5772/intechopen.80348

⁴⁶ Edo State Hospitals Management Board Patent Card

the fact that the government has sponsored research teams to Ghana and the United Kingdom on herbal medicine studies. Emphasizing this point, Elujoba opined:

Ghana now has a parallel unit in some general hospitals in their country where all they do is to prepare herbal medicine for the patient there,"; ... in Ghana, when a patient comes to the general hospital, he will make a choice of whether going for herbal medicine treatment or orthodox medicine. That started around 2012 and it is still in practice till date in Ghana.

He continued:

The Nigerian government has what it takes to try herbal medicine, because the government has also committed funds into the study and use of herbal medicine. For example, there is a book we call Pharmacopoeia. The book contains drugs that can be used safely in any country. This government has committed funds to bring it out. ... In 2008, that book now is an official book, and medicinal plants that are inside are official. Many of these plants can cure what we call malaria today. The Pharmacopoeia book, contains names of plants that can cure respiratory problems and they (the plants) are immune system modifier. This particular book contains immune stimulant that can now be formulated for people that have the virus to boost their immune system, to cure their fever, diarrhea and many other symptoms we have seen of the virus. The government is spending money to keep us, the members of the committee each time we meet. There are two other committees that came up recently and we have met. The second one is what we call medicinal plant drugs that are approved to be used, we are compiling that now as essential plant drugs that can be used in the hospital. This same Federal Government has set up a national

committee. This committee contains experts, both traditional healers and intellectuals in medicinal plant science and ... are recommending medicinal plants for different diseases that can be made official that people can use to compose medicine to finished product level which can be listed by NAFDAC and be used by our people. The Committee also deliberated on Covid-19 and how much herbal medicine can do to reduce a lot of importation. The Committee have gotten several areas of traditional medicine that can be made use of sometimes better than orthodox. There are herbal medicines that can 'cure' and challenge the symptoms of the present pandemic.

Analysis of figures of COVID 19 patients worldwide and the rate of recovery, seems to suggest that the situation in Africa is not as terrible as found in countries with high technological medical facilities. Although not yet proven, the argument in the case of Africa which has the worst modern health facilities, but with the least number of casualty, seems to indicate the effectiveness of the use of roots and herbs. This was because in most parts of the developing world it has been established that once COVID 19 was established as pandemic, there was serious rush towards the traditional methods of healing.

Table C: COVID 19 Casualty Figures from Selected Countries of the World

	Total Case	Total Death	Total Recovery	Active Cases
World	29,219,034	929,086	21,046,705	7,243,243
Benin	2267	40	1942	285
Brazil	4,330,455	131,663	3,573,958	624,834
Britain	368,504	41,628	NA	NA
Cameroun	20,167	415	18,837	915
Chad	1,084	80	938	66
China	85,194	4,634	80,415	145
Egypt	101,009	5,648	84,161	11,200
France	381,094	30,916	89,059	261,119

Ghana	45,434	286	44,342	806
India	4, 850,887	79,784	3,780,107	990,996
Italy	287,753	35,610	213,634	38,509
Japan	75,218	1,439	66,899	6,880
Spain	576,697	29,474	NA	NA
Niger	1180	69	1104	7
Nigeria	56,256	1082	44.152	11,022
South Africa	649.793	15.447	577906	56,440
U.S.A	6,710,588	198,542	3,975,154	2, 539. 892

Source: World Meter, September 14, 2020

Summary: COVID-19 situation update worldwide, as of 16 September 2020⁴⁷

Since 31 December 2019 and as of 16 September 2020, **29 611 395 cases** of COVID-19 (in accordance with the applied case definitions and testing strategies in the affected countries) have been reported, including **935 767 deaths**.

Cases have been reported from:

Africa: 1 366 884 cases; the five countries reporting most cases are South Africa (651 521), Egypt (101 340), Morocco (90 324), Ethiopia (65 486) and Nigeria (56 478).

Asia: 8 795 234 cases; the five countries reporting most cases are India (5 020 359), Iran (407 353), Bangladesh (341 056), Saudi Arabia (326 930) and Pakistan (303 089).

America: 15 141 313 cases; the five countries reporting most cases are United States (6 606 293), Brazil (4 382 263), Peru (738 020), Colombia (728 590) and Mexico (676 487).

⁴⁷ European Centre for Disease Prevention and Control: An agency of the European Union, <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases>. 15/09/2020

Europe: 4 275 413 cases; the five countries reporting most cases are Russia (1 073 849), Spain (603 167), France (395 104), United Kingdom (374 228) and Italy (289 990).

Oceania: 31 855 cases; the five countries reporting most cases are Australia (26 738), Guam (1 927), New Zealand (1 451), French Polynesia (1 109) and Papua New Guinea (511).

Other: 696 cases have been reported from an international conveyance in Japan.

Deaths have been reported from:

Africa: 33 056 deaths; the five countries reporting most deaths are South Africa (15 641), Egypt (5 679), Morocco (1 648), Algeria (1 632) and Nigeria (1 088).

Asia: 166 906 deaths; the five countries reporting most deaths are India (82 066), Iran (23 453), Indonesia (8 965), Iraq (8 166) and Turkey (7 186).

America: 519 539 deaths; the five countries reporting most deaths are United States (195 937), Brazil (133 119), Mexico (71 678), Peru (30 927) and Colombia (23 288).

Europe: 215 379 deaths; the five countries reporting most deaths are United Kingdom (41 664), Italy (35 633), France (30 999), Spain (30 004) and Russia (18 785).

Oceania: 880 deaths; the five countries reporting most deaths are Australia (816), Guam (27), New Zealand (25), Papua New Guinea (6) and Fiji (2).

From the table and summary chart, the part of the world (Africa), that was considered not ready for the pandemic, had lesser figures, compared to those who were considered well prepared. To most analysts and observers, this could not be completely divorced from the roots and herbs which even most of the hospitals eventually turned to when they could not get the necessary help from the western world⁴⁸. This achievement by Africans and Africa have been commended, because they made choices for medical plurality (disregarding prescriptions of the western world) and against irresponsible government (by resisting government impositions) and a global medical system (by affirming right to medical plurality) that has dehumanized them⁴⁹.

Forest Resources, Medicine and the Economic Gains: Lessons from the Asians

From the discourse, it is clear that African continent has great potentials and can contribute meaningfully to the development of modern world medicine if she looks inward especially her forest resources and that it could fetch the country millions of dollars and foreign currencies to boost her reserve. There is no need for Africans to shy away from what could lead to her recognition in world development, especially in the medical field. This is because the western medicine and other parts of the world had their medical practice from a traditional cradle but as technology progressed; they were so prudent to have moved very fast with the development of technology. Thus, western medicine can be referred to as a traditional or orthodox medicine because almost all the terms used are their traditional terms. This is obvious from that fact that one major synergy between the

⁴⁸ Oduntan O.B, (2020), The COVID-19 Pandemic in Africa's Cultural Cross-Road. World History Bulletin, Vol. XXXVI: No. 1, Spring/Summer 2020: 23-25

⁴⁹ ⁴⁹ Oduntan O.B, ...Ibid

African Medicine and that of the West is the use of herbs for medicine.

In line with the above, Africans have a lot to learn from the Chinese since the practice of Traditional medicine is not peculiar to Nigeria alone. It is universal just that some nations are more developed technologically in practice than the others. In the case of China, Chinese history states unequivocally that the origin of medicine was coeval with the foundation of their empire as Castiglioni observed that:

The Chinese established a medical system, which according to tradition, is as ancient as the monarchy. They have drawn the whole [of medical] science from the experience of the ancients. To SHIN-NUNG the DIVINE HUSBANDMAN, is the honor ascribed of having laid the foundation of this useful art. He [taught] that heaven had created herbs to remedy diseases. He therefore examined their qualities and communicated the result of his researches to the people. It has been justly inferred that the remedies invented by him must have been excellent. According to ancient legends, the origin of Chinese medicine is attributed to the Emperor Shin-Nung He is said to have taught his subjects . . . compiling an herbal, in which more than a hundred remedies are mentioned⁵⁰

From this stage, the Asians have taken traditional medicine to international level, through which they also benefit economically. For instance, it is a known fact that while countries in Africa, Asia and Latin America use traditional medicine (TM) to help meet some of their primary health care needs, China sales

⁵⁰ Castiglioni Arturo, *A History of Medicine* (New York: Alfred A. Knopf, 1958), 99.

of products totalled US\$ 14 billion in 2005. It is also on record that although up to 80% of African population uses traditional medicine for primary health care, most of these have been repackaged and imported into the continent by the Asians, specifically Chinese.

Similarly, in industrialized countries, adaptations of traditional medicine are termed “Complementary” or “Alternative” medicine-CAM⁵¹, and they are used side by side with modern medicines. Moreover, medical historians and research work on global use of traditional medicine have revealed that in some Asian and African countries, 80% of the population depend on traditional medicine for primary health care. In many developed countries, 70% to 80% of the population has used some form of alternative or complementary medicine (e.g. acupuncture). Herbal treatments are the most popular form of traditional medicine, and are highly lucrative in the international marketplace. Annual revenues in Western Europe reached US\$ 5 billion in 2003-2004. Herbal medicine revenue in Brazil was US\$ 160 million in 2007⁵². Similarly, it has been established that in China, traditional herbal preparations account for 30%-50% of the total medicinal consumption.

⁵¹ MacDonald Idu, *The Plant called Medicine*. An Inaugural Lecture (Benin City: University of Benin, 2009), 40-52

⁵² Gill, L.S. and H. Siakpere, 1990. Ethnobotanical studies of Urhobo People (Agbarho Clan) Ughelli Local Government Area, Delta State, Nigeria. In S.A. Adesanya (Ed.). Proceedings Workshop on Nature Products. OAU Press, Ife, Nigeria, Gill, L.S. and O. Akporhonor, 1988. Medical Practices of Urhobo People, Agbarho Clan. *Herba Hungerica*, 27: 141-147, Gill, L.S., H.G.K. Nyawuame, E.I. Esezobor and S. Osagie, 1993. Nigeria Folk Medicine: Practices and Beliefs of Esan People. *Ethnobotany*, 5: 129-142, Gill, L.S. and C. Akinwumi, 1986. Nigerian Folk Medicine. Practices and Beliefs of the Ondo People. *J. Ethnopharmacology*, 18: 257-266.

Gill, L.S., 1992. Ethomedical Uses of Plants in Nigeria. University of Benin Press, Benin-City.

It is also important to noted that although in Nigeria, Ghana, Mali and Zambia, the first line of treatment for 60% of children with high fever resulting from malaria is the use of herbal medicines at home, yet governments have not given much recognition to such, leaving the trade open for foreigners who rank in billions of dollars annually to the home countries and private pockets. In Europe, North America and other industrialized regions, over 50% of the population has used complementary or alternative medicine at least once. In San Francisco, London and South Africa, 75% of people living with HIV/ AIDS use TM/CAM; In Germany, 90% of the population has used a natural remedy at some point in their life. Between 1995 and 2000, the number of doctors who had undergone special training in natural remedy medicine had almost doubled to 10 800. In the United States, 158 million of the adult population use complementary medicines and according to the USA Commission for Alternative and Complementary medicines, US \$17 billion was spent on traditional remedies in 2000. In the United Kingdom, annual expenditure on alternative medicine is US\$ 230 million. The global market for herbal medicines currently stands at over US \$ 80 billion annually and is growing steadily⁵³.

Conclusion

Countries in Africa must be able to compete meaningfully to make the traditional medical system both functional and recognised world-wide especially as the world tackles the COVID 19 scourge. This will help the continent prevent the type of embarrassment and fraud which the actions of Tanzania

⁵³ Ibid

government would have been subjected to by the WHO and their western allies. What has been termed the Madagascar controversy has erupted days after Tanzania kicked out WHO after Goat and Papaya samples became COVID-19 positive. With the rise in false Coronavirus cases, the Tanzanian President John Magufuli growing suspicious of the World Health Organization (WHO), decided to investigate the claims himself. He sent the WHO samples of a goat, a papaya and a quail for testing. After all 3 samples became COVID-19 positive, the Tanzanian President is reported to have kicked out WHO from the country. Following the Tanzanian lead Burundi also kicked out entire WHO Coronavirus Team from the country for interference in internal matters. In a letter addressed to WHO's Africa headquarters, the foreign ministry says the four officials must leave the country⁵⁴.

Bibliography

- Adegoke, E.A., A. Akinsanya and S.H.Z. Nagvi, 1968. Studies of Nigeria medicinal plants IA: Preliminary survey of plant alkaloids. *J.W. African Sc. Assoc.*, 13: 13-33
- Adie V. O. (2020), "COVID-19: When a governor believes it's a hoax and ordinary flu" *Leadership Style*, Abuja, Jun 3, 2020
- Adodo Anslem (2017), *Integral Community Enterprise in Africa'* Routledge
- Akubor E .Osewe, (2012) *The Role of Esan Traditional (Herbal) Health System in Attaining the Millennium*

⁵⁴ <https://www.zambianobserver.com/w-h-o-offered-20million-bribe-to-poison-covid-19-cure-made-by-madagascar-president-andry-rajoelina-claims/>

- Development Goals: A Neglected Theme, in Ukago V and Akubor, E.O (2012) *A Diminishing Past-A Rescued Future: Essays on the Peoples, Traditions and Culture of the Esan of Southern Nigeria: Goldline and Jacobs*, New Jersey. Pp 107-122
- Anyacho E.O and . Ugal David B (n.d) *Modernization and Traditional Methods of Social Control in Southeastern Nigeria* F.C.E.,Obudu, C.R.S and Dept of Sociology, University of Ibadan, Nigeria
- Caleb Okereke, Kelsey Nielsenby Caleb Okereke & Kelsey Nielsen (2020), *The problem with predicting coronavirus apocalypse in Africa; OPINION /CORONAVIRUS PANDEMIC*, © 2003 -
- Cartwright, Frederick C. (2014), *Disease and History*, Sutton Publishing, 2014; Dobson, Mary (2007), *Disease: The Story of Disease and Mankind's Continuing Struggle Against It*, Quercus, 2007.
- Castiglioni Arturo, *A History of Medicine* (New York: Alfred A. Knopf, 1958), 99.
- Chester G. Starr, *A History of the Ancient World* (Oxford, 1991) 328; Smith, Christine A. (1996). "Plague in the Ancient World". *The Student Historical Journal*.
- Daodu, Tunde, 2000. *Aloe Vera, The Miracle Healing Plant*. Healthfield Publication, Ilasamaja, Lagos
- Dobson, Mary (2007), *Disease: The Story of Disease and Mankind's Continuing Struggle Against It*, Quercus, 2007
- DOI: 10.5772/intechopen.80348
- Duncan Omanga and Bartholomew Ondigo, (2020)*COVID-19 AFRICA: Sub-Saharan Africa Will Most Likely Ride Out the Covid-19 Storm*, Kujenga Amani (ed) Social Science Research Council, Brooklyn, NY 11201 • USA, May 14, 2020

- European Centre for Disease Prevention and Control: An agency of the European Union, <https://www.ecdc.europa.eu/en/geographical-distribution-2019-ncov-cases>. 15/09/2020
- Ezekwesili-Ofili J and Okaka, C, (2017), Herbal Medicines in African Traditional Medicine; Submitted: May 20th 2017Reviewed: July 17th 2018Published: January 30th 2019. DOI: 10.5772/intechopen.80348
- Ezekwesili-Ofili J and Okaka, C, (2017), Herbal Medicines in African Traditional Medicine; Submitted: May 20th 2017Reviewed: July 17th 2018Published: January 30th 2019
- Gill, L.S. and C. Akinwumi, 1986. Nigerian Folk Medicine. Practices and Beliefs of the Ondo People. *J. Ethnopharmacology*, 18: 257-266.
- Gill, L.S. and H. Siakpere, 1990. Ethnobotanical studies of Urhobo People (Agbarho Clan) Ughelli Local Government Area, Delta State, Nigeria. In S.A. Adesanya (Ed.). Proceedings Workshop on Nature Products. OAU Press, Ife, Nigeria
- Gill, L.S. and O. Akporhonor, 1988. Medical Practices of Urhobo People, Agbarho Clan. *Herba Hungarica*, 27: 141-147
- Gill, L.S., 1992. Ethomedical Uses of Plants in Nigeria. University of Benin Press, Benin-City.
- Gill, L.S., H.G.K. Nyawuame, E.I. Esezobor and S. Osagie, 1993. Nigeria Folk Medicine: Practices and Beliefs of Esan People. *Ethnobotany*, 5: 129-142
- Health Policy Watch. Pandemics & Emergencies, Geneva Switzerland, <https://info@healthpolicy-watch.org>, 15/08/2020
- <https://www.zambianobserver.com/w-h-o-offered-20million-bribe-to-poison-covid-19-cure-made-by-madagascar-president-andry-rajoelina-claims/>

- Joseph P. Byrne (2008), (ed)Encyclopedia of Pestilence, Pandemics, and Plagues, Greenwood Press, 2008
- Jude Atemanke (2020) How a Nigeria-based Catholic Medical Centre is Responding to COVID-19 Search for Cure, ACI Africa Newsletter, 02 May, 2020 / 7:09 AM (ACI Africa)
- Kanu, I. A. (2020). COVID-19 Pandemic and the Health of African Migrants. *AMAMIHE: Journal of Applied Philosophy*. Vol. 18. No. 2. pp. 56-64.
- Kanu, I. A. (2020). COVID-19 and the Economy: An African Perspective. *Journal of African Studies and Sustainable Development*. Vol. 3. No. 2. pp. 29-36.
- Kanu, I. A. (2020). Saint Augustine and COVID-19 Pandemic: The Future and Divine Providence. *Tansian University Journal of Arts, Management and Social Sciences*. Vol. 7. pp. 151-162.
- Karsten Noko (2020), Africa Coronavirus pandemic Health Colonialism slavery: Remarks about testing coronavirus drugs on Africans part of pattern where some bodies are dehumanised, others protected© 2018 Al Jazeera Media Network, 08 Apr 2020 GMT+3
- Klein I. (1988), Plague, policy and popular unrest in British India., *Mod Asian Stud.* 1988;22(4):723-55. doi: 10.1017/s0026749x00015729.PMID: 11617732
- Kyle Harper (1 November 2017). "Solving the Mystery of an Ancient Roman Plague". *The Atlantic*. Retrieved 2 December 2017; Kyle Harper (2017). "Chapter 4: The Old Age of the World". *The Fate of Rome: Climate, Disease, and the End of an Empire*. Princeton University Press. ISBN 978-0691166834.
- Logan Clendening (1960), *Source Book of Medical History*, Dover Publications, 1960.
- MacDonald Idu, *The Plant called Medicine*. An Inaugural Lecture (Benin City: University of Benin, 2009), 40-52

- Maugh, Thomas. "An Empire's Epidemic". www.ph.ucla.edu. Retrieved 20 March 2020; Rosen, William (2007). *Justinian's Flea: Plague, Empire, and the Birth of Europe*. New York City: Viking Adult. p. 3. ISBN 978-0-670-03855-8; "The Plague of Justinian". *History Magazine*. 11 (1): 9–12. 2009.
- Muhammad Ahmedullah (2014), *Ibn Khaldun and Karl Marx: Five Centuries of History and Two Civilisations Apart, Yet Remarkably Similar*; <https://alochonaa.com/2014/10/21/ibn-khaldun-and-karl-marx-five-centuries-of-history-and-two-civilisations-apart-yet-remarkably-similar/>
- Oduntan O.B, (2020), *The COVID-19 Pandemic in Africa's Cultural Cross-Road*. *World History Bulletin*, Vol. XXXVI: No. 1, Spring/Summer 2020: 23-25
- Okoegwale, E.E. and J.U. Omefezi, 2001. Some herbal preparations among the people of Isoko Clan of Delta State, Nigeria. *J. Appl. Sci.*, 4: 2350-2371
- Okoegwale, E.E. and J.U. Omefezi, 2001. Some herbal preparations among the people of Isoko Clan of Delta State, Nigeria. *J. Appl. Sci.*, 4: 2350-2371
- Oliver, B., 1990. *Medicinal plants in Nigeria*. 2nd Edition, University of Ibadan Press Ltd; Ibadan, pp: 305
- Oliver, B., 1990. *Medicinal plants in Nigeria*. 2nd Edition, University of Ibadan Press Ltd; Ibadan, pp: 305
- Omorodion F (1993) *The socio-cultural context of health behaviour among Esan communities, Edo State, Nigeria in Health Transition Review Vol. 3 NO. 2 1993*
- Omorodion F (1993) *The socio-cultural context of health behaviour among Esan communities, Edo State, Nigeria in Health Transition Review Vol. 3 NO. 2 1993*

- Omorodion, F.I. 1990. Socio-cultural factors affecting production of rice by Esan women, Bendel State, Nigeria, *Benin Journal of Social Sciences*, 5,1.
- Omorodion, F.I. 1990. Socio-cultural factors affecting production of rice by Esan women, Bendel State, Nigeria, *Benin Journal of Social Sciences*, 5,1
- Osifor, N.G.A., 1988. System of traditional health care. Volume 1. Ethiope Publishing limited, Benin-City, Nigeria
- Osifor, N.G.A., 1988. System of traditional health care. Volume 1. Ethiope Publishing limited, Benin-City, Nigeria.
- Otite O, (1977)'Historical Aspect of the sociology of Bendel State of Nigeria" in *JHSN*, Vol 9
- Paul Adepoju (2020), COVID-19: The Sky Hasn't Fallen Yet in Africa
- Rodney Walter 1973, *How Europe Underdeveloped Africa*, Bogle-L'Ouverture Publications, London:8-10, see also Ukaogo V and Akubor E.O, (2012), ... Op.cit.
- Samad UTHMAN (2020), REPORT: Why alternative medicines may offer cure to Covid-19, International Center for Investigative Reporting, On Apr 15, 2020
- Singh, Kunwar Sahab; Pandey, Bam Deo (March 2012). "Leprosy – Hidden Disease?". *Science Reporter*. 49 (3). ... Ibid
- Sofowora, A., 1993. *Medicinal Plants and Traditional Medicine*. WHO, Document No. 30.
- Stanley, Bob (13 February 2004). "Recognition and Respect for African Traditional Medicine". Canada's International Development Research Centre. Retrieved 5 June 2020.
- Tatem, A.J.; Rogers, D.J.; Hay, S.I. (2006). "Global Transport Networks and Infectious Disease Spread". *Adv Parasitol. Advances in Parasitology*. National Institutes of Health. 62: 293–343. doi:10.1016/S0065-308X(05)62009-X. ISBN 9780120317622. PMC 3145127. PMID 16647974

Tony Agbugba (2020), We Must Look Inward For Solutions To Our Health Challenges; Rev. Fr. Anselm Adodo of Pax Herbal Centre, Ewu, Interviews, NEWS, © 2020 Catholic Diocese of Warri Catholic Diocese of Warri. May 10, 2020
Traditional Medicine World Health Organisation Fact Sheet, No. 134, December 2008
"WHO Offered \$20M Bribe To Poison COVID-19 Cure" - Madagascar President Rajoelina; <https://www.zambianobserver.com/w-h-o-offered-20million-bribe-to-poison-covid-19-cure-made-by-madagascar-president-andry-rajoelina-claims/2020>, Al Jazeera Media Network Live, 07 May 2020 GMT+3

Chapter Nine

ERADICATION OF TOXIC WASTES AND POLUTANTS IN OGOINI LAND: AN IGWEBUIKE APPROACH

Princess Omovrigho Idialu, Ph.D

Wesley University, Ondo

Ondo State, Nigeria

idialuprincess72@gmail.com; idialup@yahoo.com

Executive Summary

Ogoni land, in Rivers State, Nigeria, is one of the areas mostly affected by modern technology associated with anthropogenic release of green house gases and chemical pollutants leading to environmental degradation with serious health, economic, and social implications to the people of the community. The loss of biodiversity to maintain a balance of the ecosystem by restoring soil nutrients, protecting water resources and stabilizing the climate has led to the extinction of marine life, killing the tourism industry which was a means of economic empowerment for the people. Land and water pollution especially through oil spillages have made it impossible for the people to have potable water. Fishing and farming is now a mirage and this has compounded the menace of unemployment and youth restiveness in the region, cumulating in low standard of living. This Paper, which adopts socio-phenomenological and descriptive methodologies, emphasises the necessity for an *Igwebuike* approach in order to establish a lasting solution to the menace. The *Igwebuike* philosophy is the Igbo traditional philosophy which extols the virtue of employing united efforts towards achieving goals. The application of the *Igwebuike* perspective is imperative here because in order to change what is going on in any society or to help that society develop, it is expedient that the mindset of the

individuals that make up that society is trained in a way that is geared towards self and societal improvement and development. The *Igwebuike* approach is not foreign to the Ogoni people, judging by their socio-political and cultural milieu. A call for its application is only to facilitate a reawakening of this philosophy in the people's hearts so that their innate altruistic and united way of living (that is gradually eroding as a result of acculturation and adherence to global trends) can be used as an effective tool, positively exploited to solve myriads of problems beleaguering the people; especially in tackling the problem of toxic waste and pollutants in Ogoni land.

Keywords: *Igwebuike*, Ogoni, toxic waste, oil spillage, pollutants, ecosystem.

Introduction

In the Niger-Delta, especially Ogoni Land, in Rivers State, Nigeria, modern technology has brought several challenges which inhibit the process of growth and development of the people. Anthropogenic release of green house gases and chemical pollutants like carbon-monoxide and other combustible elements, disposal of lubricating oils from machines into rivers, crude oil exploration and pipe-line vandalism, all lead to environmental degradation and contribute to global warming. These pollution-intractable problems affect communities and have serious health, economic, and social implications.

The focus of this work is to look at the solution to the problem in the light of employing the *Igwebuike approach*, and this calls for a definition of the term. *Igwebuike*, according to Kanu (2015), is an Igbo philosophical worldview that emphasises the importance of unity in communal living. *Igwebuike*, is actually a three-word sentence that is blended into a single word. The first word, “

igwe,” means “number” or “population”; “bu” means “is”, while “ike” is the word signifying strength or power. “*Igwebuike*” could therefore be translated as, “Number is strength” or “number is power.” The Igbo traditional philosophy teaches that when humans come together, in solidarity, and thus complementing one another in their united efforts towards achieving any goal, they become so powerful that they can constitute an invincible force (Kanu 2014). This clearly brings to mind the biblical story of the *Tower of Babel* exemplifying positive strength in achieving goals through the exhibition of unity of purpose (Genesis 11: 6). Here it was clearly stated that because the people were one, spoke one language and had one mind, it would be easy for them to achieve whatever they wanted to achieve.

The *Igwebuike* tradition expresses the notion that the African community is a closely knit society, beginning from the extended family unit, where there is the emphasis on a person being his brother’s keep. From the family unit, it extends to the village, the clan, and the whole of the tribe. The idea is that a person cannot exist on his or her own without supporting or being supported by members of his/her kindred. The consciousness of this interdependence of one with the other makes individuals realise that their unique talents only make meaning as long as they are used for the benefit of others. This Igbo philosophy of life is entrenched in their social-cultural lives and reflected in their conduct, morality, folklores, myths, rites, norms, rules, ideas, cognitive mappings and theologies. Like the Ubuntu ideology (I am because we are) of the Zulus, the world of relationship, harmony, continuity and complementarity makes seemingly impossible tasks easy to accomplish within their collective capability (Kenshin 2016).

The African's relational character is such that ensures that he/she does not suffer alienation. It is an anthropocentric ontology - a complete unity or solidarity which is difficult to break; an intricate web of the African philosophical experience. The individual's life depends on that person identifying with the group making it imperative to show obligation to the members of the group; by thinking and acting in ways that promote corporate survival of the group. A person's sense of responsibility is, therefore evaluated in terms of responsiveness and sensitivity to the needs and demands of the individuals that make up the group (Kanu 2017). Social order of African community as demonstrated in the traditional and socio-cultural structure and government of the Ogoni people and by extension Africa as a whole, is such that could be positively exploited to solve myriads of problems beleaguering the continent if only the people could lay aside negative foreign views that have infiltrated their minds through formal education and other cosmopolitan influences.

With the *igwebuike* culture, there are indisputable rights and privileges enjoyed from the possessive nuance of belongingness, pointing to the fact that the meaningfulness of an individual's life is based on his or her relational connectivity with others. Kenshin (2016) avers that the way people see reality affects their value system and attitudinal orientations. It is this positive inclination of seeing the oneness of family, tribe and by extension the nation that should be exploited for the transformation and humanisation of society especially in tackling the problem of toxic waste and pollutants in Ogoni Land.

Ogoni Land - Geography and Socio-Political Structure

It is expedient that mention is made of where the Ogonis are situated and to also get a glimpse of their socio-political and cultural settings in order to get a clear understanding of how

these could be brought to bear in harnessing the *igwebuike* philosophy, as a tool for actualising the eradication of toxic wastes and pollutants in Ogoni Land.

The Ogoni people of Western Niger Delta region of southern Nigeria are a minority ethnic group that became part of the Rivers State of Nigeria in the 1970s. According to Oyinlade and Vincent, (2002), the Ogonis represent less than .05 percent of Nigeria's population of about 200.96 million people. Notwithstanding, it is one of the most densely populated regions in Nigeria, with about 1,233 people per square mile. They are bounded by the Ibibio in the southeast, the Igbo to the north, the Ikwerres to the west, and the Adoni and Ijaw to the south. The Ogoni Nation is bounded on the North and East by the Imo River, on the South by the coastal sand plains occupied by the Adonis; on the west by the Aba-Port Harcourt highway. The region has coastal sand plains, deltaic and floodplains, mangrove forests, and barrier island habitats. It covers a range of about 404 square miles. The temperature is hot and humid. Prior to oil drilling the land was very fertile and was called the bread basket of the region. They engage in farming and fishing. As fishers, they work together in small groups to enlarge their catch and enhance their share in the fish market.

The Ogoni are organised into six traditional political kingdoms. These are the Khana; comprising four kingdoms (Babbe, Ken Khana, Nyo Khana and Tai), the Gokana, the Eleme. The six kingdoms are further divided into three separate but united sections. There are over 124 villages and towns in Ogoni Land, each headed by a chief. The Ogoni are mostly monogamous but their women are generally prolific in procreation. The family unit plays a vital role in socialising the children to be good tribes people and citizens of Nigeria. The Ogoni have a hierarchical system headed by the Gbenemene or King. Under him is the

Mene Bua (high chief) who governs a group of villages or towns. Each village and town has a chief called Mene Buen. The villages have many compounds with each their own compound chiefs, the Mene Zeu, who reports directly to the Mene Buen. All chiefs revere the Gbenemene, the highest political office holder in the Land, and defer authority to him in matters dealing with the development of his kingdom, and the relationship between state government and the kingdom. They hardly challenge their leaders and would rather take instructions from the monarchy than from the officials of the state government.

Toxic Waste and Pollutants in Ogoni Land

The business of toxic waste is a gigantic and satanic activity that observers like Onwunmere (2007) call an arm of the Devil's Trinity, including hard drugs and illegal arms deal. All over Africa, toxic wastes within the nations and those shipped in from developed nations constitute a threat to the health of the people. For instance, in February 14, 2017, Vanguard Newspaper reported that the "Garden City" of Port Harcourt started experiencing black soot falling from the sky that started in November, 2016, scaring and annoying residents of the oil hub because nothing was done to protect their health. People's clothes, bodies and floors were "tarred". Traders covered their wares with umbrellas; people wore protective masks, but could not escape accumulating dark phlegm in their lungs and throats and black particles in their nostrils. Cars were also covered in dust. Hash tag #stopthesoot# was all over the social media. There were photographs of hands and feet covered in dust and protest marches were organised.

Air pollution is an emergency situation in Ogoni Land and other parts of the Niger Delta. Vanguard July 31 (2011) reports that Oil revenue is central to Nigeria's economy, accounting for about 70% of government earnings and 90% foreign exchange. Decades

of exploration, spills, pollution of farmlands and fish in the maze of creeks across the Niger-Delta has greatly affected the health and social-economic status of people in the region. About 94% of Nigerians are exposed to air pollution implication levels that exceed World Health Organisation guidelines.

Burning tyres for scrap copper and illegal refineries were some of the speculated causes of the smog. Again, under the guise of recycling waste, the Rivers State government fenced and prepped a refuge dumpsite which it later called Rivers State Semi-Sanitary Landfill. The toxic waste dump was at Obigbo, in Oyingbo Local Government Area along Port Harcourt-Aba Express Way and popularly dubbed “Amaechi dustbin” (Rotimi Amaechi was the governor at the time). The toxic dumpsite was next to peoples’ homes, schools businesses and health centres. With the heavy stench emanating from the site, those who could not move out were forced to endure the man-made environmental disaster. There were no equipment for waste sorting, processing, and onward forwarding for recycling contrary to what the State Government had made the people believe. The poor folk who had the unfortunate luck of having the dump as an unwelcome neighbour suffered in silence for fear of retribution.

On April 9th 2010 a Maersk Line vessel, operated by American President Line, APL, a wholly owned subsidiary of a Singapore based Neptune Orient Lines, arrived at the Federal Ocean Terminal at Onne in Rivers State and discharged some toxic waste; it got to Lagos on the 11th loaded with 70 storage (lead) batteries classified as Basel Code A1180 and broken televisions. On a tip off it was arrested by members the Nigerian Ports Authority - NPA and the Nigerian Customs Service - NCS exposing this cruelty of people to their fellow humans. Onitsha, in May 2016 was said to have the world’s worst levels of PM10

particles, microscopic particles in the air, measuring between 2.5 and ten thousand of a millimetre or micrometres from smokes, dust, soot, vehicle exhaust and industries.

Gas flaring and oil spillage in most parts of the land are common occurrences. Till date clean potable water is a luxury in parts of Ogoni Land. The land has been so polluted that drilled boreholes do not yield water fit for drinking. One of the resultant effects of this is that water for drinking and cooking is imported (packaged in plastic bags) from neighbouring states at exorbitant prices as a result of the high cost of transportation added to the cost of water. The poor and vulnerable who cannot afford the luxury of such imported water are left to make do with what polluted natural water sources have to offer them with obvious negative health implications.

Moreover, many rural dwellers that rely on fishing and farming have been thrown out of businesses and the youth especially are rendered restive. As far back as 2011, John Vidal an environmental editor in Guardian News Papers noted the following about Ogoni Land and the Niger Delta:

- i. Community drinking water contains dangerous concentrations of benzene and other pollutants.
- ii. The soil contamination is more than five metres deep in many areas.
- iii. Most of the spill sites that oil firms claimed to have cleaned are still highly contaminated.
- iv. There is evidence of oil firms dumping contaminated soil in unlined pits.
- v. Water is coated with hydrocarbons more than 1,000 times the level allowed by Nigerian water standards.
- vi. There is failure by Shell and others to meet minimum Nigerian or own standards.

Farmland is also affected, destabilising the economic life and the health of the people and desecrating the ecosystem.

Impact of Environmental Degradation

A lot of Nigerians, especially from the Ogoni Nation and the Niger Delta, according to Bob-Manuel (2017) suffer health problems that can be linked to the activities of oil extractors. It begins with running down the ecosystem by compromising the environment with all sorts of hazards ranging from extinction of species, air, water and land pollution, leading to respiratory diseases such as breathing difficulties, including pneumonia and asthma. The United Nations Environment Programme (UNEP) estimates some 600,000 people die in Africa every year as a result of air pollution. Again, environmentalists have been sounding the alarm that the soot contains sulphur dioxide and nitrogen dioxide which cause acid rain when combined with moisture. It is common to see people with burning eyes, and sore throat, and with few and sometimes no health facilities in some places, the trauma the people experience is difficult to express.

The loss of biodiversity to maintain a balance of the ecosystem by restoring soil nutrients, protecting water resources and stabilizing the climate has led to the extinction of marine life. All these have not just made the impact of global warming not only excruciating but has also killed the tourism industry which was a means of economic empowerment for the people of the Niger Delta Region.

Exposure of fish to heavy toxic metal, sediments in rain, and in drinking water, have been implicated in the high incidence of prostate enlargement among the residents of the Niger-Delta region (Kadafa 2012). There is also the issue of unemployment for the locals whose major means of livelihood is fishing and farming. Land and water pollution have made it impossible for

the people to fish and farm. There is also noise pollution as a result of the activities of oil and gas companies. The economic impact of the cost of cleaning up oil spillage and stopping flaring is high and many of the extracting companies are not ready to do the right thing probably because the government is not responsible enough to hold them accountable.

Lack of accessibility to basic education, underdevelopment and unemployment, have contributed a lot to youth restiveness leading to the formation of militant groups, prostitution, robbery and other vices. Thus, we have negative impact of pollution (due to the activities of the oil companies) ranging from destabilisation of the ecosystem, to health hazards, noise pollution, economic crippling through unemployment, and leading to poverty that is intensified by lack of provision of infrastructure. The cumulative result of all this is low standard of living.

Employing the *Igwebuike* Approach as a Tool for Erading Toxic Wastes and Poluutants in Ogoni Land

A great hue and cry has gone up that the ruination of the ecosystem is a process to which people have to put an urgent stop to. Nonetheless, no matter how high the decibel and persistence of the public clamour, without the people taking decisive steps to end this menace, it will all be an effort in futility. Applying the *igwebuike* approach should be a sure-fire way to ensure a safe earth for all to dwell in. This is because many voices that have spoken on the topic have proposed solutions with buck-passing implications. There is the pressing need to sensitise all and sundry of that fight for a clean and sustainable environment is everyone's duty. It requires a collaborative effort, which is what *igwebuike* is all about.

Fortunately, the Ogoni Nation has a socio-cultural and political structure with an ethnocentric mental image that is anthropocentric and supportive of this necessity for a combined effort. All hands ought to be on deck, from the family unit, to the Mene Zeu (compound heads), the Mene Buen (village/town heads), to the Mene Bua (high chiefs and governor of villages/towns) to the Gbenemene or King to ensure that meaningful results are achieved in the eradication of toxic wastes and pollutants. All nations begin with individuals. Therefore, viewing this from what the individuals can do, the following areas should be looked into.

The first thing to do is that right from the family unit parents should sensitise their children and extended family members and through their exemplary demonstrations of the need for keeping the surroundings clean. The people should heed Onwumere (2007)'s cry, reiterating that people put a stop to habits such as, poor waste management, leading to contamination of fresh water sources. Individuals and groups should avoid dumping refuse in drainages and natural waste channels, leading to destruction of aquatic life, and harmful to flora and fauna, which are the mainstays of most rural folk.

Again families should opt for safer cooking methods order than the use of faggots in order to stem the tide deforestation and smoking and smouldering the ecological space. Instead, steady efforts should be made (from the Mene Zeu to the Gbenemene) towards reforestation and forestation. Toxic smoke from burning of tyres and rubbish including bush burning for agricultural and hunting purposes should be refrained from.

The Gbenemene and other leaders under him should educate and strategise through persuasive therapy, to educate members of Pressure Groups that in their bid to get across to the

government and the various multi-national companies who help to degrade the environment, they themselves should not end up adding to the destruction of the ecosystem through vandalising oil pipe lines, thus making life more unbearable for the indigenous poor people who get their livelihood from the rivers and land.

The government of the nation ought to show that they care and also understand the implications of the attack on the environment. This should reflect by their being sensitive to the fact that environmental revitalisation, restoration and accretion are important issues that should attract the installation of think tanks for effective strategic public planning and policy implementation.

The government both at the state and federal levels should see to it that technical advancement accelerating decline in the quality of the environment and ability to sustain life, is moderated for a more eco-friendly system. Apart from control of industrial wastes, poultry, and other industries that cause air, water and noise pollution should be situated in places far from residential quarters. Adequate storm drains should be provided to avoid flooding and erosion that deplete the rich soil deposits and add to the people's poverty.

The West should not wrongfully think that since most developing nations seem to care very little about their environment, they could just use them as dump sites. This is a wrong notion that is borne out of human depravity, leading to the strong over-powering nations oppressing the weak. Instead they should bear in mind that destruction of the environment in any part of the world will also with time affect other regions. They should, therefore, play supportive roles in ensuring that the waste is well managed and the negative effects of toxins are

ameliorated. Again, state and federal governments that there is civil right enforcement protection. These should not be dead letters written for the mere fun of it, and the rules should be frequently amended to suit modern realities.

A legacy of absence of adequate municipal waste evacuation services, leading to the production of toxic smoke from burning of rubbish, should be a thing of the past if people could be well educated about better ways of refuse disposal and governing being able to provide healthy waste disposal services. Ash soot and smog could be reduced by giving licence to illegal refineries to function while monitoring them to ensure that they do not indiscriminately burn tyres for scrap copper or use petrol containing high levels of sulphur.

The shameful condition of the near non-existent power supply need to be addressed, so that the use of generators that has become inevitable, and adding to the toxic fumes and noise pollution can be a thing of the past. The present and in-coming administrations should not be indifferent to the implementation of policies that safeguard and protect the environment. They should not allow the hope for person gains from the multinational companies blind their eyes and minds to the fact that both the leaders and the led live in this environment and whatever negative practices that are allowed will invariably affect us all.

The church has a role to play especially in the creation of awareness that land is not a commodity belonging to us but that we should see land as a community to which we belong. As Bauckham (2010), rightly points out, human life as not a self-contained affair, but takes place in relationship both to the creator and to the rest of the creation. Thus, the intricate interdependence of soil, water, flora and fauna, in which humans

also belong will help to emphasise that humans have obligation not just to one another but to the land (land here, meaning, the soil, water bodies, air etc). God reminds us in Leviticus 25:23-24 that the land belongs to Him and that we as tenants must provide for the redemption of the land. The Church's understanding of these issues is imperative because as Alokwu (2009) points out, the church has environmental responsibility that it needs to live up to in practical ways.

For her voice to be effective, the church should devise strategies to ensure that the mentality of our leaders change so that they can state and implement strict penalties for toxic dumpers and ensure that oil companies operate in ways in which care for the environment and the people are given due priority. Gleaning from Oviasuyi and Uwadiae (2010) and Ajodo-Adebanjoko (2017) certain suggestions come to mind. The church could work with communities to take part in the process of discussing their problems and suggesting possible solutions. The church needs to involve people of the grassroots that feel the pinch the most. Village councils, family heads, non militants and militants, activists, community leaders, elders, religious leaders, youth leaders should be engaged by the church and the government in collaboration with the multinational companies, in interactive study workshops, designed to suggest possible solutions and strategies for implementation.

Phenomena such as vector-borne diseases, flooding and landslides, ozone depletion, gully erosions, climate-induced migrations, desertification and all forms of violence to the environment through industrialisation and wars should be a primary concern for Christians because God created the world; it belongs to Him and he has delivered it to us. Thus, we have the responsibility to maintain it and give a good stewardship of it. Moreover, our humanity and wellbeing depends on the

environment. This according to Dreibelbis (2005), makes it imperative that people are alerted of the importance of working for and with God in the process of repairing creation. Indeed churches have been eco-justice advocates based on the conviction of the integrity of creation, responsibility to steward God's creation and conviction that justice, peace, and environmental protection are linked.

As part of the creation of awareness of the impact of environmental degradation, Christian communities could observe the celebration of environmental days which are usually at national and internal levels. This will create in the people the need to be agents of change. Moreover, seminars and retreats that focus on environmental stewardship could be used to redefine the people's understanding about the relationship of humans and nature. Even liturgical songs that are of environmental concern could help to communicate messages oriented towards environmental protection. Through the use of both print and electronic media, the church can preach its position and advocate for environmental care and sustainability.

Institutions of government and development intervention agencies should fast track process of environmental remediation and ecosystem restoration. Transparency and accountability should be taken seriously. Health risk communication process can be improved as a means of advancing understanding, practice and policy. Legislation, decrees and enactments that are disempowering should be reviewed and where necessary abrogated as they continue to serve as impediments to peace and security.

Topics like the use of environmentally sound technology, proper method of farming, bush burning control and the use of chemicals as detrimental to the soil fertility, avoidance of the use

of harmful chemicals for fishing, proper waste disposal, and recycling of waste material are very essential. The church could establish funds from which scholarships could be awarded to relevant students to pursue courses on environmental management, environmental theology and agriculture. The church could also provide financial support or partner with environmental agencies and departments to ensure environmental sustainability; give voice to the socially excluded through involvement of Community Based Associations, so that representatives from the ordinary people can participate in the process of planning, implementation, monitoring and executing of projects. Transnational oil companies should reserve a percentage of job openings for qualified and employable youths in the host communities.

The church should prompt the government to ensure that transnational oil companies modernise infrastructure and equipment and replace aging and corroding pipes as a preventive measure against frequent oil spillage and to ensure implementation of memoranda of understanding that are signed with host communities. In addition, there should be construction of roads and other amenities provided by the multinational companies.

Pastoral letters that promote eco-justice should be translated into local languages and discussed in small Christian communities. People should be informed, and education is key to reorient them. Theological schools, seminaries and academics could also teach stewardship of all creation in order to deepen the ethical and theological understanding of the causes of global warming. By this future ministers will become aware of the reality of the ecological crisis and how to respond to it.

Apart from the church's contribution in health and education, each Christian must consider the implication of an ecological theory for their life and the application of ecological concepts is possible in diverse fields of employment and personal interests. The church could help to demand cessation of the production of all toxin, hazardous waste and radioactive material, protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes that threaten the fundamental right to clean air, land, water and food.

The United Nations and African leaders should help Africa by enacting strict laws that would prevent these waste merchants from shipping these unwanted wastes into Africa. All over Africa, pollutants like toxic ash smog, toxic wastes within the nations and those shipped in from developed nations, oil spills, and pipeline vandalism, asphalt processing plants belching out thick smoke from its operations are common features that should be stopped.

Development priorities should be set by local priorities, to clean up and rebuild our cities and rural areas in balance with nature. All past and current producers should be held strictly accountable to the people for detoxification and the containment at the point of production. Collaborators should be dealt with; if there are no collaborators there will be no perpetrators. Emergency measures should be taken to clean up drinking wells, and companies working in the Niger Delta should overhaul the way they operate.

Conclusion

The application of the *igwebuiké* perspective is imperative here because in order to change what is going on in any society or to help that society develop, it is expedient that the mindset of the individuals that make up that society is changed or trained in a

way that is geared towards self and societal improvement and development. Nothing can be achieved with a mindset that negates whatever desirable ideologies that are put forward for attainment (no matter the capital and materials made available), if the recipients of such ideas are not wired to and as such helpless rebuff them in practical term.

The *igwebuike* approach is not foreign to the African, let alone the Ogoni national milieu. However, a reawakening of this philosophy in the hearts and interaction of the people is necessary at this time because most of our African ideologies of oneness, and corporate existence – the kind of communal living that calls for altruism that sometimes necessitates putting the kindred and community’s survival above one’s interest, have been bastardised by global trends that are suggestive of “every man for himself and God for us all” (Oguejior 2010). The Ogoni Nation, Nigerians and Africans in general need to heed the clarion call to go back to those values that unite us and had easily helped us to achieve our goals as a nation. One of such values is to see goal achievement as a team work that needs the individual and group’s contribution, realising that if we must achieve anything positive, especially this cry for eco-safety and sustenance, the buck stops at our feet. This is what *igwebuike* entails. If the afore-stated suggestions are implemented, harmful practices contributing to regional and global climate imbalances, leading to excessive storage of carbon dioxide in the atmosphere and contributing to global warming can be checked and we will live in a better and healthier world.

References

- Ajodo-Adebanjoko, A. (2017). Towards ending conflict and insecurity in the Niger Delta region: a collective non-violent approach. *African Centre for the Constructive Resolution of Disputes*.
- Alokwu C. O. (2009). *The Anglican Church Environment and Poverty: Constructing a Nigerian Indigenous Oikotheology*. A Ph.D thesis in the School of Religion and Theology, University of Kwazulu- Natal, Pietermaritzburg.
- Anglican Conservative Mission (2011). *The Five Marks of Mission*. <http://www.anglicancommunion.org/ministry/mission/fivemarks.cfm>. may 25, 2011.
- Bauckham, R. (2010). *The Bible and Ecology*, London. Baylor University Press.
- Bob-Manuel, I. (2017). *Four Largest Threats Facing Niger Delta Today*. Ijaw Youth Congress at London Conference July 3.
- Dreibelbis, M. (2005). A Call to Christian Environmentalism Revisions: *A Journal of Christian Perspective*, 1 (2).
- Kadafa, A. A. (2012). Environment Impacts of Oil Exploration in the Niger Delta. *Global Journal of Science Frontier Research. Environmental and Earth Sciences*. Vol. 12 Issue 3. Version 1.0.
- Kanu, I. A. (2017). Sources of *Igwebuike* Philosophy: towards a socio-cultural foundation. *International Journal of Religion and Human Relations*. Vol. 9. No. 1. pp. 1-23.
- Kanu, I. A. (2017). *Igwebuike* as an Igbo-African Ethic of Reciprocity. *Igwebuike: An African Journal of Arts and Humanities*. Vol. 3 No 2.
- Kanu, I. A. (2017). *Igwebuike* and Question of Superiority in the Scientific Community of Knowledge. *Igwebuike: An African Journal of Arts and Humanities*. Vol. 3 No1.
- Kanu, I. A. (2015). *African philosophy: An ontologico-existential hermeneutic approach to classical and contemporary issues*. Nigeria: Augustinian Publications.

- Kanu, I. A. (2016a). *Igwebuike as a trend in African philosophy. Igwebuike: An African Journal of Arts and Humanities. Vol.2. No. 1.[97-101].*
- Kanu, I. A. (2016b). *Igwebuike as an Igbo-African hermeneutic of globalization. Igwebuike: An African Journal of Arts and Humanities. Vol.2. No.1. [1-7].*
- Kanu, I. A. (2012). *The Functionality of Being in Pantaleon's Operative Metaphysics vis-a-vis the Niger Delta conflict. African Research Review: An International Multi-Disciplinary Journal. Vol. 6. No.1. January. pp. 212-222.*
- Kanu, I. A. (2017). *Igwebuike as an Igbo-African Philosophy for the Protection of the Environment. Nightingale International Journal of Humanities and Social Sciences. Vol. 3. No. 4. pp. 28-38.*
- Kanu, I. A. (2017). *Igwebuike as an Igbo-African modality of peace and conflict resolution. Journal of African Traditional Religion and Philosophy Scholars. Vol. 1. No. 1. pp. 31-40. 2017.*
- Kanu, I. A. (2017). *Igwebuike Philosophy and Human Rights Violation in Africa. IGWEBUIKE: An African Journal of Arts and Humanities. Vol. 3. No. 7. pp. 117-136. 2017.*
- Kenshin, U. (2016). *Ubutu Philosophy. www.newworldencyclopedia.org. Accessed 18th May, 2019.*
- Oguejiofor, J. O. (2010). *Globalization and the resilience of traditional paradigms: The case of the Igbo of Nigeria. The humanities and globalization in the third millennium. Akwa: Fab Anieh.*
- Onwumere, O. (2007). *Toxic Waste Dumping: Africa at the Mercy of God. iNigerian.com.*
- Onwumere, O. (2010). *Toxic terrorism by Americans and Europeans -The Nigerian Voice in <https://www.thenigerianvoice.com>*

- Oviasuyi, P. O. and Uwadiae J. (2010). The Dilemma of The Niger Delta Region as Oil Producing States in Nigeria. *In Journal of Peace, Conflict and Development.*
- Oyinlade, A. O. and Vincent, J. M. (2002) The Ogoni of Nigeria in *Endangered peoples of Africa and the Middle East.* Eds. Hitcock, R. K. and Osborn A. J. University of Nebraska, Lincoln.
- Vanguard July 31, 2011. 1,07900 Tonnes of Toxic Waste, "Drums of Death."
- Vanguard News May 23, 2018. *Crude oil spillage wreaks havoc in Delta communities.*

Dauda Bivan Amos

Chapter Ten

AN ECOLOGICAL REMINISCENCE OF THE ENVIRONMENT IN WILLIAM WORDSWORTH'S "NUTTING" AND GABRIEL OKARA'S "THE CALL TO THE RIVER NUN."

Dauda Bivan Amos

*Department of English Studies
University of the Western Cape
South Africa
bivanamos@gmail.com*

Executive Summary

The environments in Euro-American and African literatures are as vast and diverse as the entire ecosphere itself. The serene environment that pervaded Euro-American and African literatures during the era where Wordsworth romanticized about the enjoyable murmuring of the brooks and woods in "Nutting" while Okara recalled with deep sense of nostalgia its beauty, unruffled and bustling-animation of lush-green, natural and rustic nature, devoid of Western or Eastern intrusions and devastating effects of civilization. This essay decries the desecration and devaluation of the natural environment in its present state, occasioned by man-made ecological disasters such as deforestation, air and water pollutions to mention a few, by reminiscing on the aesthetics and glory of the ecosystem that elude us today by examining the selected poems as a window through which ecocriticism will be appreciated. The paper does not assume the position of a be-it-all prescriptive narratology, rather it envisions a continuous examination of degradations as an ongoing phenomenon that demand literary interrogations. The paper is therefore, rendered in a realist mode of interrogation of human and environmental interactions on

An ecological reminiscence of the environment in william wordsworth's "nutting" and gabriel okara's "the call to the river nun."

ecological criticism in appreciation of the huge effects of the ecocide on the Environments in Euro-America and Africa by deploying the "Ethics of the future" and "Deep ecology" as strands of Ecocriticism that demand a reconsideration of futuristic effects that millions of people yet unborn and the ecosystems will suffer consequent upon our mismanagement and destruction of the ecosphere.

Key words: Ecology, ecocriticism, nature, environment, ecocide

Introduction

What does the humanities have in common with the sciences? Is there any relationship between Biology and Literary Studies? What is the Synergy that exists between literature and ecology? And how can the study of ecology benefit from literary criticisms and vice versa? The foregoing propositions have been discussed in this paper as: An Ecological Reminiscence of the Environments in William Wordsworth's "Nutting" and Gabriel Okara's "The Call to the River Nun" by interfacing scientific and humanistic approaches in the study of ecology.

There is no gain saying that Ecocritics are fascinated by nature and nature writing. This is largely due to the fact that they are an integral part of the ecosphere which they are duty bound to protect and preserve by conscientizing their readership on the Ethics of the future. Their preoccupation is not strictly confined to the present state of the ecosystem, but futuristic. It should be noted in the works of Dobie that among ecocritics, *nature* is not synonymous with the environment. Nature refers to the environment before it was impacted by technology: the land, and the ecosystem that nourishes them (243). It is the "environments" in "Nutting" and in "The Call to the River Nun" that the study examines. Though Dobie argues that Environment on the one

hand is the surrounding landscape; Amos on the other hand sees the Environment as the natural/physical world of land, sea, and animals as well as psychological (36). The *Merriam-Webster Dictionary* states that the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival is the environment. The entirety of the physical which comprises the climate, soil, living creatures and the ecosystem in Wordsworth and Okara's works underscore the relevance of this study as an ecocritical response to the colossal ecocatastrophe caused in both Wordsworth and Okara's environments, and by extension, our today's world.

Ecocriticism at a Glance

One of the approaches to study the relationship that exists between literature and environment is referred to as ecocriticism. Dobie refers to it as literary ecology, the term Meeker, used to designate "the study of biological themes and relationships which appear in literary works." This claim underlines the synergy between humanities and sciences or between biological and literary studies. It is sometimes referred to as ecopoetics, environmental literary criticism, green cultural studies, or even compost structuralists (to mockingly distinguish its theories from those of the poststructuralists). More commonly, it is called ecocriticism, a term first used by Rueckert in his essay "Literature and Ecology: an Experiment in Ecocriticism" in reference to "the application of ecology and ecological concepts to the study of literature" (238).

Ecocriticism or Green Studies does not subscribe to one universal accepted definition. As many ecocritics that have been, so are the myriads of definitions on the concept. Lawrence Buell as a case in point, professes that "Ecocriticism is the study of literature and environment from an interdisciplinary point of view where

An ecological reminiscence of the environment in william wordsworth's "nutting" and gabriel okara's "the call to the river nun."

all sciences come together to analyse the environment and brainstorm on possible solutions for the corrections of the contemporary environmental situations," and this is the thrust of this paper. While Estok postulates that ecocriticism "takes a stand by its commitment to the natural world as an important thing rather than simply as an object of thematic study and by its commitment to making connections," from multidisciplinary approaches. Gomides on the other flip side, authenticates its social function when he speaks of "motivating audiences to live within a limit that will be binding over generations." This position is what Ethics of the Future upholds strongly. Estok in "Shakespeare and Ecocriticism," elucidates on ecocriticism and included the study of "any theory that is committed to effecting change by analyzing the thematic, artistic, social, historical, theoretical or otherwise functions of the natural environment, or aspects of it, represented in documents (literary or others) that contribute to material practices in material worlds."

In essence, ecocriticism or Green studies is a committed approach to studying the entire human environments or ecosystem from multidisciplinary perspectives, with the purpose of proffering solutions to ecological banes. To buttress this assertion, Bennett and Royle succinctly postulate that "Ecocritical thinking in this respect involves a change of scale and vision: rather than an obsession with human-sized objects, it attends both to the miniature realm of a blade of grass, an ant, amoeba, or pathogen, and to a mega-scale of the ocean, the mountain, or even the earth itself (as well as everything in between)" (162).

Theoretical Framework

The study is anchored on a realist mode of interrogation interfaced with Ethics of the future and Deep Ecology. G.H

Lewes, George Eliot's friend in Asoo, argues brilliantly on the importance of reality to creative works in these words: "Arts always aims at the representation of reality... of truth and no departure from truth is permissible.... Realism is thus the basis of Art and its antithesis is not idealism but falsism" (18). Bennett and Royle commenting on the Ethics of the future put forward that ecocriticism therefore demands a rethinking of ethics, extending the notion of our responsibility for others unpredictably into the future, those others include people yet unborn, as well as those who will live after our death (165). A rethinking of ethics of the future requires a realistic presentation of the environments under scrutiny as they are for ecological analysis. This is attainable when other approaches or theories like Deep ecology is also deployed in the realist depiction of the ecosphere where deep ecology as an environmental movement rejects the notion of 'sustainable development' and suggests that capitalism, progress, even Western liberalism itself is responsible for the current ecological crisis that afflicts the world. Deep Ecology as further stressed by Bennett and Royle might be compared to the literary and philosophical work of deconstruction in its call for radical critique and transformation of conventional ways of conceiving 'human' values of humanism, even of science itself. For deep ecologists, it is a matter of new ways of thinking about our relationship with the world, a new ethics and politics that will challenge the instrumentalist view that the world is and should be available for human exploitation (167). It is this reductive view that the world is, and should be available for human exploitation that Niyi Osundare in his poem "Ours to Plough, Not to Plunder," sternly condemns. Wordsworth and Okara's poems which have not been widely read and engaged on their ecological relevance are susceptible to rethinking of the rapport that exists between man and the bio-sphere when read from a realist mode, interfaced with Ethics of the future and Deep Ecology

An ecological reminiscence of the environment in William Wordsworth's "Nutting" and Gabriel Okara's "The Call to the River Nun."

correspondingly. "Nutting," has been read in terms of psychoanalysis and sexual violence by other scholars, unlike "The Call to the River Nun," which is commonly read from a modernist approach.

Ecopoetic Analysis of Wordsworth and Okara's Environments

To me the meanest flower that blows can give
Thoughts that do lie too deep for tears.
- William Wordsworth, *Imitations of immorality*.

Why the ecocide on our ecosystem? What are the catalysts that propel the ecological destructions of the meanest flower that blows, the birds that fly, the wild life, the murmurings of the brooks - rivers that flow, the woods and the entire world? Though the poems under study cannot answer the aforementioned questions; they could aid us in the rethinking and readdressing of the crucial questions of human interactions with the ecosystem vis-à-vis ecological destruction; which perhaps is one of the ways that the study of ecology can benefit from literary criticisms. It is therefore, against the above setting that the environments in Wordsworth's poem and Okara's are depicted in vivid scenic forms for re-examination on a realist stance and interfaced with Ethics of the future and Deep Ecology. Wordsworth insisted that the ability to observe and describe objects accurately, although necessary, is not all a sufficient condition for poetry, "as its exercise supposes all the higher qualities of the mind to be passive, and in a state of subjection to external objects." And while many of the great Romantic lyrics - Wordsworth's *Tintern Abbey* and *Ode: Intimations of Immortality*, Coleridge's *Nightingale* - begin with an aspect or change of aspect in the natural scene, this serves only as a stimulus to the most characteristic human activity, that of thinking. The longer romantic "nature poems" are in fact unusually meditative poems, in which the presented scene

serves to raise an emotional problem or personal crisis whose development and resolution constitute the organizing principle of the poem. As Wordsworth asserts in his *Prospectus to the Recluse*, not nature but “the Mind of Man” is “my haunt, and the main region of my song.”

Gabriel Okara, a Nigerian poet that is categorized as one of the Modern African poets, and a post-colonial writer, is a progeny of William Wordsworth. Okara was quoted saying, “I felt the urge to write. I began with poetry because I had read the poem, ‘Spring’ by William Wordsworth, and I was very touched by it because it made me to recall my childhood experiences in my home village, where we used to go beneath the trees with bamboo bows and arrows and wait for birds to come and perch, and then start shooting. One day there was a very, very beautiful bird and I was fascinated by it; my companion wanted to shoot it but I made some noise and the bird flew away.” This reaction was because of the influence Wordsworth’s “Spring” had on Okara. Wordsworth’s and works of William Blake, Gerard Manley Hopkins, Dylan Thomas, Alfred Lord Tennyson and Robert Brooks became sources of great inspirations to Okara, as a Romantic or “Nature” poet who like Wordsworth, also romanticizes with his natural environment (nature).

In agreement with Abrams’ view, Romantic Poems habitually endow the landscape with human life, passion, and expressiveness, as the poems under study equally reveal. In part, such descriptions represent the poetic equivalent of the metaphysical concept of nature which had developed in deliberate revolt against the worldviews of the scientific philosophies of the seventeenth and eighteenth centuries. This represents the ultimate reality as a mechanical world consisting of physical particles in motion. What is needed in philosophy, Coleridge wrote, is “the substitution of life and intelligence... For

An ecological reminiscence of the environment in William Wordsworth's "Nutting" and Gabriel Okara's "The Call to the River Nun."

the philosophy of mechanism, which, in everything that is most worthy of the human intellect, strikes Death." But for many Romantic Poets, it is a matter of immediate experience to respond to the outer universe as a living entity that participates in the feelings of the observer (1321-2). This spontaneous response to the outer universe as a living entity that participates in the emotion of the poet or poet persona is vividly portrayed in a realist mode by both Wordsworth and Okara.

In his preface, Wordsworth wrote "I have at all times endeavoured to look steadily at my subject," and in a supplementary essay he decries that from Dryden through Pope there is hardly an image from external nature "from which it can be inferred that the eye of the poet had been steadily fixed on his subject." A quick look at the table of contents of any anthology of Romantic Poems reveals the extent to which the natural scene has become a major primary poetic subject.

The fact that environments in Wordsworth and Okara's nature poetry can be better viewed 'through the eye, not with the eye,' is buttressed by Burke's submission in *Philosophical Inquiry into the Origin of our Ideals of the Sublime and Beautiful* (1757), where he emphasizes on the individual feeling, thus: If we felt terror before a landscape, it was sublime. If we felt pleasure, it was beautiful. An excursion into the Romantic poets' world therefore, reveals the blending of natural pleasure with external nature where both poets experienced some aesthetics that are interfaced with sublimity/somber in their romance with nature.

In Wordsworth's 'Nutting,' for instance, the poet persona through his mind's eye recalls with a deep sense of nostalgia his childhood days when as a boy he sailed with great delight to collect hazelnuts with 'A nutting crook in hand' thus:

It seems a day,
(I speak of one from many singled out)
One of those heavenly days which cannot die,
When forth I sailed from our cottage- door,
And with a wallet o' ver my shoulder slung,
A nutting crook in hand, I turn'd my steps
Towards the distant woods, a Figure quaint, ...

In the foregoing verses, William Wordsworth wrote of "Nutting," as he arose out of the remembrance of feelings he often had when a boy, and particularly in the extensive woods that still stretch from the side of Esthwaite Lake towards Graythwaite, to the seat of the ancient family of Sandys. The environment depicted here is "A virgin scene!" The scene exudes some excitement in the poet persona, while he keenly observes the murmurings of the water. The uncontaminated and unblemished environment/nature is expressed in the following lines:

A virgin scene! - A little while I stood,
Breathing with such suppression of the heart
As joy delights in; ...
Among the flowers, and with the flowers I play'd;
A temper known to those, who after long
And weary expectation, have been blessed
With sudden happiness beyond all hope.-

Just like Wordsworth, Okara in "The Call of the River Nun," recalls his childhood experiences of his ancestral homeland while at the Udi Hills of Enugu, with a reverent reminiscence of the aesthetic beauty of the serene and natural scene of the River Nun where though distant from home, like Wordsworth, still heard the call, not with the physical, but with the sensual. He heard the unrestrained urgent call of the "River," as scripted in these verses:

*An ecological reminiscence of the environment in william wordsworth's "nutting"
and gabriel okara's "the call to the river nun."*

I hear your call
I hear it far away;
I hear it break the circle
I hear your lapping call
I hear it coming through
(Senanu & Vincent, 103-104)

The call was audible to the poet persona though it was a very long distance away from home. The urgency of the call connotes the eminent and unrestrained desecration of the Ogoni land as well as the "River Nun," A river that outlived ages and humanity. This is a clarion call by the poet persona for an irresistible service to nature- an urgent call to protect and conserve nature from man-made environmental hazards and desecrations caused by oil- spillages; from oil mostly foreign commercial companies of the Niger Delta region. The poet's lament is demonstrated in "I hear your lapping call" as though the waves of the river are rebelling against the foreign - man-made, intrusion on nature through oil drilling. Equally, the poet personae in "Nutting" admits their inability and helplessness before the scene of the ecocide in these words: That, fleeced with moss beneath the shady trees, Lay round me scatter'd like a flock of sheep ... Deform'd and sullied, patiently gave up
I felt a sense of pain when I beheld
The silent trees and the intruding sky.-

Nature serves as the nexus through which the environments in "Nutting," and "The Call to the River Nun" are appreciated. The environments deployed in the poems before the advent of Western industrialization and civilizations are all rustic and naturally endowed with nature's aura and fauna; calm, serene, undisturbed, solemn and fascinating. Nature as depicted in these environments before their destructions is thought-out consciously or unconsciously is in perfect harmony with man.

Worthy of note therefore, is the foreshadowed destruction of the bower, consequent upon the unintentional ecocide, the present state of the environment is confronted with in these lines:

Droop'd with its wither'd leaves, ungracious sign
Of devastation,
-Perhaps it was a bower beneath those leaves
Voluptuous, fearless of a rival, eyed ...
And fade, unseen by any human eye, ...

What is most striking about "Nutting" as explained by Bennett and Royle is the way the destruction of nature seems to be motivated, the way it is unexplained, seemingly inexplicable, such that we are reminded of some of the fundamental questions raised earlier, such as: Why the ecocide on our ecosystem? ... and so forth. These and many other questions resonate with the poets' readership as captured in the following words; why is the heart of the poet personae luxuriating with indifferent things?

Evidently, no reason may be advanced and none is obliged for the desecration and the destruction of our world. The realism can be juxtaposed with the innateness of man's cruelty in Golding's *Lord of the Flies*, where the destruction of man and his environment epitomized by supposedly pure and innocent children such as Jack, Ralph and Piggy is mainly motivated by man's inborn nature of destructive tendencies and sheer wickedness. This destructive notion is coloured with callousness and supported by the claim: "We never done nothing, we never seen nothing" (194). The aforementioned shows man's state of indifference and pretense. It illustrates man's claim of being oblivious to the destruction of fellow human beings and nature: where the killing of Simon by the "innocent" children as exemplified by Golding is taken for granted under the conspiracy and blame theories. Okara's poem implies an up-

*An ecological reminiscence of the environment in william wordsworth's "nutting"
and gabriel okara's "the call to the river nun."*

coming-future-disaster as a result of some unforeseen man-made threats to nature. In "the river Nun," Okara suggests:

... each dying year
brings near the sea-bird call,
the final call that
stills the crested waves
and breaks in two the curtain
of silence of my upturned canoe

Okara's out of the blue beautiful environment is beclouded by imminent danger. More than the fondness of the memories of the "River," is the pending death of nature with the passage of time that is: "... each dying year." The insistent call to the River Nun by the poet-sage to protect and preserve the ecosphere is like the convergence of the Sciences and the Humanities through an eclectic embrace or approach. Hence, the sea-bird is deployed and saddled with the crucial task of safeguarding the environment from the new multifaceted ecocritical-thinking-approaches by the poet-sage when he said: "... each dying year **brings near the sea-bird call.**" The environments studied in the paper exude some form of aesthetic-beauty that eventually dovetails into somber and sublime. The environments portrayed are pristine and idyllic, remotely detached from every form of pollutions, characterized by innocence and purity until the encroachments of the unintended devastation of nature by man's deliberate orchestrations.

From the foregoing analysis, the poems under examination align with the environmental sociologist, Broswimmer's submission in *Ecocide: A Short History of Mass Extinction of Species* (2002), that successful societies accumulate wealth through ecological destruction to the point at which their very existence is undermined as a result of the wasting of the environment. In an

eco-unfriendly cycle of boom-and-bust, and both of the environments depicted in the poems are not exceptional cases to this allegation. These ecocides that Broswimmer describes have no doubt been exacerbated and have escalated in the 202 years since Wordsworth wrote "Nutting" and in the more than 30 years that Okara wrote "The Call to the River Nun." Unfortunately, Ikiriko (2000) decries that today there is no more the River Nun, in *The Oily Tears*, as it is also the case with the environment in "Nutting."

Okara's silver-surfaced Nun is no more
Now effluent- effete, sludge- silvered
Its slop lumbers to the sea
Rendering brackish zones barren
Like poisoned ditch water (p. 26)

Conclusion

Though early societies produced their own localized form of unintended 'ecocide' and their own subsequent demise, twenty-first-century global capitalism is currently facing the possibility that within the lifetime of many of us living today, our rapacious, land-grabbing, pollution rage occasioned by the incessant road and air travels, mad crave for consumables and other material possessions will lead inexorably, unstopably to the effective destruction of more or less all lives on the planet (Bennett & Royle, 2012:162). This explains why the place of Ethics of the future and Deep Ecology interfaced with the Realist theory as a new way of ecological thinking helps in the protection and conservation of the flora and fauna of the entire ecosystem cum the socio-cultural dimensions of the environment today, for the good of future generations. The conclusion is premised on the fact that this paper should open up more responsible and uncommon awareness in the ongoing literary interrogations to the exploitations and ultimate destructions of nature among the mosaic-of-ecocritic-scholars, in mankind and environmental

interactions. This foregrounds the ultimate benefits ecology can derive from literature as this paper has achieved by engaging Biology, Philosophy and Ethics, Physics and other disciplines to interact with literature on a poetic purview for multidisciplinary cross fertilization of ideas and approaches to the complex and hydra-headed ecological related challenges. Unless urgent proactive and conscientious measures are taken to avert the trending ecocatastrophe of our world which until its desecration and destruction, was in perfect euphony with nature: our ecosystem will perpetually remain in a state of unrestrained cacophony with mother earth or nature's orchestrations. As one of the viable remedies to this ecocide, geothermal energy generation is what Mamman Grace Ayuba has propounded as an alternative to fossil fuel generation instead of gas flaring and other forms of pollutions as well as eco-unfriendly environmental plunders. These among others include illegal mining, pipeline bunkering/vandalization, air and oil pollutions in the Niger Delta region, with their attendant effects such as: the destruction of the ozone layers, global warming and nuclear energy threats to humanity. Hence, in the words of Niyi Osundare, the world is:

... ours to plough and plant ...
This earth is
Ours to work not to waste
Ours to man not to maim
This earth is ours to plough, not to plunder.

Instead of desecrating and dissipating our metaphoric waters and energies through the gas fumes that motor bikes, cars, airplanes and ships (representing the myriad of machines), man uses that are unfriendly to the ecosystem as seen in the poems understudy. A proactive and pragmatic steps ought to be taken to prevent the ecocide unleashed on the entire ecosphere as the

following lines attests; “Then up I rose, And dragged to earth both branch and bough, with crash” as asserted by Wordsworth’s poet persona in an attempt to proffer solution to the devastations of their environment. As Okara’s persona also hears the distress call to the river Nun for the redemption of the River and its ecosphere. Five times, the poet persona repeats for emphasizes the urgency and agency of the call to action: I hear your call, I hear it far away; I hear it break the circle, I hear your lapping call, I hear it coming through...

Works Cited

- Abrams M.H. (1953) *The Mirror and the Lamb; Romantic Theory and the Critical Tradition* Oxford; Oxford University Press.
- Abrams M.H. (2001). *The Norton Anthology; English Literature*. New York; W.W. Norton & Company.
- Amos, B. D. (2015). *The Creative Writer and His Environment: A Panoramic View of Some Select African Writers*. In ICSHER Journal Vol. 1, No. 3 (Dec.): 53-41.
- Asoo, Ferdinand Lorbee. (2006). *The African Novel and the Realist Tradition* Makurdi; Aboki Publishers.
- Broszimmer, Franz J. (2002). *Ecocide; A short History of the Mass Extinction of Species*. London Pluto.
- Bennett, Andrew & Royle, Nicholas. (2016). *An introduction to Literature, Criticism and Theory*. New York; Routledge.
- Bnell, Lawrence. (2001). *Writing for and Endangered World; Literature, Culture and Environment in the U.S. and Beyond*. Cambridge; The Belknap Press of Harvard University Press.
- Burke, Edmund. (1757). *Philosophical Inquiry into the Origin of our ideals of the Sublime and Beautiful*.
- Coleridge, Taylor Samuel. (1921). Coleridge Ernest Hartley (ed). *The Poem of Samuel Taylor Coleridge*. Oxford University Press.
- Dobie, B. Ann. (2012). *Theory into practice; An Introduction to Literary Criticism*. Canada; Wadsworth Cengage Learning.

An ecological reminiscence of the environment in william wordsworth's "nutting" and gabriel okara's "the call to the river nun."

- Estok, Simon C. (2011). *Ecocriticism and Shakespeare; Reading Ecophobia*. New York; Palgrave Macmillan.
- Gomides, Camilo. (2006). *Putting a New Definition of Ecocriticism to Test: The Case of "The Burning Season," a Film of (Mal) Adaptation*. Interdisciplinary Studies in Literature and Environment. Oxford University Press, Vol. 13, No. 1.
- Golding, William. (2001). *Lord of the Flies*. Ibadan; Spectrum books.
- Meeker, Joseph (1972). *The Comedy of Survival: Studies in Literary Ecology*. New York.
- Osundare, Niyi. (1986). "Ours to Plough, Not to Plunder." Ibadan; Heinemann.
- Okara, Gabriel. (1978). "African Speech ... English Words" in *African Writers on African Writing*, ed. E.D. Killam. London; Heinemann.
- Rueckert, William. (1978). "Literature and Ecology: An Experiment in Ecocriticism." *Iowa Review* 9, no. 1.
- Sananu, K. and Vincent, T.A. (1978). *Selection of African Poetry*. London; Longman.
- Wordsworth, William. (1985). *The Fourteen Book Prelude*. Edited by W.J. B. Owenm. Copyright © Cornell University Press.
- Ikiriko, Ibiware (2000) *The Oil Tears*. Ibadan: Kraft.
- Mamman Grace Ayuba. "Evaluation of Geothermal Energy Resource Potential in South - West Nigeria Using Aeromagnetic Data". PhD Diss. in the Department of Physics Ahmadu Bello University Zaria, 2019.

Chapter Eleven

CYBERNETIC IMMORTALITY AND ECOLOGICAL IMBALANCE: INSIGHTS FROM AFRICAN ANTHROPOHOLIST PHYSICO-SPIRITUAL ECOLOGY

Idoko Vincent Edache

St. Albert Institute, Kaduna, Nigeria

idokovincent85@gmail.com

Executive Summary

Man is constantly seeking to improve himself and to overcome the challenge of the limitations of life and death. Several approaches in addressing this challenge abound. However, the transhumanist solution to this primeval quandary is via cybernetic immortality. The idea is premised on a materialist cum functionalist idea of personhood, where the essence of man is narrowed to the information in the brain; hence, the possibility of codifying man's consciousness into a software and transferring it into cyberspace or silicone bodies. While this transhumanist project has been hitherto evaluated from various perspectives, there is hardly literature that discusses its possible inadvertent ecological consequences. On the other hand, Africa enjoys a rich ecological heritage and understanding of the human person, life, and reality that is metaphysical, anthropocentric, and holistic. In the face of the possible global ecological challenge, that the transhumanist quest for cybernetic immortality portends, this book chapter, therefore, intends to foray into the African anthropoholist physico-spiritual ecology, to see what insights can be gleaned from her in cautioning and cushioning against this daring techno-scientific utopia, which possesses the potential of disrupting the equilibrium of the ecosystem.

Keywords: Cybernetic immortality, personhood, ecology, anthropoholism, transhumanism.

Introduction

One of the strongest instincts in man is the instinct of self-preservation. Hence, every desire that is associated with this instinct (i.e. eating, drinking, aversion for sickness and death, sex etc.) is usually necessary and compelling. It is not out of place then for man to linger on the possibility of immortality. The desire for immortality is therefore coeval with man. However, how we go about gratifying this desire matters. Transhumanism promises a fulfillment of this age long desire in the form of cybernetic immortality. The idea of cybernetic immortality aims to attain perpetuity of life by uploading the mind into cyberspace or silicone bodies. This is only possible because they believe personhood is tied to the information in the brain. As expected, this idea has sparked wild reactions, ranging from acceptance, skepticism, and repugnance. However, the focus here will be on the ecological implications of cybernetic immortality.

On the other hand, in Africa, personhood is understood metaphysically and relationally; there is continuity of life and existence even after death; all things in the universe (physical and spiritual; living and non-living) are interconnected; and man is at the centre of this physico-spiritual ecological balance. This book chapter therefore intends to give an exposition of insights that can be mined from African anthropologist physico-spiritual ecology in restoring balance to the possible disruption of the ecosystem, as suggested by cybernetic immortalists.

In doing this, the discourse opens with an investigation of the modus operandi of cybernetic immortality, followed by an exploration of the African understanding of personhood, life,

death, and the after-life. It then evinces anthropoholism, as it is unique within the framework of African physico-spiritual ecology. This leads to several rationalizations, regarding the charge of ecological imbalance that could result from cybernetic immortality, when considered from the optics of African anthropoholism. This chapter wraps up with a conclusion that attempts to strike a balance, while posing possible areas and questions for further research.

Cybernetic Immortality and a Materialist *cum* Functionalist Conception of Personhood: Virtual Reality and Silicon Bodies

According to Johnson Lee (2015), cybernetic immortality refers to a “radical transhumanist vision”:

in which the information in the brain is uploaded onto a computer so the ‘person’ can exist in the virtual world. En route to an entirely disembodied existence, technology will permit intelligence to be shared, minds to be connected to other minds and other devices, and communal rather than individual intellect to emerge (p. 273).

Nelson Kellog (2015) regards the transhumanist’s goal of cybernetic immortality as “the most ambitious”. He explains that cybernetic immortality intends to provide a non-biological substrate that can realize the functional capacities of the human brain, including the capability for consciousness, as well as the possibility of uploading the contents of a person’s existence into this artificial mind. Chief proponents of this movement include Raymond Kurzweil, Martine Rothblatt and Ted Chu.

This idea has appeared under several names such as “digital immortality”, “brain emulation”, “mind transfer”, “mind uploading”, “mind copying”, etc. In defining what these terms mean collectively, John Doyle (2018) gives a similar definition, that they refer to “the hypothetical process of transferring a

conscious mind from a biological brain to a non-biological substrate (e.g., silicon digital computer) via technical developments (scanning, mapping, simulation) that are as yet uninvented” (p. 130). The idea is for the substrate to achieve a complete simulation of the native brain, such that its behavior is undistinguishable and complete with the individual’s memories and life experiences.

Before further elucidation will be made on the contents of cybernetic immortality, it is pertinent at this point to consider why they think this project is not only possible but also plausible. It is because advocates of transhumanism believe in a fluid understanding of personhood that is materially and functionally construed. The idea of cybernetic immortality from a materialist cum functionalist perspective of personhood is based on a number of assumptions. The first assumption is that “personhood may be defined by a set of functions or abilities and such abilities must be present in actual, not potential form” (Sullivan, 2003, p. 17). The second assumption is that personhood or what characterizes identity is a function of brain states or mental states. The third assumption is that what characterizes a particular mental state of a peculiar type is not dependent on its intrinsic properties, but on the way it operates or the role that it plays in the system that it constitutes (Levin, 2018). Hence, there is an emphasis on what a thing does or how it functions than what it is made of (Polger, 2020). The fourth assumption is that:

mental states and processes of consciousness are none other than functional states and processes. And, furthermore, as functional states and processes, mental states and processes can occur in different material substrates, one such being the neurological system of a human brain, and another being the electronic system of a suitably programmed AI system (Cocchiarella, 2019: 5).

What this means is that the mind neither depends on a spiritual substance such as the soul or a biological substrate like the human brain. As such, the functionality of the mind can as well work on an electronic substrate such as a digital computer. The fifth assumption is that despite functional states being independent of specific types of substrates, mental states “*must* occur in a physical system, and hence, mental states and processes *must* have a physical or material substrate made up of many interrelated parts of a common structure... hence, functionalism’s view of mentality is completely contrary to the claim of metaphysical dualism” (Cocchiarella, 2019: 5).

Functionalism’s claim that the essence of mental states and processes can be realized on different physical substrates is only possible because of what they call *multiple realizability*. According to Bickle John (2020), multiple realizability is the thesis that “a single mental kind (property, state, event) can be realized by many distinct physical kinds” (n.d.). A good example is the idea of a mousetrap for killing or catching mice. Different types exist, with different mechanisms of operation, and made of different materials such as wood, iron, adhesives, boxes etc. However, at the end of the day, they are all mousetraps and they fulfill the purpose of catching a mouse (Polger, 2020).

What this implies then is that the functionality of the mind is not dependent on the biological substrate of the brain and can be realized in different physical substrates such as an electronic digital computer. As such, the goal then is to duplicate the functional processes of mental states in a computer program. The obvious challenge that rears its head is the ability to differentiate duplication from good and complete simulation. Here then, the underlying assumption is that the mind-body relationship is analogous to the relationship between the software and hardware of a computer; where the mind is akin to the software,

and the body, the hardware. As it is claimed, it becomes easy then for the mind to be duplicated as software in a computer superstructure (Cocchiarella, 2019).

Two probable hypothetical models are often considered in realizing cybernetic immortality. The first model of mind uploading considers high-resolution 3D scanning, modeling, mapping and characterization of every vital feature of a person's brain, and then operating this resultant model on a powerful computer host. In the second model, the neurons in a person's brain would be increasingly substituted by synthetic forms until the person's brain become entirely synthetic. Usually, advocates of this project are materialists who believe that man is entirely a bundle of matter and if at all there is any spiritual element involved, it is via the interaction of material forces.

Moravec Hans (1998) suggests that "successive generations of human beings could be designed by mathematics, computer simulations, and experimentation, like airplanes, computers, and robots are now" (p. 108). The reason he gives for this proposition is to have a plan B in case the earth is bedeviled by some great catastrophe or the earth becomes overpopulated and there is a need to exit to an alternate universe. He also argues that this will significantly increase human intelligence since neurological synapsis in the human brain is slow. In an age of intelligent robotics, Ray Kurzweil argues that holding on to the human body would make us "second-rate kind of robot" distinguished only by our DNA. Hence, only "human chauvinists would be foolish enough to cling to the human body" (2005: 108). To overcome this limitation, there is need to transfer the human mind to a computer. According to Moravec (1998), this can be possibly achieved through systematically scanning the human

brain, destroying it, and making a copy of the brain in the form of a computer software or program.

Moravec (1998) however suggests the possibility of mind transfer via noninvasive scanning that would not necessarily kill the person in question. The idea is to reproduce the molecular structure of the brain in digital form or a in a hybrid form that is both digital and analogue. This amounts to the mind of the person that has just been killed but immortalized since the “mind is entirely the consequence of interacting matter” (p. 119). He adds that:

The entire program can be copied into similar machines, resulting in two or more thinking, feeling versions of you. You may choose to move your mind from one computer to another that is more technically advanced or better suited to a new environment. The program can also be copied to a future equivalent of magnetic tape. Then, if the machine you inhabit is fatally clobbered, the tape can be read into a blank computer, resulting in another you minus your experiences since the copy. With widely enough dispersed copies, your permanent death would be highly unlikely (p. 112).

Furthermore, he argues that “as a computer program, your mind can travel over information channels, for instance encoded as a laser message beamed between planets. If you found life on a neutron star and wished to make a field trip, you might devise a way to build a robot there of neutron stuff, then transmit your mind to it” (p. 114). Though this would lead to “two separate versions of you, with different memories for the trip interval” (p. 114), this could be resolved combining both memories as one.

Explaining how cybernetic immortality can be realized via mind uploading, Kurzweil (1999) evinces that:

As we cross the divide to instantiate ourselves into our computational technology, our identity will be based on

our evolving mind file. We will be software, not hardware... As software, our mortality will no longer be dependent on the survival of the computing circuitry... as we periodically port ourselves to the latest, evermore capable 'personal' computer... Our immortality will be a matter of being sufficiently careful to make frequent backups (p. 129).

He surmises that when this becomes possible, "we will be able to live as long as we want" (2005, p. 330). However, this provokes the problem of personal identity. Is the copy of an individual's mind, really the individual or another entity that thinks like the individual? How can the complications resulting from multiple copies of an individual's mind being in different places be resolved? Are these computer copies same as the individual? (Drozdek, 2015).

Surprisingly, Moravec (1998) answer that these copies are the same as the individual, since it is not the continuity of the mind's substance that constitutes personal identity but continuity of the mind's pattern: "pattern-identity defines the essence of the person" (p. 117). Kurzweil (2005) concurs that personal identity is a function of "the patterns of matter and energy that are semi-permanent (that is, changing only gradually)" and this "identity is preserved through continuity of the pattern of information that makes us us", such that the copy in cyberspace "is not you- it is you. It is just that there are now two of you" (p. 54-55). Drozdek Adams (2015) explains that this means "two (or a hundred) copies of one pattern make one person" (p. 8). This uploaded mind is believed, would exist either in cyberspace/virtual reality or relativized in silicone bodies. Some scholars opine that even if this vision is feasible, it will only be realizable in the distant future. Albeit, others such as Dmitry Itskov believe that we are at the threshold of realizing

this project and according to the 2045 initiative program, this vision will be realizable by 2045 (Itskov, 2013).

An African Understanding of Personhood

Looking at the transhumanist proposal for cybernetic immortality, I imagine that the first reaction of an average African, who is largely bioconservative (Mbessa, 2020), and has a religious affiliation, will be that of open eyes and mouth, with mixed feelings of shock and amazement. Perhaps, such a reaction will be due to the novelty of the idea, its daring poise, and other mind boggling issues surrounding this transhumanist project; especially as it conflicts with certain areas of African ontology and cosmology.

The first point of conflict is in the understanding of man and personhood. Taking into account the diverse African opinions on the subject matter, two things stand out in the consideration of man and personhood from an African perspective. The first is an understanding of the composition of man that is metaphysical, and the second is a normative notion of personhood that is understood relationally.

As regards the metaphysical composition of man, the prominent African scholar from Ghana, Kwasi Wiredu, describes the composition of man as “made up of *nipadua* (body), *okra* (a life giving entity), and *sunsum* (that which gives a person’s personality its force, i.e. courageous, evil, kind, modest, etc.)” (1995: 132). These three qualities represent the constituting elements of a person. Wiredu adds the concepts of *mogya* and *ntoro*, which are both derived from the blood of the mother and father respectively, and becomes the conduit for inducting a person into the clan of both parents. Kwasi Wiredu however cautions against the understanding of the *okra*, often translated to mean the soul, in terms of western categories, wherein it is

dubbed as immaterial. For Wiredu, the *okra* is quasi-material. It is not visible to the physical eyes, but possesses both physical and spiritual properties. It is more or less a portal for trafficking and negotiating between the physical and spiritual world.

Kwame Gyekye, though agreeing with Wiredu that man is composed of *sunsum*, *okra*, and *honam* (similar to *nipadua*, meaning the body), differs by positing that the *okra* can be understood to be soul in purely immaterial terms: "So conceived, the *okra* can be considered as the equivalent of the concept of the soul in other metaphysical systems. Hence, it is correct to translate *okra* into English as soul" (Gyekye, 1987: 85). It is the germ of the divine in man and represents the essence and life giving force of the individual. Gyekye further introduces the concept of *honhom*, which connotes breath. The departure of this breath from the individual marks the death and consequent departure of the soul. His submission that the both the *sunsum* and *okra* are immaterial properties while the *honam* is a physical property, ultimately leads to a conception of man that is basically dualistic (i.e. material and immaterial): "Akan hold a dualistic conception of a person; a person is constituted by two principle substances, one spiritual (immaterial) and the other physical (material)" (Gyekye, 1987: 205).

Kwame Appiah further corroborates the position of Gyekye and Wiredu by consenting to the tripartite elements that comprises the human person: "according to Asante traditions, a person consists of a body (*nipadua*) made from the blood of the mother (the *mogya*); an individual spirit, the *sunsum*, which is the main bearer of one's personality; and a third entity the *okra*" (Appiah, 2004: 28).

Segun Gbadegesin also attempted to give a similar corollary of man's composition from a Yoruba standpoint. Gbadegesin

underscores the person (*eniyan*) as comprising of four fundamental characteristics:

Among the terms that feature in discussions of the Yoruba concept of *eniyan*, the following are prominent: *ara*, *okan*, *emi*, *ori*, though there is a lot of confusion about what each of these means and what relationship exists among them. One way to avoid, or at least, minimize confusion is not to start with English equivalents of these terms, but rather to describe their usages among the Yoruba and to relate them to each other in terms of their functional interdependencies (Gbadegesin, 1991: 28).

In his exposition, the *ara* refers to the physical properties of the body- in terms of size, weight, shape or height. The *okan* represents the heart, which is the seat of blood circulation and emotions. The *emi* connotes the divine breath in the person (different from *eemi* which is physical breath). Finally, the *ori* plays the dual role of designating the physical head and the personality of a person:

It is thus *ori* so chosen, with the destiny wound up in it, that determines the personality of the individual. And though, the *ori* is symbolized by the physical head, it's not identical with it. For the *ori* is construed as the inner- or spiritual head *ori-inu* (Gbadegesin, 1991: 38).

As seen from the above discourse, though compositionally, man is understood to have a metaphysical basis from an African perspective, there is also a widespread belief that his personhood is expressed and fulfilled socially. According to Placide Tempels, the Bantu conceive that a person is an essentially an assemblage of diverse forces. However, these forces are only activated via social relations with other forces- ancestors, gods, human beings, animals, and inanimate objects (Tempels, 1959). Here, the individual is basically defined as a relational being. As such, Tempels avers that possessing vital forces as an individual is not enough to grant an individual the status of a person. The

individual is only considered as being a person by the community based on the quality of his/her social relations and alignment with the norms and ethos of the community. What this implies is that there are those who possess a higher degree of personhood than others, and those who do not even merit being accrued the status personhood.

John Mbiti (1980), links personhood with the ability of the individual to integrate himself within ties of family and kinship. According to Mbiti, for one to be a person, he ought not only to ensure the vitality and perpetuity of these ties with the living on earth, but also with his/her ancestors who are believed to be alive in another spiritual plane of life, and the unborn. In his words, the individual “owes his existence to other people, including those of past generations and his contemporaries. He is simply part of the whole. The community must therefore make, create or produce the individual; for the individual depends on the corporate group” (Mbiti, 1980: 141). From this premise, Mbiti posits that the individual’s identity is immutably linked with the life of the community; hence, his popular phrase: “I am because we are; and since we are therefore I am”.

Menkiti (1984) stretches the argument further and exalts the community over the individual. Hence, it is the community that decides who counts as a person or not. In his view, personhood is attained in varying degrees, to the same extent of an individual’s fulfilment of the prescribed moral obligations.

The point to be made here is how radically, the African conception of personhood differs from the functionalist conception of personhood, upon which the feasibility of cybernetic immortality thrives. The functionalist conception of personhood rejects any concept of man that has a metaphysical

undertone. It considers man to be purely matter. This mechanistic view of man embraces a fluid understanding of personhood that is realizable in a non-biological substrate other than the carbon based human body. Such a framework will hardly sit squarely within the African perception of man, in relation to his fellow man and the environment. The implication of this transhumanist understanding of personhood, on the balance of the eco-system within the African world-view, will be made clearer as the discourse progresses.

The Interconnectedness of Life, Death, and Afterlife: An African Idea of Immortality

The African worldview enjoys a rather seamless symbiotic relationship between her cosmology and ecology. As such, the whole universe (physical and spiritual) is seen as one organic whole. This represents the tenor of her ecological equilibrium. To create a distinction or separation in the constitutive parts of the universe and reality will invariably lead to an imbalance in the eco-system, with undesirable ecological repercussions. The transhumanist agenda for cybernetic immortality does just this; as it not only radically alters the ontological understanding of reality in favour of a materialistic one, but in so doing, treats its constitutive parts as separate units. This informs the foreground for Africa's distrust and cry for caution against transhumanism's aggressive techno-progressivism.

While this will be discussed subsequently, we seek here to first understand her closely knitted metaphysical understanding of reality. In doing this, we will consider her understanding of life, death and the afterlife; the interconnectedness of the physical and spiritual world (ancestors, gods, man, animals, plants, and inanimate objects); and man's central role in the universe.

Acknowledging the diverse cultural belief systems and practices in Africa, Sambuli Moshia (2000) identifies four basic areas that cut wide across Africans: 1. the centrality belief in gods or God, 2. synergy between individuals and their community, 3. the idea of the universe as an independent interconnected whole, 4. the understanding of life as a continuous process of realization and transformation. Asuquo (2011) adds that this metaphysical, religious, or spiritual outlook on life permeates the African's understanding of life, death, and the afterlife.

Four cardinal points are identified in relation to life: that it originates from God; that it finds meaning in communal identity and integration (Njoku, 2002); that the living dead (ancestors) play a central role in the balance of life (Opokwu, 1978); and that life is related to time cyclically, rather than linearly (Mbiti, 1980). Death therefore, is considered to be liberation from the jaws of this problem-ridden and restless world. For those who live a good life, it is a bliss that marks the departure of the immortal soul to its real home (the land of the ancestors). Those who live bad lives will also receive the recompense of their iniquities by being excluded from the world of the ancestors, thereby losing their personal immortality (Wiredu, 1992). The sacredness of death is expressed in the elaborate rituals and piety that accompanies burial practices (Kanu 2015a&b; M'passou in Cox, 1998; Mbiti, 1980). As such, death does not mark the cessation of life, but a transition to the afterlife, where the dead shed off bodily encumbrances for a purely spiritual body and life as ancestors (Uduigwomen, 2004). These ancestors (living dead) do not cut of links with those on earth; there is continuity of relationship and interaction (Tempels, 1959). As such, through several rituals, sacrifices, and obeisance, the living can communicate with and seek the patronage and protection of the ancestors (Gyekye, 1987). The ancestors in turn, can also reach

out to the living through visions, dreams, and omens (Baloyi & Makobe-Rabothata, 2014).

Anthropoholism: African Physico-Spiritual Ecology

Stretching further from the discourse above, the African position on the connection that exists between the physical and spiritual forces that embodies man's reality does not exist among humans alone. It transcends humans and ancestors to include all non-human animals, plants, and every other inanimate object in the universe (Edwards, 2015). In the African worldview, everything is interrelated and interconnected (Behrens, 2010). Regarding this view, Austine Okwu (1979: 19) notes that:

The foundation of most African value systems, thought patterns, and general attitudes to events and phenomena such as life, disease, and death is the belief in the unity of creation, in other words, the absence of any mental demarcation between the spiritual and the human, animate and inanimate. Thus, the notion of reality is not limited to that which one sees and touches. Consequently, the members of the supernatural world are regarded as an integral part of the material world... The notion of the unity of being connotes also that all things exist in cosmic order and harmony.

Describing this holistic worldview, Steyne Philip (1990: 58) notes that:

The world interacts with itself. The sky, the spirits, the earth, the physical world, the living and the deceased all act, interact and react in consort. One works on the other and one part can't exist nor be explained without the other. The universe, the spirit world and man are all part of the same fabric. Each needs the other to activate it.

And so, faced with the question of man's relationship with this holistic worldview, he stands face to face with the physical, the material, and the spiritual expressions of reality. Man interacts

with this organic whole and they in turn reciprocate this gesture. Man feels at one with this reality and according to Steyne (1990: 59), does not draw “distinctions between the physical, material or the spiritual...between the sacred and the profane... the secular and the religious... between his profession and his community responsibilities... they are all knit together in a whole”.

Onunwa (1994) further expatiates that the African cosmos can be likened to an isosceles triangle wherein God or the Supreme Being is at the top, the ancestors are at the bottom, and man is at the centre. Kanu concurs that “the primacy of the human being in the African universe is due to the central place he occupies within the universe. The triangular imagery suggests that human beings form a ‘microcosm’ on which converge the innumerable forces that inhabit the other arms of the universe” (Kanu, 2013). This echoes the perspective of Mbiti (1970: 119):

African ontology is basically anthropocentric; man is at the very centre of existence, and African peoples see everything else in its relation to this central position of man. God is the explanation of man's origin and sustenance; it is as if God exists for the sake of man. The spirits are ontologically in the mode between God and man; they describe or explain the destiny of man after physical life.

This represents the framework for the anthropologist understanding of African physico-spiritual ecology. It becomes pertinent at this point to clarify the term “anthropoholism”. Anthropoholism consists of two Greek words: “Anthropos”, meaning “man/human being” and “holos” which means “whole” (Griffen, 1993). Smuts Jan Christian (1927), who is generally given the credit for the coinage of the term “holism,” defines it as a “principle which makes for the origin and progress of wholes in the universe” such that “the whole is greater than

the sum of the parts” (Okoro, 2019: 5). Philosophically speaking, the theory implies that “parts of a whole are in intimate interconnection, such that they cannot exist independently of the whole, or cannot be understood without reference to the whole, which is thus regarded as greater than the sum of its parts” (Barney & Perkinson, 2016: 292). Thus, considered from an African perspective, anthropoholism refers to the concept of the cosmos and reality that is interconnected and interdependent, with man at the centre.

Ecologically speaking, this inexorable bond between man and nature, places on man the ginormous burden of responsibility for the sustenance, protection, and preservation of nature (Opoku, 1993). According to Oji (1988: 15), nature here refers to “the visible material world or universe, comprising both living and non-living things, visible and invisible powers, plants and animals, the inanimate and the natural phenomena, like lightning and thunder, all centred around man. The spirit world is all the same, tacitly understood as inclusive in nature” (In Turaki, 2000: 18). This obligation that is thrust upon man is owing to his ontological and teleological status (Beyers, 2010). Opoku (1993) emphasizes that this represents the contribution of African Traditional Religion for the worldwide concern for the environment. This need for man to protect the environment is due to the following rationalizations: because man depends on it, because of its beauty and life, because of its intrinsic worth, and because of its ontology, history, and complexity (Bassey, 2019).

Cybernetic Immortality and Ecological Imbalance: An African Anthropoholist Perspective

As the posthuman promises and possibilities of cybernetic immortality is gradually gaining acceptance, and people are

beginning to fancy themselves living forever in virtual reality, it becomes easy to get carried away with the fantasies and ecstatic thrill of this techno-scientific vision; hence, losing sight of the ecological consequences of this pursuit. Having discussed an African understanding concerning the interrelatedness of life, reality, the cosmos, and man's place in it; what we seek to evince here is to see what plausible sensibility and consciousness can be sieved from African physico-spiritual ecology, to cushion against the potential ecological imbalance that may ensue from transhumanism's extreme ambition of cybernetic immortality.

A fundamental charge that an African anthropologist ecological mindset would throw against cybernetic immortality, would be framed around the depersonalization of man, and the displacement from his ontological and teleologically ordained role in the nurture, protection and equilibrium of the ecosystem. Cybernetic immortalists conceive of a monolithic worldview that is purely materialistic and functional. As such, what defines man is not any metaphysical or spiritual mumbo jumbo. For them, personhood is the sum of all information that is stored in the brain, which can be realized in cyberspace. On the other hand, Africans have an understanding of man that is both metaphysically and relationally defined. This includes his ability for ratiocination. As such, he sees the cosmic order through the dualistic prism of the spiritual and physical (but connected and interdependent on each other). Therefore, since man embodies both dimensions of the physical and spiritual, he stands as the central figure to mediate the traffic and balance between both realms. Hence, what cybernetic immortality does is that it strips man of his essential metaphysical nature, leaving a carcass of hard matter that is hardly recognizable even to himself. Man loses his place at the centre of the universe and the other parts can longer rapport in convivial harmony. While it is a truism that

that man is responsible for much of the environmental challenges today, it is still up to him to seek redress and restore the balance. And so, if the caretaker of the environment (man) gets compromised, the resultant effect will be unprecedented ecological crisis.

A second charge against cybernetic immortality will be that it bifurcates reality into its constituent parts, destroying that seamless unity that exists in the universe among the physical, the spiritual, man, non-human animals, plants, and inanimate objects. Cybernetic immortality denies the spiritual dimensions of man and the universe, traps the essence of man in his brain, and inadvertently conceives of everything in nature as a mere means for realizing man's selfish ambitions. This is diametrically opposed to the African worldview which embraces a metaphysical undercurrent to the physical, and sees the constitutive parts of both realities in a unified macrocosm. This forms the basis of her bioconservative poise towards the environment. For the African, to break these relational links, as the cyber immortalist does, will cause the individual parts of the earth to see themselves as antigens and antibodies in a cataclysmic macrocosm; gunning for domination through manipulation, exploitation, and intimidation, rather than amiable exploration and cooperation towards a teleological end. This will breed brute rivalry and an unhealthy level of competition between the biotic and abiotic factors of the ecosystem. It becomes a fierce battle for supremacy and dominance, and the survival of the fittest; with the individual parts eating into themselves. In the end, man suffers, nature suffers, and spirits also suffer.

Another issue that may be raised against cybernetic immortality is its subtle consideration of biological life and nature as a limitation to be escaped from. Though rarely explicitly stated, this underlying grievance against the human body and nature,

as though it were an incurable disease, informs the cyber immortalist's drive to find a cure (i.e. to leave the human body and natural environment and become avatars in a digital environment). They believe that this is the only solution to breaking free from the limitations of space, time, disease, ignorance, suffering, and death. But how do we react to diseases? Yes! We hate them and fight them like we would an infernal foe. Such an attitude towards the natural environment will lead to an aggressive exploitation of the earth's resources to achieve this goal; leading to an eventual abandonment of nature. In reaction to this possible outcome, it is as if I could already hear the conservative African bemoaning, "Who would take care of mother earth?" "Who owns those who live in this alternate virtuaverse—the company that owns the server or the entities in the server?" "Are those copies of me in cyberspace really me?" These and many more similar contentions will make the African anthropologist, rather stick to his biological body and strive to maintain his primeval duty of maintaining harmony and balance in the universe.

Furthermore, cybernetic immortalists seem to superimpose the artificial over the natural in a parasitic manner. This gradation begins with artificially complementing body parts; then the body is eventually abandoned for synthetic or silicone bodies; then we finally end up as software in a computer! The African anthropologist would contend that this mindset would lead to a slippery slope error that would include the annihilation of the natural environment as we know it. Africans believe that artificiality ought not to take the place of the natural. At best, they can both work together in a symbiotic relationship to maximize life's possibilities.

This last point to be raised is in regards to morality and the meaning of life. Cybernetic immortality conceive of evil materially; hence, the need to do away with that material (i.e. the human body and the natural world). However, the African sees evil as an exercise of freewill and a thermometer for measuring the moral temperature of a person. Thus, while the cybernetic immortalist is consumed with the desire of living forever, the African is worried whether this will deal with the evil concupiscence in man. If the same evil persons we live with in this natural environment will retain their evil nature in a virtual reality, what then will be the desirability of living eternally with them? What will be the moral status of cyber immortals? The promise of living forever therefore, does not even solve the fundamental problem of evil and the ultimate meaning of life, it rather complicates it. Death and the cycle of life is considered by the African as nature's way of maintaining balance, renewing the freshness her beauty and substance; and cushioning against overpopulation and undue pressure on her limited resources. Supposing we could achieve digital immortality via silicone bodies, we would then have to deal with the greater problem of an ever growing human population (having the freewill for good or evil; that is if man's freedom is not taken away by mind engineering), on a static universe with limited resources. The environmental consequences of what I would rather call a dystopia, are only better imagined.

Conclusion

Does this bioconservative approach to the techno-progressive drive of transhumanism, negate altogether the need for technology and artificiality? Judging how much Africa has embraced technological trends and how it has aided in improving her standard of living, it is nearly impossible to answer in the affirmative. Rather, insights from her ecological worldview would encourage man's use of technology, within

reasonable limits that maximizes man's exploration of all of nature's resources at his disposal; while also maintaining man's personality, and the integrity of the harmony among all the agents and factors in the ecosystem in their rightful place. It is also worthy of note that there are several transhumanist propositions that are compatible and even encouraged within the African worldview. Areas of compatibility, and what particular paradigms, possibilities, and projects are tenable within the African mindset could be engaging areas for further research.

References

- Appiah, K. (2004). "Akan and Euro-American Concepts of the Person". In Brown, L.M. (ed). *African Philosophy: New and Traditional Perspectives*. New York: Oxford University Press, pp 21-34.
- Asuquo, O. (2011). "A Rationalization of an African Concept of Life, Death and the Hereafter". *American Journal of Social and Management Sciences*, 2(1): 171-175.
- Baloyi, L., & Makobe-Rabothata, M. (2014). "The African Conception of Death: A Cultural Implication". In Jackson L., Meiring, D. Van de Vijver, F., Idemoudia, E. & Gabrenya K. (Eds.), *Toward Sustainable Development through Nurturing Diversity: Proceedings from the 21st International Congress of the International Association for Cross Cultural Psychology*. Retrieved from https://scholarworks.gvsu.edu/iaccp_papers/119/
- Barney, K., & Perkinson, M. (2016). *Occupational Therapy with Aging Adults: Promoting Quality of Life through Collaborative Practice*. St. Louis, MO: Elsevier.

- Bassey, A. (2019). "Anthropoholism as an Authentic Tool for Environmental Management". *Int. J. of Environmental Pollution & Environmental Modelling*, Vol. 2(3):160-168.
- Behrens, K. (2010). "Exploring African Holism with Respect to the Environment". *Environmental Values* 19: 465-484.
- Beyers, J., (2010). "What is Religion? An African Understanding". *HTS Teologiese Studies/Theological Studies*; Vol. 66 No. 1: 2- 8.
- Bickle, J. (2020). "Multiple Realizability". *The Stanford Encyclopedia of Philosophy*. Edward N. Zalta (ed.), Retrieved from <https://plato.stanford.edu/archives/sum2020/entries/multiple-realizability/>
- Cocchiarella, N. (2019). "Can an AI System Think? Functionalism and the Nature of Morality". *Conference Paper Presented in Benevento, Italy, at the conference of the Universit degli studi del Sannio - Liceo classico Pietro Giannone: Incontri 2019 su Scienza e Pensiero: La Complessit.*
- Cox, J. (1998). *Rites of Passage in Contemporary Africa: Interaction between Christian and African Traditional Religions*. Eds. Cardiff.
- Doyle, J. (2018). *What Does it Mean to be Human? Life, Death, Personhood and the Transhumanist Movement*. Switzerland: Springer.
- Drozdek, A. (2015). "On Cyberimmortality". *Analiza i Egzystencja*, ISSN 1734-9923; DOI: 10.18276/aie.2015.31-01
- Edwards, S. (2015). "Some Southern African Views on Interconnectedness with Special Reference to Indigenous Knowledge". *Indilinga – African Journal of Indigenous Knowledge Systems*; Vol. 14, (2): 272-283.

- Gbadegesin, S. (1991). *African Philosophy: Traditional Yoruba Philosophy and Contemporary African Realities*. New York: Peter Lang.
- Griffen, A. (1993). "Holism in Nursing: Implication and Evaluation". *British Journal of Nursing*; Vol. 2 No. 6: 310-312.
- Gyekye, K., 1987, *An Essay on African Philosophical Thought: The Akan Conceptual Scheme*. Cambridge: Cambridge University Press.
- Itskov, D. (2013). "On the Path to a New Evolutionary Strategy". *Global Future 2045 International Congress*; New York: Lincoln Centre.
- Johnson, A. (2015). "Return of the Corporeal Battle: How Second-Century Christology Struggles Inform the Transhumanism Debate". In *Religion and Transhumanism: The Unknown Future of Human Enhancement*; Ed. by Calvin Mercer and Tracy J. T. Rothen; California: Prager.
- Kanu, A. (2013). "Dimensions of African Cosmology". *Journal of African Philosophy, Culture and Religion*, Vol. 2, No. 2: 533-555.
- Kanu, I. A. (2015a). *A hermeneutic approach to African Traditional Religion, philosophy and theology*. Augustinian Publications: Nigeria
- Kanu, I. A. (2015b). *African philosophy: An ontologico-existential approach to classical and contemporary issues*. Augustinian Publications: Nigeria
- Kurzweil, R (1999). *The Age of Spiritual Machines: When Computers Exceed Human Intel- ligence*. New York: Viking.
- Kurzweil, R. (2005). *The Singularity is Near: When Humans Transcend Biology*. New York: Viking.

- Levin, J. (2018). "Functionalism". *The Stanford Encyclopedia of Philosophy*. Edward N. Zalta (ed.) <https://plato.stanford.edu/archives/fall2018/entries/functionalism>.
- Mbessa, D. (2020). "African Bioconservatism and the Challenge of the Transhumanist Technoprogressism". *Open Journal of Philosophy*; 10: 443-459.
- Mbiti, J. (1970). *Concepts of God in Africa*. New York: Pareger, 1970.
- Mbiti, J. (1980). *African Religions and Philosophy*. London: Heinemann.
- Menkiti, A. (1984). "Person and Community in African Traditional Thought". In Wright, R (ed). *African Philosophy: An Introduction*. Lanham: University Press of America, pp 171-181.
- Moravec, H. (1988). *Mind Children: The Future of Robot and Human Intelligence*. Cambridge: Harvard University Press.
- Mosha, S. (2000). *The Heartbeat of Indigenous Africa*. New York.
- Nelson, R. (2015). "Cybernetic Immortality and its Discontents". *Theology and Science*; 13:2, p. 162-174.
- Njoku, F. (2002). *Essays in African Philosophy, Thought And Theology*. Owerri: Clacom.
- Okoro, K. (2019). "African (Igbo) Holism: A Model for the Contemporary Quest for an Integrated Community/Humanity". *The International Journal of Human Resource Management*; 15 (1): 1-16.
- Okwu, A. (1979). "Life, Death, Reincarnation, and Traditional Healing in Africa". *A Journal of Opinion*, Vol. 9, No. 3: 19-24.
- Opoku, K. (1978). *West African Traditional Religion*. Lagos: F. E. P.

- Opoku, K. (1993). "African Traditional Religion: An Enduring Heritage". In Olupona K. & Nyang, S. (Eds.), *Religious Plurality in Africa: Essays in Honour of John S. Mbiti*. Berlin: Mouton de Gruyter.
- Polger, T. (2020). "Functionalism". *Internet Encyclopedia of Philosophy*. Retrieved from <https://www.iep.utm.edu/functism/>
- Smuts, J. (1927). *Holism and Evolution*. London: MacMillan.
- Steyne, P. (1990). *Gods of Power: A Study of the Beliefs and Practices of Animists*. Houston: Touch Publications.
- Sullivan, M. (2003). "The Conception View of Personhood: A Review". *Ethics and Medicine*, Vol. 19: 1, pp. 11-33.
- Tempels, P. (1959). *Bantu Philosophy*. Paris: Presence Africaine.
- Turaki, Y. (2000). "Africa Traditional Religious System as Basis of Understanding Christian Spiritual Warfare". Retrieved from lausanne.org/content/west-african-case-study.
- Uduigwomen, A. (2004). "Reincarnation as a Metaphysical Principle of Explanation in African Traditional Thought: A Critique". *Global Journal of Humanities*; Vol. 3, No. 1 & 2: 15-19.
- Wiredu K. (1992). "Death and the Afterlife in African Culture". In Wiredu K., Gyekye K., (Eds.). *Person and Community: Ghanaian Philosophical Studies I*. Washington, DC: Council for Research in Values and Philosophy.
- Wiredu, K. (1995). "The Concept of Mind". In Kwame, S. (ed). *Readings in African Philosophy: An Akan Collection*. London: University Press of America, pp 125-145.

Chapter Twelve

CONFLICTING PERCEPTIONS OF TRADITIONAL MEDICINE IN THE OKU FONDOM, BAMENDA (CAMEROON): THE QUESTION OF ECOLOGICAL CONTEXT

Nixon Kahjum Takor & Gilbert Mbingek Wensakwi

Department of History & Archaeology

The University of Bamenda

takornixon@yahoo.com

Executive Summary

Conflicting schools of thought have come up regarding the practice of traditional medicine in Africa. Others argued that the practice was demonic and contradictory to the will of God while others saw the practice as a gift and the blessing of God upon them. It is with this that this paper maintained that the practice of traditional medicine in Oku Fondom was a strong bone of contention between the western institutions and the 270rade-practitioners. In an attempt to address this issue, the paper made appeal to a wide range of primary, mainly, oral sources and complements with some secondary data. The data obtained was analyzed using qualitative and narrative approach. The study revealed that the practice of traditional medicine in Oku was the main point of division between the western, principally Christian-faith based institutions and the 270rade-practitioners. It was also discovered that traditional medicine had been a long established and resilient practice in the Oku Fondom, in spite threats from western medical advocacy and facilities.

Keywords: Conflicting, Perception, Traditional, Medicine, Oku, Bamenda, Grassfields, Cameroon.

Introduction

Traditional medicine is a facet of a people's culture which focuses on the use of herbs to restore health. This practice was a characteristic of the African society where most communities utilized natural products like leaves, bark of trees, roots of trees as well as certain animal parts for healing. The process was cheap and easy to access than western medicine and for this reason, many people went in for it. The healing process was almost similar in the different African societies given the fact that African societies had interrelated cultural values. In Oku, one of the typical African societies located in the Bamenda Grassfields of Cameroon, the practice of traditional medicine was identical to the people. It was practiced in a way that just seeing an Oku man, the first thought was traditional medicine. Both spiritual and physical traditional healing was practiced in the Fondom whereby the spiritual forces were invited through incantations to come and help in the healing process. With the spiritual practice, most of the healers became deeply involved and believed in African Traditional Religion (ATR) than in Christianity. They believed that their world and their activities were influenced first by God almighty, gods, deities and ancestral spirit. This made the Christians and western institutions to see traditional doctors and their practices as devilish. Others who have seen the effectiveness of traditional medicine perceived it as God's way to keep the underprivileged healthy. This then led to the conflict of philosophies on the perception of traditional medicine in Oku Fondom. This paper argues that the implantation of Western institutions in Oku ushered in the atmosphere of conflicting perception of traditional medicine in the Fondom. This paper is divided into two parts; the first part brings out the various views about traditional medicine by the western institutions and the second part examines the views of this practice by the traditional medical practitioners and their faithfuls in Oku.

Conflicting philosophies about traditional medicine

The argument raised here is that the colonization of Cameroon led to the spread of western cultures like Christianity, western medicine and western education all over Cameroon including Oku. These western institutions did not see anything good about the culture of Oku including the practice of traditional medicine. This led to the growth of two factions strongly opposing each other in their observation of traditional medical practice in Oku Fandom.

Institutions such as the church, western health units, western educational institution and their converts regarded traditional medicine with a pejorative mindset. They saw nothing important about traditional medicine and preached strongly against the practice. Each of these institutions had its own way in which it perceived traditional medicine and Oku culture at large. They tried all their efforts to make sure that the culture of Oku including traditional medicine was relegated to the background and made sure that the western cultural norms were promoted. In less than no time, their influence was felt all over Oku as even those who had been faithful to the practice of traditional medicine got converted to embrace the Eurocentric view of the Oku traditional healing. These converts spread contrary messages to the practice of traditional healing more than the institutions which got them converted.¹

The Perception of the Church

¹ Interview with Tata Ngoran, 52, Traditional doctor, Bow-Oku, 21st February 2020.

To the church, there was nothing godly in the practice of traditional medicine. It regarded traditional healing as satanic, metaphysically influenced from the marine world or dark forces. These prerogatives and misconceived perceptions of traditional healing started shortly after the first Baptist church was established in the Fondom around the 1930s.² Around 1930s, the first seed of radical Christianity emerged in Oku with the foundation of Jiane Baptist church under Moses Nkeng. He was the first to conceive the western Christian value in the land of Oku. He was well grounded and directed with the instruction of operating a mission in Oku.³ He, and his entourage preached and converted many indigenes to Christ which was appreciated.⁴ In less than no time, Jiane Baptist church started preaching against the cultural practices of Oku including traditional healing. They considered traditional healers as agents of Satan and any of their members who visited a traditional healer was sanctioned from the church.⁵

In the year 2000, the second violent Christian mission that was also against the cultural values of Oku known as the Full Gospel Mission was established in the land. Before then, the Roman Catholic Church was already operating in Oku.⁶ The Catholic Church did not have anything negative about the practice of traditional medicine in Oku. Rather, one of the Rev. Fathers who was equally an Anthropologist Herman Gufler was initiated into

² Interview with Tankwa George, 42, Teacher, Mbam- Oku, 18th March 2020.

³ Interview with Ndishiangong John, 84, Traditional doctor, Jikijem- Oku, 12th October 2019.

⁴ Interview with David Nchinda, 71, Traditional doctor, Elak-Oku, 17th November 2019.

⁵ interview with George Nkwain, 78, Traditional doctor, Mam-Oku, 25th November 2019.

⁶ Interview with Fai Balebay, 84, Notable, Third in Command after the Fon in Oku, Elak-Oku, 24th November 2019.

the Oku tradition to the extent that he held titles in *Mfu* and *Manjong* houses and was appointed into the Kwifon society by the traditional authorities of Oku.⁷ The traditional healers and the Catholics in Oku lived harmoniously contrary to the Baptist and Full Gospel views of traditional medical practices in Oku.⁸

The Full Gospel missionaries organized programs over the Oku Community Radio (OCR) titled “The Revivals” with the aim of cubing the spread of traditional medical practices in Oku.⁹ They made the inhabitants of Oku to know that the practice of traditional medicine was against the will of God.¹⁰ They held that traditional healers invited spirits by calling upon the gods, deities and ancestral forces in their healing operation which was unscriptural. These messages preached over the Oku Community Radio went viral not only in Oku but to the neighboring villages. This made people to associate traditional healing in Oku with witchcraft and with this, just hearing Oku in any part of Cameroon, the first thought was traditional medicine. Thus, the advent of Christianity in Oku, especially the Baptist and the Full Gospel perceived traditional medicine as ungodly practice influenced by marine forces. They associated everything in relation to Christian values with short sightedness in understanding that before the advent of Christianity, the people of Oku were believers.¹¹ They practiced ATR (African

⁷ Mfu and Manjong were the military units in the land of Oku. In times of war, these units were charged with the task of organizing young to fight in the protection of the land. While Kwifon was a regulatory society in the land Oku. It was charged with the task of judging and sanctioning the defaulters of the norms in Oku.

⁸ Interview with Godlove Fenge, 51, Traditional doctor, Bow-Oku, 26th November 2019.

⁹ Interview with Tendong Stephen, 55, Ful Gospel Pastor 2000, 26th November 2019.

¹⁰ Interview with Wirkar Sonjom, 61, Traditional doctor, Lui-Oku, 29th November 2019.

¹¹ Idem

Traditional Religion) which strongly held God as ultimate and creator of mankind.

The views of Western Medical Institutions

The western expression about traditional medicine in Oku was noticed in 1913 when the Society of Jesuit opened the first western health unit in the Nso Kingdom precisely at Shisong. The effect of this health unit was felt throughout the region including Oku as part of Nso Kingdom. Their arrival ushered in another conflict about traditional medicine as they saw it as unhygienic, archaic and primitive. They went around preaching against the practice in the pretext that the herbalists were not having equipments which could be used in the scientific laboratory screening of diseases. To them, the traditional medical practitioners in Oku were based on the trial and error method of treatment which was dangerous to the patients.¹² This made some of the indigenes to be skeptical about traditional medical healing in the land. The messages of the archaic and unhygienic nature of the traditional medicine was widened in the 1960s and 1980s, with the creation of the Elak Health Centre respectively Jikijem Baptist Health Centre. Their views and perceptions about the traditional healing reached almost every angle of Oku.¹³ These derogatory and misguided views of traditional medicine by the western health institutions corrupted the minds of people who had been faithful to the practice of traditional healing thereby making them to embrace the western culture of healing.¹⁴ This led to the elbowing of indigenous cultural methods of healing by the western culture thereby provoking

¹² Joan Wirba, "Interaction between Traditional and Western Medicine in Nso Land 1820-2000", (DEPES II Dissertation in History, University of Yaounde, 2011), 53.

¹³ Interview with David Nchinda, 71, Traditional doctor, Elak-Oku, 17th November 2019.

¹⁴ Interview with Shy Suly, 50, Traditional doctor, Ibal-Oku, 19th November 2019.

resistances from the faithful and devoted practitioners of traditional healing Oku.

Gebremichael puts it generally that modern health professionals consider traditional medical practices as a practice that serves no purpose and several times it has been stated that the continuous existence of traditional medicine was merely because of lack of access to modern health facilities.¹⁵

Western Education

One of the domains through which traditional medicine was viewed as inferior was in the various western schools. The type of education rendered was the type that perceived Oku culture engulfing traditional medicine as archaic and backward. These educational institutions rendered the western culture of healing superior to the African way of healing.¹⁶ The western educated ambassadors carried out a derogating mentorship of the inhabitants of Oku to see traditional medicine as nothing than an exploitative and barbaric practice. Noting is the fact that before the advent of western education in Oku, there was a concrete, more precise and specialized educational system where children in families where traditional healing was practiced spend their time under the mentorship of the practitioners. They were educated on the effectiveness and utilization of one medicinal plant to another. This system of education was based on the transfer of healing skills and knowledge to the next of kin.¹⁷ The coming of the Western education did not take all these learnt

¹⁵ Gebremichael Habtom, "Perceptions and Attitudes of Modern and Traditional Medical Practitioners about Traditional Medical Practices in Eritrea," *International Journal of Complementary and Alternative Medicine* 12, no.1 (2010):18-27.

¹⁶ Klaus G., "WHO Guide Lines Challenges in Botswana: Traditional Medicine between Healing, Politics and Witchcraft," *Journal of Political Ecology*, 2, no.5 (2018):27.

¹⁷ Interview with Jerimiah Tanjong, 89, Notable and a traditional doctor, 5th December 2019.

skills and practice into consideration and as a result no aspect of traditional healing was promoted in the various schools.¹⁸ With this, after a child could reach secondary school, his interest in the traditional practice and culture was already assimilated by the western culture as a result of western education.

The western education as one of the agents of the Western institutions contributed a lot in wiping out the traditional medical practices and Oku culture as a whole.¹⁹ It almost made those who had received concrete help from traditional healing to regard traditional medicine as barbaric and archaic.²⁰ These perceptions of traditional medicine by western institutions and their ambassadors were bitterly counteracted and backed by the devoted and faithful traditional healers and those who held Oku culture at heart.

The Counter Views of Traditional Practitioners

Most of the traditional healers perceived traditional medicine as a gift from God to Oku Fondom. The indigenous medical practitioners in Oku and their faithful strongly stood against the various views of western institutions on the practice of indigenous healing. They came out to debunk the imagery projected by these institutions especially the interpretation that traditional medicine in Oku was devilish, insanitary and lacked method.

Quoting from Ezekiel 47:12, one of the traditional doctors made it clear that the first medical practice to be approved by God was Traditional Medicine. He said that God commanded the people as seen from this scripture to use herbs for healing and fruits of

¹⁸ Idem

¹⁹ Interview with Samuel Ngoran, 75, Traditional doctor, Chack-Oku, 28th November 2019.

²⁰ Idem

the tree for food and that this was the bedrock of African traditional medicine.²¹ The indigenous healers in Oku harvested prescribed and well researched herbs, concurred them according to the norms of healing in the land and gave them to their patients.²² Worthy of note was the fact that these healing procedures were done for little or no compensation as a fowl and three coins were taken in some instances.

Traditional herbalists went to the OCR to educate the people on the differences between traditional herbalist and witch doctors.²³ They moved around the Fondom making the indigenous people to realize the harm that Westerners had caused to the culture of Oku.²⁴ Thus, they greatly stood against the views of the West with regards to traditional medicine.

Seimboh Moses, one of the healers in Oku made it clear that, in the healing process, God Almighty was first invited upon the herbs with the indulgent that only the spirit of God upon the herbs could enable healing. After the invitation of God almighty, gods of the land and the ancestors were called upon. This was in accordance with the norms of the African religion. He further expressed that dwelling on the view that African traditional practices in Oku were ungodly, was just in accordance with the western believe system which considered the western culture superior to that of the indigenous people of Oku.²⁵

Not only did the indigenous population see traditional medicine as cheap, they equally saw it as a means of administering justice

²¹ Interview with Emile Kelei, 42, Mechanics, Bow-Oku, 6th December 2019.

²² Interview with George Chongwan, Business Man, Mbam-Oku, 8th December 2019.

²³ Interview with Tanjong

²⁴ Idem

²⁵ Interview with Seimboh Moses, 53, Mbam Oku, Notable, 6th January 2020.

in the society.²⁶ When your items were stolen, there was no need for yelling, the owner of the stolen property simply went and saw a traditional doctor who upon incantations called the names of gods and ancestors of Oku, killed a fowl on certain property he took to represent the stolen goods and in less than three days, the person who took the goods was inflicted and if he did not show up fast, he died within twenty one days, Ngoran Samuel recounted.²⁷ This method helped to reduce the rate of robbery in Oku thereby bringing about peace and Order. Also, in some instances, thunder was sent to fetch out the person who was guilty of theft. This was all thanks to the ability of traditional doctors to use herbs in the control of the cosmological forces. Lightning and thunder could easily be controlled to deliver a message to a far-off village.²⁸ Thus, this made traditional medicine to be interesting to most of the inhabitants of Oku.

The traditional healers saw and perceived the traditional practices as a virtuous activity especially as from 1992 to 2006. This period marked the reign of Fon Ngum III who was working with the Baptist Fields management in Oku. He struggled to blend Christianity and tradition including traditional medicine. He saw nothing wrong with the practice of traditional medicine in as much as it was for the good of the people and for the purpose of restoring life.²⁹ The Fon held that it was not good to contradict certain healing practices, for their purpose were to save lives and to make sure everybody was healthy. According

²⁶ Idem

²⁷ Interview with Ngoran

²⁸ Interview with Seimboh

²⁹ Interview with Balack Philemon, 43, wood Carver, Ngashie- Oku, 4th December 2019.

to the Fon, no healing method was more than the other as long as the purpose was to bring healing.³⁰

To Fon Ngum III, there was no condemnation of traditional medicine in the bible as God even approved herbs for healing in the bible.³¹ He saw traditional metaphysical medicine used in the treatment of spiritual disease as the black man's own method of taking life from the spiritual forces to the physical. He debunked and castigated the pejorative perception of traditional medicine by Christian missionaries and western medical units and made them to understand that it was a practice since the foundation of Oku.³² So, the people of Oku could not be separated from their practices in as much as the purpose was genuine. Before his demise in 2006, he had tried to reconcile the traditional norms of Oku with the various Western medical units in the Fondom.³³ His preaching made traditional medical practitioners and western medical practitioners to co-exist with each other.

Conclusion

Taking into consideration the views of the two factions, it can, therefore, be judged that there was no agreements as regard the practice of traditional medicine in Oku. On the one hand, Christian missions mostly the Pentecostal missionaries saw it as satanic, ungodly and contradictory to the Word of God. On the part of the western medical units, they saw it as archaic, barbaric, and unhygienic and a mode through which diseases could be further spread from one patient to another. With this, they

³⁰ Interview with John Nshom, 71, Traditional Healer, Jikijem-Oku, 28th October 2019.

³¹ Interview with Fai Balanjoh, 93, Bow-Oku, Chief and a traditional doctor, 21st February 2020.

³² Fai Nsanen, 94, Notable and second in Command to the Fon, Mban-Oku, 19th November 2019.

³³ Interview with John Ndawei, 59, branch president OTHA, Manchock- Oku, 12th November 2019.

struggled to call the practice of traditional medicine off the minds of the inhabitants of Oku. On the other hand, traditional practitioners considered traditional medicine as a gift from God to the under privileged and poor mass. They saw it as cheap and a way through which justice was administered in Oku. In regard of this, we can, therefore, say that the world is endowed with diversity of ecological opportunities to be exploited by the human society. The western culture of healing pertained to an ecological context which might not always be adaptable to the African social niche.

Works cited

Primary sources

- Tata, Emmanuel. 64. Irish producer and Notable. Mbam-Oku, 27th September 2019
- Ful, Francise. 71. President OTHA. Elak brange, Elak-Oku, 26th February 2020
- Ngoran, Samuel. 82. Brange President OTHA. Chack, Ngham-Oku, 28th Nuvember 2019
- Nshom, Godwin. 85. Native doctor and Nchinda. Elak-oku, 5th September 2019.
- Fai, Nsanen. 94. Notable and second in Command to the Fon. Mban-Oku, 19th November 2019.
- Seimboh Moses. 53. Notable and Traditional doctor. Mbam Oku, 6th January 2020.
- Ndawei, John. 59. Branch president OTHA. Manchock- Oku, 12th November 2019
- Ndifon, Lamnyam. 65. Traditional doctor. Ichim-Oku, 28th November 2019.
- Abanda, Tangwa. 61. Chief and former Journalist of OCR. Elak-Oku, 24th November 2019.
- Ngek, Emmanuel. 49. Manager of Oku Palace Museum. Elak-Oku, 11th January 2020.

- Bvelewa, Mawoh. 47. Hunter and Traditional doctor. Mbingek Gilbert. Chack-Oku, 23rd January 2020
- Shey, Tanjong.59. Traditional doctor and Nchinda. Boh-Oku, 28th December 2019.
- Ndishiangong, John. 84. Traditional doctor. Jikijem- Oku, 12th October 2019.
- Lami, Tata. 66. *Nchinda* and a Traditional doctor. Lum, 18th December 2019
- Ngoran, Samuel. 75. Traditional doctor. Chack-Oku, 28th November 2019.
- Fai, Balebay. 84. Notable, Third in Command after the Fon in Oku. Elak-Oku, 24th November 2019.
- Tendong, Stephen. 55. Ful Gospel Pastor. Manckock-Oku, 26th November 2019.
- Tanjong, Jerimiah. 89. Notable and a traditional doctor. Fekeng-Oku, 5th December 2019.
- Ngoran, Samuel. 75. Traditional doctor. Chack-Oku, 28th November 2019.
- Tah, God's will. 58. Hunter. Ketonghang-Oku, 26th November 2019.
- Suly, Shy. 50. Traditional doctor. Ibal-Oku, 19th November 2019.
- Labah, John.67. Tractional doctor. Lui-Oku, 28th December 2019.
- Kelei, Emile. 42. Mechanics. Bow-Oku, 6th December 2019.
- Tanjong, John. 76. Jikijem-Oku, Notable, 22nd January 2020.
- Meghanle, Jeremiah.46. Nchinda. Elak-Oku, 25th January 2020.
- Ngong, Henry.47. Traditional doctor. Chack-Oku, 19th January 2020.
- Balanjoh, Fai. 93. Bow-Oku, Chief, 21st February 2020.
- Tata, Ngoran. 47. Traditional doctor. Bow-Oku, 17th February 2020.
- Ngek, Ephesians. 55. Black Smith. Nghashie-Oku, 4th march 2020.
- Nkwambi, Ernest. 46. Bow-Oku, Traditional doctor, 25th January 2020.

Nshom, Peter. 63. Traditional doctor. Fekeng-Oku, 16th February 2020

Nshom, John. 71. Traditional Healer. Jikijem-Oku, 28th October 2019

Nchinda, David. 71. Traditional doctor. Elak-Oku, 17th November 2019.

Fenge, Godlove. 51. Traditional doctor. Bow-Oku, 26th November 2019.

Secondary sources

Books

Aaron, Neba. *Modern Geography of the Republic Cameroon*. New York: Neba Publishers, 1987.

Brannen, G. *Tikari Traditions of the Cameroon Grassfields, Explanatory Model of Illnesses*. Bamenda: Anoh's Printing Services, 1998.

Eyongetah, Tambi et al. *A History of Cameroon*. Hong Kong: Longman Group limited, 1974.

Inwagen, Van. *Metaphysics and Philosophy*. London: Renat Printing, 2007.

Mutuku, Peter. *Metaphysics and Techniques*. Ghana: Gandhi printing press, 2010.

Nkwi, N.P and Warnier, J.P. *Elements for a History of the Western Grassfields*. Publication of the Department of Sociology, University of Yaounde, 1982.

Rai, Fuad. *Concept of Health*. Geneva: LUMS, 1999.

Vorly, Ethan. *Metaphysics Alchemy Realm*. London: ARHI publishing, 2006.

World Health Organisation. *Guidelines on Developing Consumer Information on Proper Use of Traditional, Complementary and Alternative Medicine*. Italy: WHO Library of cataloguing in Publication, 2004.

Articles

- Bolak, Mark. "Local Reaction to British Introduction of Scientific Medicine in Southern Cameroons." *Palgo Journal of Medicine and Medical Sciences* 5, no.4. (2018): 2-4.
- Brempong, Owusu. "Libation in HighLife Songs." *The African Journal Project* 6, no.2 (2000): 39.
- Duru, Walter. "The Communication of Incantation in the Traditional Igbo Society." *Journal of Medical and Communication Studies* 8, no.9. (2006): 321.
- Fogwe, Zaphania et al. "Geographical Patterns and Issues in the Development of Cameroonian Traditional Medicine in Oku ("Small India"), North West Region." *African Humanity Review, A Multidisciplinary Journal* 2, no.1. (2016): 101-116.
- Gyasi, Razak "Public Perceptions of the Role of Traditional Medicine in the Health Care Delivery System in Ghana." *Global Journal of Health Science* 3, no.2. (2011): 40-49.
- Habtom, Gebremichael. "Perceptions and Attitudes of Modern and Traditional Medical Practitioners about Traditional Medical Practices in Eritrea." *International Journal of Complementary and Alternative Medicine* 12, no.1. (2010): 18-27.
- Klaus, G. " WHO Guide lines Challenges in Botswana: Traditional Medicine between Healing, Politics and Witchcraft." *Journal of Political Ecology*, 2, no.5. (2018): 24-55.
- Mutuku, Peter. " Western Christian Interpretation of African Traditional Medicine: The case of Akamba Herbal Medicine." *Ilorin Journal of Religious Studies*, 8, no.1. (2012): 42-58.
- Ohemu et al. " Knowledge, Attitude and Practice of Traditional Among People of Jos, North Local Government Area Plateau State, Nigeria." *International Journal of*

Pharmacognosy and Phytochemical Research 9, no.10.
(2010): 15-36.

Sekhar, Sonal." Herbalism: A Phenominon of New Age in
Medicine." *Journal of Pharmacology* 5, no.3.
(2005):

Dissertations and Thesis

G.M, Ngum. " The Kilum-Ijim Forest Project in Oku, 1987-2004:
A Historical Perspective." M.A

K, Mulemfo. " Tradition and Christian concept of Diseases and
Healing among the Manianga." PhD Thesis in
Missiology, University of Pretoria, 2008.

k., Mulemfo. " Tradition and Christian concept of Diseases and
Healing among the Manianga." PhD Thesis in
Missiology, University of Pretoria, 2008.

Lum, E.N."Evolution of Traditional Medical Practice in
Mankon from Pre-Colonial time to
2000." MA Dissertation in History University of
Yaounde 1, 2008.

N.P, Nkwi and J.P, Warnier." Elements for a History of the
Western Grassfields." Publication of the Department
of Sociology, University of Yaounde, 1982.

Wirba, Joan. " Interaction between Traditional and Western
Medicine in Nso Land 1820-2000." DEPES II
Dissertation in History, University of Yaounde,
2011.

Zimba, Zebonele." Challenges Faced by Traditional Healers
when Treating People Living With HIV and AIDS:
the Case of Intsika Municipality, Eastern Cape
Province of South Africa." PhD Thesis in Social
Works and Social Development, University of Fort
Hare, 2007.

Chapter Thirteen

GREEN CULTURAL PRACTICES AND SUSTAINABLE BUSINESS MANAGEMENT

Okanazu, Oliver Okechukwu

Department of Business Education,

University of Nigeria, Nsukka,

Enugu State

&

Akele, Francis Egberi

Department of Business Education

School of Vocational Technical Education

Isaac Jasper Boro College of Education,

Bayelsa State

Executive Summary

This study identified green culture practices for sustainable business management in a world of change in Anambra and Enugu States, Nigeria. Three research questions guided the study while three null hypotheses were tested at $P \leq 0.05$ level of significance. Survey research design was adopted for the study. The population for the study consists of all the 547 registered SMEs in the two states of the South East zone. The instrument for data collection was a structured 43-item questionnaire titled: Green Culture Practices for Sustainable Business Management Questionnaire (GCPSBMQ). The reliability of the instrument was ascertained using Cronbach Alpha reliability method. The data collected were analyzed using mean and standard deviation for answering the research questions while t-test was used for testing the null hypotheses. Result obtained indicated that discouragement on the use of hazardous chemical in production, encouragement of proper waste management, discouragement of the use of plastic bottles, over exploitation of nonrenewable

resources, encouragement of the use of reusable materials, recyclable materials, biodegradable products, energy saving equipment, environmental friendly products among others as parts of green cultural practices for sustainable business management in a world of change. The result of the hypotheses showed no significant difference in the mean ratings of rural and urban, high and less experienced, educated and less education SMEs business managers/operators in three categories of location, experiences and education. The study, among others, recommended that SMEs business managers/operators should attend training on green cultural practices in order to address the cultural, religious and social barriers that hinders the adoption of green cultural practices in their business operations.

Keywords: Green business, Green cultural, sustainability, business management.

Introduction

In today's world, sustainability is referring to continuity of resources for coming generation and how it can be used consciously. But Sustainability according to Gupata, and Kumar (2013) has often been defined as how biological systems endure and remain diverse and productive. But, the 21st century definition of sustainability goes far beyond these narrow parameters. Today, sustainability refers to the need to develop the sustainable models necessary for both the human race and planet earth to survive. It is the study of how natural systems function, remain diverse and produce everything it needs for the ecology to remain in balance. Sustainability looks to protect our natural environment, human and ecological health, while driving innovation and not compromising our way of life (Keskin, Diehl, & Molenaar, 2013). Sustainability, according to Tokgoz and Once (2009), focuses on meeting the needs of the present without compromising the ability of the future

generation to meet their needs. To the authors, the concept of sustainability is composed of three pillars: economic, environmental and social- also known informally as profits, planet and people. Sustainability emerged as a component of corporate ethics in response to perceived public discontent over the long-term damage caused by a focus on short-term profits. Over-focusing on short-term profitability have made businesses, abandoning those environmental friendly practices that help in the business survival and sustainability as such lead to many business failures.

In terms of its socio-economic perspective, sustainability is quite an important issue but may not be achieved without imbibing green cultural practices. Green culture was initially conceived as an idea to put the business sector, creative sector, agricultural sector among others at the heart of the environmental campaign. The aim is to achieve sustainable and friendly environment for the present and future generations. From the business side, the results of business operations have an effect, not only on companies, but also on society; hence acquisition of green cultural practices for sustainable business management has become a matter that should be evaluated with a holistic approach to achieve a green business.

Brown and Ratledge (2011) defined green business as an establishment that produces green output. Meanwhile, Makower and Pike (2009) noted that green businesses require a balance commitment to profitability, sustainability and humanity. According to The Business Dictionary (2018), green business is a business functioning in a capacity where no negative impact is made on the local or global environment, the community, or the economy at large. The author further noted that green business will also engage in forward-thinking policies for environmental

concerns and policies affecting human right. Similarly, Croston (2009) stated that green businesses have more sustainable business practices which are helping people live well today and tomorrow while making money and contributing to the economy. A green business is any business organization that is committed to the principals of environmental sustainability in its operations, strives to use renewable resources, and minimize the negative environmental impact of its activities (Linax, Rugile & Agne, 2014). Thus, greening a business is part of a long-term strategy of becoming sustainable. It is being able to achieve business tasks in the way that does not develop any threat-economic, social or environmental- for both current and future generations. To achieve this, business organizations must embrace green cultural practices in their day - to - day business operations.

Green culture according to Howard-Grenville, Golden-Biddle and Mao (2011), is defined as a lifestyle of making deliberate choices and decisions regarding the resources used for daily living for the purpose of minimizing resources used. It is the use of resources that are renewable. To the authors, green culture encourages the use of recycled paper, encourages the use of biodegradable products as much as possible, and discourages the use of plastic bottles made from nonrenewable resources, chemicals that are harmful to the environment among others. In the context of this study, green culture are those practices which business organizations should adopt in the cause of their business operations that are environmental friendly, reduces wastage, and be less harmful to the society.

Supporting pollution prevention through operations, minimizing resource allocation and selling greener products is not enough to be a sustainable or green organization. Businesses should think green, seek green and behave green. Green culture

will bring harmony between the human and the environment in which they live. Lloyed and Andrew (2002) noted that green culture linked human and environmental harmony together so as to achieve sustainable development of human culture, which include sustainable businesses, sustainable agriculture, sustainable forestry, among others. The authors opined that in the past 20 years, part of human society's call for foresight and practical education towards green culture. To them, the gradual emergence and formation of green production, green consumption, green industry, green trade, green business, green technology, green polities, green party, green investment, green design, green plan, green education, green school among others are conscious effort, that have been made to create green culture awareness.

The reason behind green culture focuses on significant commitment on environmental and ecological wellbeing (Therese, 2010). To the author, adoption of green cultures will create more environmentally sustainable practices into business organizations. Many business organizations around the world commit themselves to sustainability and environmentally friendly production. Therese (2010) asserted that from a purely scientific standpoint, companies have to start being sustainable through adoption of green culture. The author noted that unreasonable exploitation of nonrenewable resources will force companies to find alternatives and well-articulated government regulations will equally restrict pollution due to the global warming. Ryan (2015) outline five steps that will help business organizations foster a green corporate culture. These includes: to assess the business organization current culture; define and share organizational goals; build a nurturing environment for change; maintain consistency and motives others. These according to the author will make the sustainability goal of

business organization more reachable, measurable and manageable.

Becoming green is a multifaceted process; there are various practices that can be applied when business wants to shift to a green behaviour or culture. An environmentally aware business should participate at least in one of the “4Rs – reduction, reuse, recycling, and recovery (Kassaye, 2001). Each of these “Rs” can be achieved through several practices and using green agents. Green agents include green consumers, government and business itself. A green consumer can be defined as an individual who purchases ecologically produced or eco-friendly products – those that are made, imported and traded without causing pollution, can be reused or utilized and avoids environmentally harmful consumption by saving water and energy, through recycling (Jansson, Marell & Nordlund, 2010). On the other hand, governments should provide a regulatory framework for business operations, aimed at restricting environmentally harmful business operations and to foster the environmentally friendly business culture and behaviour (Buono, 2011). Promoting environmentally friendly business culture and behaviour can only be achieved through sustainable business management.

Sustainable business management in the context of this study is concerned with all activities associated with running a business or company be it small and medium scale enterprises, such as controlling, leading, monitoring, organizing, and planning that must be environmentally friendly and will not jeopardize the future of coming generation. Businesses irrespective of size are facing a new paradigm. According to FairRidge Group (2017) creating long-term practices that do more to respect the environment, the well-being of employees and the prospects of future generations. The author noted that these same businesses

are also expected to improve profitability, fund innovation and increase market share for current stakeholders. When this is done, it can lead to a sustainable society. A sustainable society is founded on equal access to health care; nutrition; clean water; shelter, education, energy, economic opportunities and employment (Winkler 2017). Having a sustainable society is the aim and target of business sustainability which can only be achieved through the adoption of right green cultural practices by the business organization.

Due to increased unemployment, poor standard of living as a result of incessant business failure in developing countries like Nigeria, Anambra and Enugu State in particular, the researchers' concerned is on how the adoption of green cultural practices will bring about business sustainability especially to small and medium scale enterprises (SMEs). When SMEs are sustained, they will invariably create employment, increase standard of living and develop the economy in general. Small and medium scale enterprises otherwise called small and medium sized enterprises are businesses whose personnel numbers fall below certain limits (Ministry of Business, Innovation & employment, 2014). The abbreviation "SME" is used in the European Union and by international organizations such as the World Bank, the United Nations and the World Trade organization (WTO) (Allbusiness.com, 2016). Many authors and bodies like Kalanje (2002), Osuala (2004) and World Business Council for Sustainable Development (WBCSD, 2007) are in agreement that there is no universally accepted definition of SMEs. However, they are of the view that the term SME covers a wide range of definitions and measures, varying from, country to country and between the sources reporting SME statistics. The central bank of Nigeria (2013) defines small and medium scale enterprise in Nigeria according to asset base and number of staff employed.

The criteria are an asset base equal or less than N5 million, and staff strength equal or less than 100 employees.

In the United States of America, any business with fewer than one hundred (100) employees is classified as small while medium scale business refers to a business with fewer than five hundred (500) employees (Allbusiness.com, 2016). From the forgoing, it can be deduced that small and medium scale enterprises especially in this world of change are enterprises that have the capacity to employ at most five hundred (500) employees with asset base equal or less than N5 million, being driven by the power of technology especially information and communication technology at the same time practicing or adopting green culture practices and had been proved to be the back bone of every economy. Small and medium scale enterprises (SMEs) are generally regarded as the engine of economic growth and equitable development in developing economies. They are labour intensive, capital saving and capable of helping create most of the one billion new jobs the world will need by the end of the century. They are also perceived as the key to Nigeria's economic growth, poverty alleviation and employment generation (Agwu & Emeti, 2014).

Despite these laudable benefits that SMEs are expected to bring, it seems that SMEs, especially the ones in Anambra and Enugu, are still facing challenges in the area of not using environmental friendly products, raw materials, equipment, among others, in their business operations. These challenges most times lead to business failures as a result of poor patronage by the consumers who are now more aware of the effect of artificial products on their health and on the environment. It is against this backdrop that the researchers seek to identify the green cultural practices required by small and medium scale enterprises (SMEs) business

managers/operators for sustainable business management in Anambra and Enugu State Nigeria.

Purpose of the Study

The main purpose of the study is to identify the green cultural practices required by small and medium enterprises (SMEs) business managers/operator for sustainable business management in Anambra and Enugu States, Nigeria.

Specifically, the study sought to identify the,

1. Green cultural practices required by SMEs business managers/operators for sustainable business management
2. Challenges in the adoption of green cultural practices by SMEs business managers/operators for sustainable business management
3. Strategies for improving green cultural practices by SMEs business managers/operators for sustainable business management in Anambra and Enugu State Nigeria.

Research Question

Based on the specific purpose of the study, the following research questions were formulated to guide the study:

1. What are the green cultural practices required by SMEs business managers/operators for sustainable business management?
2. What are the challenges faced in the adoption of green cultural practices by SMEs business managers/operators for sustainable business management?
3. What are strategies of improving the adoption of green cultural practices by SMEs business managers/operators for sustainable business management in Anambra and Enugu States, Nigeria?

Hypothesis

- H0₁:** There is no significant difference in the mean ratings of rural and urban SMEs business managers/operator on the green cultural practices required for sustainable business management
- H0₂:** There is no significant difference in the mean ratings of experienced and less experienced SMEs business managers/operators on the challenges faced in the adoption of green cultural practices for sustainable business management
- H0₃:** There is no significant difference in the mean ratings of educated and less educated SMEs business managers/operators on the ways of improving the adoption of green cultural practices for sustainable business management in Anambra and Enugu States, Nigeria?

Methodology

Design of the Study

Descriptive survey research design was adopted for the study. Descriptive survey design is that in which the same information is gathered from an unbiased representative group of interest using questionnaire, interview and observation (Owens, 2002). Descriptive survey design was found suitable for this study because data were collected from the respondents using questionnaire on the green cultural practices required by small and medium enterprises (SMEs) business managers/operator for sustainable business management in Anambra and Enugu State Nigeria.

Area of the Study

The study was carried out in Anambra and Enugu State Nigeria. The researchers choose this States because of high level of small and medium scale enterprises in the area and perceived lack of green cultural practices among the businesses.

Population for the Study

The population for the study consists of 547 registered small and medium scale enterprises business managers/operators in the two States. These SMEs business managers/operators were identified through their different State Ministries of Commerce and Industries with Anambra as 369, and Enugu as 178.

Sample and Sampling Techniques

Due to the manageable size of the participants, the entire population was involved in the study; therefore, there was no sampling.

Instrument for Data Collection

The instrument for data collection for the study was a 43-item structured questionnaire titled: Green Culture Practices for Sustainable Business Management Questionnaire (GCPsBMQ). The questionnaire was structured on a 4-point rating scale of Strongly Agree (SA); Agree (A); Disagree (D); and Strongly Disagree (SD) with corresponding values of 4, 3, 2, and 1 respectively.

Validation of Instrument

The instrument was face-validated by three experts from the Department of Business Education, University of Nigeria, Nsukka, Enugu State. For the purpose of ascertaining the internal consistency of the instrument, Cronbach Alpha reliability method was used. The overall reliability coefficient obtained was 83.

Data Collection Techniques

The questionnaires were distributed and collected by the two researchers and five research assistants on the spot to avoid loss. All the 547 copies of the questionnaires administered were

retrieved due to the large number of research assistants representing 100% rate of return.

Data Analysis Techniques

The data collected were analyzed using mean and standard deviation for answering the research question while t-test was used for testing the null hypotheses at 0.05 level of significance. Research questions were answered using boundary limit of 3.50 - 4.00 (Strongly Agree), 2.50 - 3.49 (Agree), 1.50 - 2.49 (Disagree), and 1.00 - 1.49 (Strongly Disagree) the null hypothesis of no significant difference was accepted for items who t-values were greater than 0.05 level of significance while hypothesis of no significant difference was rejected for items whose t-value were less than 0.05 level of significance.

Results

The results for this study were obtained on the research questions answered and hypothesis tested. The results from research questions and hypotheses are presented in Tables 1, 2 and 3.

Research Question One:

What are the green cultural practices required by SMEs business managers/operators for sustainable business management?

H0₁: There is no significant difference in the mean ratings of rural and urban SMEs business managers/operators on the green cultural practices required for sustainable business management

The data for answering the first research question and testing first null hypothesis are presented in Table 1

Table 1
Mean ratings and t-test of the responses of SMEs business managers/operators on the Green cultural practices required for sustainable business management (N 547)

S/N	Item Statements	\bar{x}	SD	Rem.	t-value	Remark
Green cultural practices for sustainable business management include:						
1.	Use of recycled material in production process in business organizations.	3.41	.71	A	.61	NS
2.	Use of biodegradable products as much as possible in business organization.	3.56	.69	SA	.79	NS
3.	Use of natural ingredients in the production of food products.	3.67	.80	SA	.58	NS
4.	Use of green packets in the packaging of business products.	3.51	.93	SA	.61	NS
5.	Use of reusable products like bottles, crates, gallons among others in business organizations.	3.87	.77	SA	.82	NS
6.	Discouraging the use of plastic bottles that are not reusable for products packaging.	3.56	.46	SA	.91	NS
7.	Encouraging the use of green plastic that is usually made from plants- a renewable resources	3.67	.81	SA	.71	NS
8.	Discouraging the use of hazardous chemicals in the production industries	3.88	.61	SA	.52	NS

9.	Discouraging the use of artificial materials in the production of food products	3.51	.73	SA	.43	NS
10.	Encouraging the proper waste management habits in every organization.	3.66	.88	SA	.79	NS
11.	Encouraging the use of energy saving equipment in business operations	3.99	.59	SA	.53	NS
12	Encouraging the use of the right bulbs in business organization	3.60	.93	SA	.66	NS
13	Encouraging the repair of tools, equipment, rather than replacement in business organization	3.89	.89	SA	.76	NS
14	Encouraging of staff to make use of soft information than hard printed information	3.66	.75	SA	.54	NS
15	Encouraging the use of clean energy like solar, biogas as the main source of energy in business	3.98	.97	SA	.76	NS
16	Discouraging the use of carbon emitting sources of energy in business operation /organization	3.50	.66	SA	.78	NS
17	Encouraging staff to switch off all appliances, equipment at the end of every working day	3.67	.87	SA	.86	NS
Grand Mean		3.68	.77	SA	.69	NS

Note: $G\bar{x}$ = Grand Mean; \bar{x} = Mean; SA = Strongly Agree; A = Agree; N = No of respondents; S = Significant; NS = Not significant; Sig. at 0.05.

Table 1 shows the mean ratings of the responses of the respondents on 16 out of the 17 items in the Table ranged from 3.51 - 3.99 which are within the boundary limit of 3.50 - 4.00 on 4-point rating scale. This indicates that the small and medium

scale business managers/operators strongly agreed that the sixteen identified items are green cultural practices required for sustainable business management in small and medium scale enterprises in Anambra and Enugu State. Similarly, data in the Table 1 show that the mean rating on item 1 was 3.41 which are within the boundary limit of 2.50 – 3.49 on 4 – point rating scale. By this finding, the SMEs business managers/operators agreed that item 1 in the Table is also a green cultural practice required for sustainable business management in small and medium scale enterprises. Furthermore, the data presented in Table 1 on the first hypothesis show that the t- values of the entire 17 items in the Table ranged between .43 - .91 which are in each case greater than 0.05 level of significance. This indicates that there was no significant difference in the mean ratings of rural and urban SMEs business managers/operators on the green cultural practices required for sustainable business management in Anambra and Enugu State, Nigeria. Therefore, the null hypothesis of no significant difference was accepted on all the seventeen items.

Research Question Two:

What are the challenges faced in the adoption of green cultural practices by SMEs business managers/operators for sustainable business management in Anambra and Enugu State?

H0₂: There is no significant difference in the mean ratings of experienced and less experienced SMEs business managers/operators on the challenges faced in the adoption of green cultural practices for sustainable business management in Anambra and Enugu State.

The data for answering the second research question and testing the second null hypothesis are presented in Table 2 in page 10. Data presented in Table 2 revealed that the mean ratings of the respondents on 12 out of the 13 items ranged from 3.54 – 3.79 which are within the boundary limit of 3.50 – 4.00 on 4-point

rating scale. This indicates that the small and medium scale business managers/operators strongly agreed that the twelve identified items are challenges faced in the adoption of green cultural practices for sustainable business management in Anambra and Enugu State. Furthermore, data in the Table 2 show that the mean rating on item 2 was 3.36 which is within the boundary limit of 2.50 - 3.49 on 4-point rating scale. By this finding, the SMEs business managers/operators agreed that item 2 in the table is also a challenge faced in the adoption of green cultural practices for sustainable business management. Similarly, data presented in Table 2 also reveal that the t-values of the entire 13 items ranged between .27 - .97 which are all greater than 0.05 level of significance. This indicates that there was no significant difference in the mean ratings of high and less experienced SMEs business managers/operators on the challenges faced in the adoption of green cultural practices for sustainable business management in Anambra and Enugu State. Therefore, the null hypothesis of no significant difference was accepted on all the thirteen items.

Table 2
Mean ratings and t-test of the responses of SMEs business managers/operators on the Challenges in the adoption of Green cultural practices for sustainable business management. (N 547)

S/N	Item Statements	\bar{x}	SD	Rem.	t. value	Remark
<hr/> Challenges in the adoption of green cultural practices for sustainable business management include: <hr/>						
1.	Inadequate information about green cultural practices among businesses all over the world	3.54	.54	SA	.72	NS

Green Cultural Practices And Sustainable Business Management

2.	Inadequate training of business staff on the green cultural practices	3.36	.67	A	.52	NS
3.	Insufficient laws, regulations among others to compel businesses to practices green culture	3.42	.43	SA	.28	NS
4.	Insufficient equipment to practices green culture	3.57	.49	SA	.47	NS
5.	Insincerity in the punishment of business organizations that violate green cultural laws	3.66	.58	SA	.56	NS
6.	Poor taxation on the business organizations who are making use of carbon emitting equipment/energy source	3.69	.81	SA	.31	NS
7.	Lack of willingness among business organizations to adoption green culture in their business operations	3.45	.69	SA	.38	NS
8.	Inability of the regulatory bodies to stop the use of harmful chemicals.	3.79	.60	SA	.79	NS
9.	Poor supervision of business organization by regulatory bodies on green cultural practices	3.66	.92	SA	.97	NS
10.	Lack of alternative source of energy for business organizations	3.79	.33	SA	.42	NS
11.	Lack of alternative sources of raw materials use in the production process.	3.67	.81	SA	.67	NS
12.	No solution to the use of artificial materials in the production of products	3.56	.36	SA	.36	NS
13.	No alternative in the use of harmful and hazardous	3.78	.45	SA	.27	NS

chemicals in the production
of special products

Grand Mean	3.61	.59	SA	.52	NS
-------------------	-------------	------------	-----------	------------	-----------

Note: $G\bar{x}$ = Grand Mean; \bar{x} = Mean; SA = Strongly Agree; A = Agree; N = No of respondents; S = Significant; NS = Not significant; Sig. at 0.05.

Research Question Three:

What are the ways of improving the adoption of green cultural practices by SMEs business managers/operators for sustainable business management in Anambra and Enugu States, Nigeria?

H0₃: There is no significant difference in the mean ratings of educated and less educated SMEs business managers/operators on the ways of improving the adoption of green cultural practices for sustainable business management in Anambra and Enugu State Nigeria.

The data for answering the third research question and testing third null hypothesis are presented in Table 3.

Table 3
Mean ratings and t-test of the responses of SMEs business managers/operators on the ways of improving the adoption of Green cultural practices for sustainable business management. (N 547)

S/N	Item Statements	\bar{x}	SD	Rem.	t. value	Remark
	Way of improving the adoption of green cultural practices for sustainable business management include:					
1.	Conducting of seminars and workshops to educate SMEs business operators and works on the green cultural practices	3.76	.74	SA	.82	NS

2.	Provision of adequate information to business staff about green cultural practices	3.56	.69	SA	.52	NS
3.	Provision of sufficient equipment to practice green culture in business organizations	3.77	.52	SA	.34	NS
4.	Enacting of sufficient laws, regulation that will compel businesses to practices green culture	3.57	.49	SA	.47	NS
5.	Punishing of businesses that violate green cultural practices in their business organizations	3.92	.88	SA	.86	NS
6.	Placing ban on the use of carbon emitting equipment in their business operations	3.89	.61	SA	.41	NS
7.	Encouraging business organizations to provide an alternative source of energy	3.59	.89	SA	.78	NS
8.	Provision of alternative raw materials that are not harmful in the production of products	3.87	.66	SA	.91	NS
9.	Making use of natural ingredients in the production of food products	3.89	.93	SA	.97	NS
10.	Making use of biodegradable materials in the production and packaging of products	3.49	.39	A	.44	NS
11.	Reduction in the energy, water and other resources wastage	3.61	.73	SA	.64	NS

12	Reduction in the use of carbon emitting resources like crude oil, coal, among others	3.56	.36	SA	.36	NS
13	Forming NGOs that will be advocating for adoption of green cultural practices in business organizations	3.88	.67	SA	.34	NS
Grand Mean		3.72	.66	SA	.60	NS

Note: $G\bar{x}$ = Grand Mean; \bar{x} = Mean; SA = Strongly Agree; A = Agree; N = No of respondents; S = Significant; NS = Not significant; Sig. at 0.05.

Data presented in Table 3 revealed that the mean ratings of the respondents on 12 out of the 13 items ranged from 3.56 - 3.92 which are within the boundary limit of 3.50 - 4.00 on 4-point rating scale. This indicates that the SMEs business managers/operators strongly agreed that the twelve identified items are ways of improving the adoption of green cultural practices for sustainable business management in Anambra and Enugu States. Furthermore, data in the Table 3 equally show that the mean rating on item 10 was 3.49 which is within the boundary limit of 2.50 - 3.49 on 4-point rating scale. By this finding, the respondents agreed that item 10 in the table is also a way of improving the adoption of green cultural practices by SMEs business managers/operators for sustainable business management. Similarly, data presented in Table 3 also revealed that the t-values of the entire 13 items ranged between .34 - .97 which are all greater than 0.05 level of significance. This indicates that there were no significant difference in the mean ratings of educated and less educated SMEs business managers/operators on the ways of improving the adoption of green cultural practices for sustainable business management in Anambra and

Enugu States, Nigeria. Therefore, the null hypothesis of no significant difference was accepted on all the thirteen items.

Discussion of Findings

This study identified green cultural practices required by SMEs business managers/ operators to include; use of recycled material in production process in business organizations; use of biodegradable products as much as possible in business organization; use of natural ingredients in the production of food products; use of green packets in the packaging of business products; use of reusable products like bottles, crates, gallons among others in business organizations; discouraging the use of plastic bottles that are not reusable for products packaging; encouraging the use of green plastic that is usually made from plants- a renewable resources; discouraging the use of hazardous chemicals in the production industries; discouraging the use of artificial materials in the production of food products; encouraging the proper waste management habits in every organization; encouraging the use of energy saving equipment in business operations; encouraging the use of the right bulbs in business organization; encouraging the repair of tools, equipment, rather than replacement in business organization; encouraging of staff to make use of soft information than hard printed information; encouraging the use of clean energy like solar, biogas as the main source of energy in business; discouraging the use of carbon emitting sources of energy in business operation / organization; encouraging staff to switch off all appliances, equipment at the end of every working day.

These findings were in agreement with the opinion of Shorcham (2017) who stated that that going green in an organization is more than just switching the light off each night when going home. The author affirmed that it is all about a change in culture which the directive must come from the top. The business

managers/operators of business organization need to clearly show the rest of the staff the green cultural practices in their business organization which include: reduction of total energy usage and maximized usage of renewable energy; reduction of air pollutants and air impacts; reduction of water usage and water resource impacts; protection of the ecosystem and promotion of best practices related to land management; reduction of waste generation and improvement of material management among others.

In the same vein, Lloyd (2017) identified discouragement of the use of plastic bottles, encouragement of the use of reusable ones that can be washed out and used again, encouragement of the use of recycle paper, encouragement of the use of biodegradable products as much as possible, manufacturing of environmental friendly product as some of the green cultural practices in business organization.

There was no significant difference in the mean ratings of the rural and urban SMEs business managers/operators on the seventeen items on the green cultural practices required for sustainable business management. This is in agreement with the opinions of Linas, Rugile and Agne (2014), who asserted that there are also a number of minor green actions that still can contribute to the greening of business organizations irrespective of their locations. To the authors, some companies encourage their employees to use public transportation instead of their own cars in order to reduce air pollution, or to refuel the car after 6.p.m when the gas fumes reputedly are less harmful to the environment. Other green practices in business organization include: waste sorting, organizing seminars about green business and environmental protection, the rule of not smoking in the office and participation in environmental actions (Collins, 2008). The author confirmed that the number of green business

actions adopted by business organizations depends on particular business abilities to change its operations to environmentally friendly ones.

Furthermore, the study identified Challenges in the adoption of green cultural practices by SMEs business managers/operators for sustainable business management to include: Inadequate information about green cultural practices among businesses all over the world; inadequate training of business staff on the green cultural practices; insufficient laws, regulations among others to compel businesses to practices green culture; insufficient equipment to practices green culture; insincerity in the punishment of business organizations that violate green cultural laws; poor taxation on the business organizations who are making use of carbon emitting equipment/energy source; lack of willingness among business organizations to adoption green culture in their business operations; inability of the regulatory bodies to stop the use of harmful chemicals; poor supervision of business organization by regulatory bodies on green cultural practices; lack of alternative source of energy for business organizations; lack of alternative sources of raw materials use in the production process; no solution to the use of artificial materials in the production of products; no alternative in the use of harmful and hazardous chemicals in the production of special products

The finding is in line with the report of Cedric (2009) when he affirmed that implementing environmentally-friendly practices like green cultural practices throughout an entire brand or even in a few properties, is exciting and will produce long-term financial benefits. Yet, it presents a set of challenges that business owners/operators must anticipate which include sharing of the business vision with team members. The author opined that

controlling the actions and behaviours of business team members is always a challenge when going green. Having a solid plan, sharing the company vision with the team, and then helping each person, from executives to storekeeper, understand how their daily actions effect the environment and its inhabitant can be very difficult.

There was also no significant difference in the mean ratings of experienced and less experienced SMEs business managers/operators on the challenges faced in the adoption of green cultural practices for sustainable business management in Anambra and Enugu State. The findings of this study were in agreement with that of Ewins (2017), who stated that effective management of energy consumed during business operation is critical in building a green culture. A business irrespective of the experience of its staff, cannot manage its energy consumption or change to alternative source of energy if it does not have a way to measure and track its' energy cost accurately. Energy measurement technology and implementation can be costly, but if a business wants to be effective in its commitment to being green, it must be ready to invest in new technology and alternative sources of energy so that it can make an environmental and business impact. Investing in new energy sources will require a company committing certain percentage of its yearly capital expenditure to invest in new energy-saving equipment.

Similarly, the study identified ways of improving the adoption of green cultural practices by SMEs business managers/operators for sustainable business management to include: Conducting of seminars and workshops to educate SMEs business operators and works on the green cultural practices needed for effective business operation; provision of adequate information to business staff about green cultural

practices; provision of sufficient equipment to practice green culture in business organizations; enacting of sufficient laws, regulation that will compel businesses to practices green culture; punishing of businesses that violate green cultural practices in their business organizations; placing ban on the use of carbon emitting equipment in their business operations; encouraging business organizations to provide an alternative source of energy; provision of alternative raw materials that are not harmful in the production of products; making use of natural ingredients in the production of food products; making use of biodegradable materials in the production and packaging of products; reduction in the energy, water and other resources wastage; reduction in the use of carbon emitting resources like crude oil, coal, among others; forming NGOs that will be advocating for adoption of green cultural practices in business organizations

The finding is in line with the report of Helen (2016) who affirmed that a corporate green culture that values sustainability will save business money and make its brand more marketable to consumers and prospective employees. The author further out line five tips that will help a business establish it green cultural practices which include: business organizations going paperless, business organizations encouraging carpooling among its staff, business organization offering incentive to staff who practiced and encourage green cultural practices, allowing the use of remote in working and making use of sustainable materials in production. Helen noted that businesses can start their green cultural practices through the use of refillable pens, ink and cartridges, using of biodegradable soaps and cleaners, replacing standard materials with eco-friendly alternatives among others. There was also no significant difference in the mean ratings of educated and less educated SMEs business managers/operators

on the ways of improving the adoption of green cultural practices for sustainable business management in Anambra and Enugu State Nigeria. This is in line with the opinion of Virginia (2012), who stated that training and communication are vital to successful business operation. The author continued that adequate training and communication will help in building the educational capacity of the staff. To Virginia, developing a monthly message or best practices tip, send it to each business manager, and work with them to educate their staff will keep the staff in a state of perpetual training and more educated about how to be more environmentally-conscious.

Conclusion

Green cultural practice, no doubt, improves the way every nation carry out its activities. This study was able to identify most of the green cultural practices that should be adopted in business organizations. Challenges faced by business organizations in the adoption of green cultural practices were also identified. Finally, strategies for improving the adoption of green cultural practices by SMEs business managers/operators for sustainable business management were also identified to include: Conducting of seminars and workshops to educate SMEs business operators and works on the green cultural practices needed for effective business operation; provision of adequate information to business staff about green cultural practices. Therefore, for Nigeria as a nation to be on the map of countries with sustainable business management, it must fully understand what business sustainability is all about and make sincere effort in the adoption of green cultural practices as a hallmark for business sustainability.

Recommendations

Based on the findings of the study, the following recommendations were made:

1. Small and medium scale business managers/operator should state clearly the green cultural practices that should be operations in their business organizations in doing this; they should encourage their staff to adhere to that.
2. Business organizations should equally provide equipment that will enable their staff implement green cultural practices in business organizations.
3. Business organizations should also source for alternative means of energy, raw materials in their business operations.
4. Business organizations should train and retrain their staff on green cultural practices through seminars, workshops and conferences.
5. Government should enact laws that will compel business organizations to adopt green cultural practices in their business operations.

References

- Agwu, M.O. & Emeti, C.I. (2014). Issues, challenges and prospect of small and medium scale enterprises (SMEs) in port-Harcourt city, Nigerian. *European Journal of Sustainable Development*, 3(1), 101-114.
- All business.com (2016). SMEs and national development. Retrieved from *allbusiness.com* on 14th January, 2018.
- Brown, D.T, and Ratledge, E.C. (2011) Energy, environment and delaware jobs: Defining and describing green business. *University of Delaware*, 116. Retrieved on May 2nd 2018 form <http://128.175.63.72/projects/Documents/Greenbusiness.pdf>.
- Buono, D. L. (2011). EU regulations governing tenderers and suppliers for regeneration projects Retrieved on 12th May, 2018 from <http://www.climateactionpromme.org>.

- Business Dictionary (2018). Green business definition. Retrieved on 13th April, 2018 from <http://www.businessdictionary.com>.
- Cedric, L. (2009). Building a green culture. Retrieved from <https://www.slideshare.net/green-culture-54934267>.
- Central Bank of Nigeria (2013) 2010 to 2015 government policy on SMES and government buying. Retrieved on 9th March, 2018.
- Collins, J. (2008). *Why green is good for business*. Business and Economic Review pp 25-26.
- Croston, G. (2009). *Starting green: An ecopreneur's toolkit for starting a green business from business plan to project*. Entrepreneur Press. 324p
- Ewins, A. (2017). Small steps are the way for SME's to reduce emissions and make savings. <http://www.flickr.com>.
- FairRidge Group (2017). Building an organizational culture of sustainability: Employee Engagement. Retrieved from <https://www.triplepundit.com>. On May 23rd, 2018.
- Gupta, S. and Kumar, V. (2013). Sustainability as corporate culture of a brand for superior performance. *Journal of World Business*, 48(2)156-166.
- Helen, Z. (2016). Five tips for establishing a green corporate culture. Retrieved on 25 May, 2018 from <https://www.slideshare.net/green-culture-54934267>.
- Howard-Grenville, J., Golden-Biddle, K., and Mao, J. (2011). The greening of organizational culture. *Journal of Organizational Change Management*, 15(3)102-110.
- Jansson, J., Marell, A. and Nordlund, A. (2010). Green consumer behaviour: determinants of curtailment and eco-innovation adoption. *Journal of Consumer Marketing*, 27(4) 233-250.
- Kalanje, C. (2002). The interrelationship of marketing productivity and financial performance of global SMEs, Irish marketing. Review, vo. 14 Dublin. Retrieved on July

2nd, 2018 from <http://www.Zianet.com.newDSB/business.html>.

- Keskin, D., Diehle, J. C, and Molenaar, N. (2013). Innovation process of new ventures driven by sustainability. *Journal of Clean Production* 45, 111-115
- Linas, C., Rugile, B., and Agne, D. (2014). Green business: challenges and practices. Retrieved on 16 April, 2018 from www.EKONOMIKA, 93(1) 144-160.
- Lloyd, C. H (2017). The greening of organizational culture: Management views on the depth, degree and diffusion of change. *Journal of Organizational Change Management*. Retrieved on 25 May, 2018 from <https://www.slideshare.net/green-culture-54934267>.
- Lloyd, C. H. and Andrew, C. (2002). The greening of organizational culture: management views on the depth, degree and diffusion of change. *Journal of Organizational Change Management*, 15(3)234-355.
- Makower, J., and Pike, C. (2009). *Strategies for the green economy: opportunities and challenges in the new world of business*. New York, McGraw-Hill. 290p
- Ministry of Business, Innovation and Employment (2014). The Small business sector report 2014, *Ministry of Business, Innovation and Employment*. MBIE.
- Osuala, E. C. (2004). *Principle and practices of small business management in Nigeria*. Enugu: Cheston Agency Limited
- Shoreham, A. (2017). How to cultivate a green culture in your business. Retrieved on 27th May, 2018. From <https://journals.ala.org>.
- Slovik, K. (2013). Nine steps to green your business. Accessed 16 April, 2018 from <http://www.startupnation.com/steps/93/>
- Therese, S. P. (2010). French for green business. Retrieved on 12th May, 2018 from <http://docs.lib.purdue.edu/cgi/viewcontent.cgi>.

- Tokgoz, N., and Once, S. (2009). Corporate sustainability: alternative approach to traditional business management. *Afyon kocatepe university Turkish* 11, 2.
- Virginia, G. (2012). Embedding sustainability in company culture: Retrieved from <http://128.175.63.72/projects/Documents/Greenbusiness.pdf>.
- Winkler, K. (2017). Developing a sustainable society. Retrieved from <https://www.triplepundit.com>. On May 23rd, 2018.
- World business council for sustainable development (2007). Retrieved on January 6th, 2018 from <http://www.smallandmediumenterprisesacrosstheglobe>.

Chapter Fourteen

AFRICAN CULTURAL BELIEFS AND ECO-SPIRITUALITY

Jude I. Onebunne, PhD

Department of Philosophy

Nnamdi Azikiwe University Awka

juno.anyi@gmail.com

&

Success O. Okechukwu

Nnadiabube Research Institute

Ngozika Housing Estate, Awka

ifechukwuhijioke@gmail.com

Executive Summary

Every society or community in the world and Africa in particular has a set of values and norms that guide the activities and protects their interests. Culture which is commonly known as the people's way of life, in Africa, can be said to be a tree in which eco – spirituality has a branch. The connection between spirituality and the earth has deep and historical roots in many cultural practices and beliefs especially those that have remained in tune with the rhythm and limits of the earth, such as the African tradition. Using the method of critical evaluation and analysis the researchers find out that the African cultural beliefs have positive effects on the revolution of eco – spirituality. The researchers, therefore, suggested that the African cultural beliefs be critically assessed and those found inimical to the intricacies of eco – spirituality be dissolved. It is essential then, that African cultural beliefs be revaluated and the relevance of these beliefs especially those pertaining to ecological spirituality be sustained for an improved ecology.

Keywords: African; Culture; Ecology; Spirituality; Beliefs; Eco-spirituality

Introduction

Culture is to be understood as the way of life of a people. This presupposes the fact that there can be no people without a culture. To claim that there is no society without a culture would, by implication, mean that such a society has continued to survive without any form of social organisation or institutions, norms, beliefs and taboos, and so on; and this kind of assertion is quite untrue. That is why the western who claim we the Africans have no history never insinuated we had no culture. Eco-spirituality which simply denotes the environment and its sacredness have and would always be effected by cultural and believes. The African cultural believes have always been concerned with the well being of the environment and at such been a big source of environmental conservation. The practice of eco-spirituality has been part of Africans cultural believe and practice, in fact, the importance of the environment was at some point overly emphasised on by the Africans and this emphasis led to not just respecting but worshipping the eco-system, the worshipping of the ecosystem though not a good idea has a good side to it which is, It in no small measure set Africans as icon worthy of emulation in matter pertaining to ecological conservation. With the coming of the white men and in a bid to meet up with trends and innovations Africans are fast forgetting the cultural believes that has sustained them for many generation an are fast embracing the activities and practice of the white men with ought considering the extent of harm being done on the environment. It is, therefore, important that these aspects of our culture that have enhanced conservation be critically assessed and looked into so as to resuscitate and revive our cultural heritage. This works however points out the different aspect of our cultural

beliefs which would enhance the revolution of the eco-spirituality if resuscitated.

Appreciation of Culture

Edward B. Taylor is reputed as the scholar who first coined and defined culture in his work *Primitive Culture* (1871) and reprinted in 1958. Taylor saw culture as that complex whole which includes knowledge, belief, art, morals, law, customs or any other capabilities and habits acquired by man as a member of society. This definition captures the exhaustive nature of culture. One would have expected that this definition would be a univocal one - but this is not so. In fact, there are as many definitions of culture as there are scholars who are interested in the phenomenon. Culture embraces a wide range of human phenomena, material achievements and norms, beliefs, feelings, manners, morals and so on. It is the patterned way of life shared by a particular group of people that claim to share a single origin or descent. In an attempt to capture the exhaustive nature of culture, Bello (1991: 189) sees it as "the totality of the way of life evolved by a people in their attempts to meet the challenge of living in their environment, which gives order and meaning to their social, political, economic, aesthetic and religious norms thus distinguishing a people from their neighbours". Culture serves to distinguish a people from others (Aziza 2001; Kanu 2015).

Culture refers to the totality of the pattern of behaviour of a particular group of people. It includes everything that makes them distinct from any other group of people for instance, their greeting habits, dressing, social norms and taboos, food, songs and dance patterns, rites of passages from birth, through marriage to death, traditional occupations, religious as well as philosophical beliefs. Culture is passed on from generation to generation. The acquisition of culture is a result of the

socialisation process. Explaining how culture is passed on as a generational heritage, Fafunwa (1974: 48) writes that: The child just grows into and within the cultural heritage of his people. He imbibes it. Culture, in traditional society, is not taught; it is caught. The child observes, imbibes and mimics the action of his elders and siblings. He watches the naming ceremonies, religious services, marriage rituals, funeral obsequies. He witnesses the coronation of a king or chief, the annual yam festival, the annual dance and acrobatic displays of guilds and age groups or his relations in the activities. The child in a traditional society cannot escape his cultural and physical environments.

This shows that every human being who grows up in a particular society is likely to become infused with the culture of that society, whether knowingly or unknowingly during the process of social interaction. We do not need to have all the definitions of culture and its defining characteristics for us to understand the concept and meaning of culture. Even though there are as many definitions of culture as there are writers, there is an element of similarity that runs through them all. This singular underlying characteristic is the attempt to portray and capture culture as the entire or total way of life of a particular group of people. Etuk (2002: 13) is of the opinion that "an entire way of life would embody, among other things, what the people think of themselves and the universe in which they live - their world view - in other words, how they organise their lives in order to ensure their survival". It can be safely stated that there can be no culture without a society. It can also be said that culture is uniquely human and shared with other people in a society. Culture is selective in what it absorbs or accepts from other people who do not belong to a particular cultural group.

Culture has been classified into its material and non-material aspects. While material culture refers to the visible tactile objects

which man is able to manufacture for the purposes of human survival; non-material culture comprises of the norms and mores of the people. While material culture is concrete and takes the form of artefacts and crafts, non-material culture is abstract but has a very pervasive influence on the lives of the people of a particular culture. Hence beliefs about what is good and what is bad, together with norms and taboos, are all good examples of non-material culture. From the foregoing, it is obvious that culture is shared since it consists of cherished values or beliefs that are shared by a group, lineage, and religious sect and so on. Apart from this, culture is dynamic in the sense that it is continually changing. Culture is not static. We are not alone in this observation as Antia (2005: 17) states that "culture is not fixed and permanent. It is always changed and modified by man through contacts with and absorption of other peoples' cultures, a process known as assimilation". Etuk (2002: 25) has also observed that "cultures are not static, they change. Indeed culture needs to change; which wants to remain static and resistant to change would not be a living culture". We can see that since culture is carried by people and people do change their social patterns and institutions, beliefs and values and even skills and tools of work, then culture cannot but be an adaptive system. Once an aspect of culture adjusts or shifts in response to changes from within or outside the environment, then other aspects of the culture are affected, whether directly or indirectly. It is necessary to know that each element of a culture (such as material procedures, food processing or greeting patterns) is related to the whole system. It is in this respect that we can see that even a people's technology is part of their culture.

Appreciation of Eco-spirituality

Eco-spirituality expresses the joining of spirituality with ecological perspectives. There are numerous types, traditions, expressions, and understandings of eco-spirituality. It does not

refer to any one set of beliefs, but to a range of ethical or moral, religious, spiritual, or agnostic beliefs, tendencies, or actions that relate to ecological concerns. Eco-spirituality has evolved over the years and is currently a practice the westerners hold dear. The connection between spirituality and the Earth has deep and historical roots in many religious traditions and in particular with those that have remained in tune with the rhythms and limits of the Earth, such as some indigenous traditions around the world.

Eco-spirituality has many meanings, the first referring to a thirst for connection between spirituality and the Earth, given the extent of and the general lack of religious responses to the ecological crisis. There is this recognition that the ecological crisis threatens all life on Earth, and it is fundamentally a moral, spiritual, and religious problem.

Since the early 1970s there has been a global, public, and political consciousness of the need for ethics and religions to be consistent with ecological and social liberation, noting, as does Steven Rockefeller (1992), that there are many diverse cultural paths joining in this awareness. Discussions have been increasingly cross-cultural and interreligious. Organizations such as the United Nation, the World Wildlife Fund, World Conservation Strategy, and numerous religious groups have been involved in interdisciplinary work aimed at developing religious and spiritual responses to the ecological crisis that are connected to political decision-making. From the initiatives of Mary Evelyn Tucker and John Grim, the Harvard Centre for the Study of World Religions hosted a Religion and Ecology Project involving ten conferences since 1996, bringing together scholars and environmentalists from Buddhism, Confucianism, Taoism, Shinto, Jainism, Hinduism, indigenous traditions, Judaism,

Christianity, and Islam. This work is entering a phase of discussions with the united Nation.

The foundation of this collaboration among religions, academics, and activists is an awareness of a commitment to a new ecological worldview that reflects alternative values, ethics, and actions about and toward life on Earth. There is an understanding that religion not only broadens the conversation beyond discussing environmental issues in terms of economics, political legislation, or scientific analysis, but also that at the heart of spirituality is an encounter with the sacred: an intuition of the wondrous mystery in the power of life and being. Eco-spirituality is a manner of speaking about this kind of religious experience that is awakening, slowly and unevenly, within the human community. As Rockefeller suggests, an appreciation of the miracle of life and of the beauty and mystery in the being of animals, plants, and the Earth as a whole becomes so intense as to generate a keen sense of the natural world's sacredness. This awareness of the inner mystery of life is at the heart of most religions.

Eco-spirituality is not connected to any one tradition. As well as pertaining to established religious traditions, eco-spirituality can refer to a myriad of Goddess, Wiccan, deep ecology, eco-feminist, or any mixture of Eastern, indigenous, and New age beliefs and practices. Eco-spirituality can refer to those who do not want any religious affiliation. James Lovelock (1970) proposed a scientific theory called the Gaia hypothesis, which revives the name of a female Greek goddess of Earth. Lovelock proposed that the best way to understand the Earth is as a living planet on which all life functions as a systemic, interconnected whole – alive in the sense that the Earth is self-organizing and self-regulating. This theory has been debated intensely, and

there is a slow acceptance of its validity. The relationship between eco-spirituality and the proposed *Gaia hypothesis* does not originate with Lovelock but with those who share his sense that the Earth is alive and humans just like the Igbo who believe that both earth and humans are an integral member of a larger community of life.

Eco-spirituality is also a term that can be applied to the work in cosmology and particularly that of Thomas Berry, a cultural historian of religions. Berry's work in scientific and religious cosmologies-stories about the origin of the world that provide orientation, guidance, and meaning to life-has done much to revive a sense of the sacredness of life, the Earth, and all the processes of the universe. He offers a comprehensive context for rethinking our current situation and for understanding ourselves as part of a larger evolutionary whole that is both spiritual and material.

There are several elements within eco-spirituality, and priorities are divergent. One challenges the belief that humans are the centre of life, or anthropocentrism. Some propose a bio-centric approach wherein the intrinsic value of animals, plants, rivers, and mountains has a priority over their instrumental value as resources for humans. The eco-spirituality insights emerging from deep ecology, eco-feminism, and cosmology are in this vein. Others would attend to the ethical dimensions, such as environmental ethics, eco-feminism and issues of domination, and social ecology wherein the relationships among ethics, social issues, and ecological issues are the central pieces of their eco-spirituality. Others would put a priority on public policy and activism, seeking to change institutions, economic agendas, and legislation. Still others work to change the ideas, values, and beliefs at universities, colleges, workshops, and conferences. Finally, there is a plethora of eco-spirituality rituals.

On Cultural Beliefs

Good cultural practices denote healthy ecological value; eco-spirituality thrives on the need for a rich ecosystem that accommodates all living entity with equity and empathy of one towards another. The African cultural practice is a rich practice that covers; religion, values, mode of eating dressing and what have you. It is therefore true to say that culture defines a people, it is an identity that distinguishes one community from the other and in this context it seeks to examine or regulate the relationship of man and its environment.

Eco-spirituality is based on a fundamental belief in the sacredness of nature Earth, and universe though not relating particularly to any culture or tradition its practice involves the cultural beliefs of the people in various community. The place of culture in the evolution of eco-spirituality is that it considers the under listed aspect of the ecosystem in founding its legacy:

- i. Humanity is born of nature from nature. It's a part of nature, and does not own nature exclusively for its own ends and purposes.
- ii. Humanity should not use nature and atmosphere as a toilet for its pollution
- iii. Humanity cannot use and treat the natural world as an "infinite extraction resource and treasure chest. It must not over exploit the natural world which is like to harm the current and future generations, or other biological life forms.
- iv. Humanity must assume the role of stewardship for nature. It is a cultural belief in most African countries that nature has its own life and at such is what brought about the existence of humans. In the Igbo tribe of Africa there have been a lingering culture of offering the earth foods and drinks to eat first before it goes into the mouth, this culture denotes the importance and respect the African Igbo tribe have for the natural earth and further shows its awareness of the fact that humanity is born of

nature. This practices is directly aligned with the long living practice of the Africans allowing the fathers and the elders to take things first when items of consumption is being shared. By implication, the African sees the land as an.

The ancient African community though not grounded in western education sure try to recycle their waste into nutrients that nourishes the land. The passing of human waste in the bushes as a way of enhancing its soil nutrient is a long time practice which even today can be seen in primitive areas, proves that the African man do not believe in using nature as a toilet for its pollution rather they endeavour to savour the lands and enrich it with human waste, the culture guiding waste disposal in African is that decomposable waste be thrown into a mapped out area in the farm, where it decomposes and forms manure, nylon materials and fire consumable waste be thrown into the kitchen fire place whereas the tin waste should be packed and resold for recycling. This process of waste disposal clearly denotes the effort of the African believes and towards an enriched environment.

The African culture as pertaining to land exploitation has a lot to say when it comes to ecology conservation, the Africans practice shift cultivation and are not interested in any form of wilful escapade that might harm the ecosystem in the name of pursuit for wealth.

Traditional beliefs associated with operations in the agricultural system are guided by animistic beliefs in every farming process. Their practices Sustainability based on the traditional beliefs have demonstrated the ability to sustain agro-diversity and inherent wild biodiversity, ensuring ecosystem functions and supporting livelihoods and food security. In another example, some African tribes performed management and conservation of

natural resources as guided by their beliefs in the spirits of the forests. These tribes live in the “holy” forest perform ancient rites and rituals where they worshipped the spirits of their ancestors. They believed that the “holy” areas were the place where their god resided. Consequently, the villagers respected and maintained the forest resources. These aspects of indigenous belief systems that rest on the attribution of supernatural powers to some parts of the natural environment as the home of the gods seem to have significantly contributed to conservation and protection of essential natural resources such as groves, ponds, soil fertility and animals from overutilization and exploitation, and their use explicitly encourages conservation of environmental resources. African culture encourages eco-spirituality in all its fullness and acknowledges nature as superior and sacred.

African Cultural Beliefs and Eco-spirituality

African culture in no particular order relates to people’s believe, attitude, collective values and practices. In the actual sense of it, it is therefore not wrong if we say that culture defines a person and his relationship with his environment. Africa is not an exception to this definition in fact Africa is one of the continents that still holds onto their cultural believes and practices. Eco-spirituality which presents or advocates for the sacredness and protection of the environment would not be justly treated if we do not look at culture. Culture defines man and man governs the ecosystem so by implication culture guides the attitude of man and his reaction / responsiveness towards ecological crises and conservation. The belief of the people be it spiritual or otherwise affects the ecosystem positively or negatively.

Man often is a product of his belief and at such culture guides mans attitude towards maintaining a sustainable eco-spirituality. Indigenous people in some parts of the globe are

entitled to specific rights to collectively use and manage natural resources, predicated on their historical, social and cultural connection to a particular territory. The United Nations (UN) defines indigenous people as people being inheritors and practitioners of unique cultures with unique ways of relating to people and the environment. Indigenous people have retained social, cultural, economic and political characteristics that are distinct from those of the dominant societies in which they live. Following such traditional practices as beliefs, taboos, and myths, some local African communities have been able to conserve their forests for generations. Access to any sacred forests in such community is governed by strict customs, which include the practice of rituals and sacrifices before obtaining the permission to harvest certain tree species. These practices could protect forest biodiversity and watersheds, certify existing forests, and prevent Africans from overexploiting resources, resulting in better conservation of their forests. An example of indigenous peoples' practices is the use of beliefs in totems for managing the natural resources and conserving flora and fauna by the *Ba'Aka* pygmies of Central Africa. They believe that killing totems for food would bring a negative impact to their well-being. They also believe that hunting of the animals would prompt bad luck for the community. It is believed that pregnant women should not eat certain types of reptiles, birds and animals because eating them might stop production of breast milk or cause fatal abortions. In addition, as some parts of rivers or streams and forests are considered sacred, fishing and hunting are forbidden unless special rituals are to be performed. Traditional practices in *Ba'Aka* demonstrate the existence of traditional strategies by indigenous people for conserving natural resources in some African communities.

Conclusion

The ecosystem has suffered a lot due to man's actions and inactions and this has been as a result of the total negligence of man. Eco-spirituality is therefore a wakeup call that reminds us of the value of our environment and the reason to keep it safe. Culture is an indispensable aspect of a man and in Africa cultural practices and beliefs have helped enhance the ecosystem. It is in fact the negligence of these cultural practices that has led to the deterioration of our ecosystem. Eco-spirituality revolution should therefore look into reviving African cultural practices that enhances the ecosystem and eco-spirituality.

References

- Antia, O.R.U. (2005). *Akwa Ibom Cultural Heritage: Its Incursion by Western Culture and its Renaissance*. Uyo: Abnny Publishers.
- Aziza, R.C. (2001). The Relationship between Language use and Survival of Culture: the case of Umobo youth. *Nigerian Language Studies*. No.4.
- Bello, S. (1991). *Culture and Decision Making in Nigeria*. Lagos: National Council for Arts and Culture.
- Edward B. Taylor (1994). *Culture in Education*. In *Sociology of Education: A Book of Readings*. Calabar: Edigraph Communications.
- Etuk, U.A. (2002). *Religion and Cultural Identity*. Ibadan: Hope Publication.
- Fafunwa, A.B. (1974). *History of Education in Nigeria*. London: George Allen and Unwin.
- Kanu, I. A. (2013). The Dimensions of African Cosmology. *Filosofia Theoretica: Journal of African Philosophy, Culture and Religion*. 2. 2. 533-555.
- Kanu, I. A. (2015a). *A hermeneutic approach to African Traditional Religion, philosophy and theology*. Augustinian Publications: Nigeria

- Kanu, I. A. (2015b). *African philosophy: An ontologico-existential approach to classical and contemporary issues*. Augustinian Publications: Nigeria
- Lovelock, James. (1988). *The Ages of Gaia*. Oxford: Oxford University Press.
- Rockefeller, Steven, and John Elder, eds (1992). *Spirit and Nature: Why the Environment Is a Religious Issue*. Boston: Beacon Press.
- Tucker, Mary Evelyn, and John Grim, eds. (1993). *Worldviews and Ecology: Religion, Philosophy and the Environment*. Lewisburg: Bucknell University Press.

Chapter Fifteen

HERDSMEN/FARMER'S CRISIS AND ITS EFFECTS ON ECOLOGY

Atsue Iorliam Isaac

Department of Religion and Cultural Studies

Benue State University, Makurdi

isaacatsue@gmail.com

Executive Summary

This paper examines farmers and herders' crisis and its effects on ecology in the contemporary society. It employed the qualitative research design where data were sourced from books, articles and journals to examine farmers and herders' crisis and its effects on ecology. In line with the above, descriptive method was employed to establish that farmers. Herders and ecological crisis in our society have become very paramount and should be recognized and appropriate measures have to be taken to tackle it. The researcher observed in his findings that many have different conceptions about the issue in place and how the crisis has affected the ecological system in our society. The significance of the work would be for those with misconception about this crisis and how it has affected the ecosystem to understand and be able to manage the environment in the right perspective. The aim of this study is to philosophically examine the effects of the crisis to the environment, or the society and propose recommendations necessary for the need of the people and the society. The work, therefore, concludes that, there is need for more enlightenment about the destruction and a possible encouragement about the things around us.

Keywords: Herdemen, Farmers, Crisis, Ecology, Eco-system, Eco-spirituality

Introduction

Conflict gives meaning to one's experience as well as actions. The conflict between the herdsmen and farmers has brought in some experience and thoughts from many Nigerians. People have been affected directly or indirectly from one form of conflict or the other and this has to do with the experience of this crisis. According to Elaigwu 2005, Conflicts often rise out of mistrust, hostility and polarization of relations among groups at times in a competitive setting (59). For Joseph and Tanko, edited by Obanure, it is the product of antagonistic interests between two or more opposing forces or groups within the society. It is a struggle for the control of the socio-economic, ethnic, religious, cultural, racial, and gender differentiation within the context of scarce resources (152). In the recent years, the issue of the conflict between herdsmen and farmers has become so alarming in Nigeria and in Benue state in particular. This has to do with the richness and fertility of land in the state. It is observed that some of the herdsmen migrated from Chad, Niger, Cameroon and other African countries into Benue state all in the name of cattle grazing. Indeed, the conflict has become very difficult and it is spreading between the host farmers and their guests, who are herdsmen and this has resulted in killings and destructions of lives and property (Ikpanor, 1).

Findings have revealed that the major factors that trigger this conflict between the herdsmen and farmers are the destruction of crops by the cattle of the guests (herdsmen), the injuring and rustling of cattle by the hosts (the farmers) in the course of trying to prevent them from destroying their crops, and most importantly, lack of adequate conflict resolution mechanisms in the community, or the belligerence by members of the two groups to avail themselves of same before resulting into self-help in settling conflict (Tor et al. 3). This conflict is characterized with killings, dislocation of people and their means of livelihood,

destruction of both private and public property as well as massive displacement of people in some communities, especially in Guma and Gwer West local government areas of Benue state. This conflict also has to do with the use of deadly weaponry such as daggers, machetes, military parade assault weapons and even chemical weapons as was the case in Sengey village of Gwer West local government area (4). The conflict has gone a long way in destroying our environment, the ecological system has been affected by polluting the water that is taken by both human beings and animal by chemical weapons and cattle contaminating the streams thereby resulting to diarrhea and other life threatening diseases. Another effect of this conflict to the ecological system is the destruction of trees, trees that are very important for making of herbs for the betterment of the society. This destruction has led to global warming which causes unbearable heat to humans and other organisms. Conflict itself is just but a reality of life, we find ourselves in such conditions at the different stages of life. it could be at home, at work places, individual understanding, and among others, even in the ancient times, people were often in conflict with each other because of various reasons best known to them. The trend has continued up to this present moment. And since this trend has never changed and the government in power appears to be unable to find a possible solution to it, this has caused more damage to our ecological system. It is in view of this that this paper would address the issue of herdsmen and farmers' crisis and its effects on the ecosystem and how the government and traditional rulers would be able to put an end to this ugly situation or malady.

Definition of Terms

Herdsmen: These are people, usually the Fulani nomads who always move with their cattle from one place to another in search of greener pastures for feeding their cattle. They are seen as people whose life, survival and tradition are embedded in the

value attached to the herds and the capacity they retain to protect their way of life. Historically, it must be taken into consideration that herdsmen in africa have always played an important role in islamic jihad (holy war). In the same vein, fulani herdsmen or fulani pastoralists are nomadic or semi-nomadic. They have the raising of livestock as their primary occupation. The pure fulani pastoralists engage in random movement of cattle while the semi-nomadic make transhumance migration and return to their camps or homes (<https://en.m.wikipedia.org>>. Wiki). According to abdulbarikindo and alupsen, herdsmen are people who are constantly going about in search for greener pasture for feeding their herds (8).

Farmers: these are individuals whose primary job or function involves livestock and agriculture. A farmer takes all the necessary steps to make sure that he/she raises items and sells them to purchase other items (ngbea, 2).

Ecology: it is the scientific study of the distribution and abundance of organisms, the interaction among organisms and their abiotic environment. Ecologists try to understand the inner workings of natural ecosystem and the species they contain (<https://biology.duke.edu>>major>e). Furthermore, it is the study of the relationship between living organisms, including humans and their physical environment. It seeks to understand the vital connection between plants and animals and the world around them. Ecology also provides information about the benefits of ecosystem and how we can use the resources of the earth in ways that leave the environment healthy for future generation (www.esa.org).

Herders and farmers' crisis and its effects on the ecosystem

The fact that herdsmen and farmers are always clashing over vegetation can be directly or indirectly linked to climate change.

The indiscriminate felling of trees without replanting, illegal mining, etc., are all part of man's activities that are taking a toll or affecting our environment. The impact of these activities resulting to climate change has given birth to high exposure to heat stress and ultraviolet radiation, the absence of clean air, a shortage of potable water, desertification, unpredictable weather, etc.

Our land is polluted due to improper or lack of available dumpsites for domestic waste and wrongful or excessive use of agro-allied chemicals, our different sources of water are polluted by direct dumping of refuse in them or other waterways thus causing blockage of such waterways which results in flooding and contamination of water. Crude oil drilling activities of the oil producing states are another aspect of water pollution. Improper chemical waste disposal by industries is also not left out of this (www.vanguardngr.com).

According to nwachinemere emeka who lost over four hectares of cassava farm, said the level of destruction of life in the wake of the grazing was more than had been witnessed in a long time. He said they lost about two hundred hectares of cassava on the whole. In order to protect their farms from being grazed upon, some farmers decided to take action by spraying ddt, i.e. Dichlorodiphenyl-trichloroethane on their farms and forty-five cattle died as a result of the poison. This of course created acrimony between the villagers and the herdsmen who vowed to retaliate. The farmers are aggrieved that when their farms are destroyed and they report to the authorities, no one is brought to book; so they seek means of protecting themselves (www.vanguard.com). The chemical used above did not only affect the cattle alone. It went a long way killing other micro-organisms and polluted the environment and water which in turn affected human beings as well. The above example is just

one of such that farmers employ with a view to scaring the herders away from grazing in their land or farms but such measures affects both micro-organisms, macro-organism and even plants and human beings. Thus, the ecosystem is affected in the long run.

In the same vein, the destruction of our trees that are used for traditional medicine is so alarming that the traditional medicine specialists go out with difficulty in search of crops or herbs they can use for their concoctions. This destruction is usually carried out by both farmers and herdsmen. Farmers often do that to prevent herdsmen from entering their farmland to cut such trees down to feed their cattle while herdsmen do same to feed their cattle. This destruction of trees has led to excessive heat which affects our ecosystem. These and many more are some of the ways the conflict between herdsmen and farmers have affected our environment.

The role of government and traditional rulers

In dealing with conflict, the government and traditional rulers have to play some roles that are very important both to the herders and farmers here. One of such roles has to do with the method of Thomas Kilmann on conflict resolution. With his method, we can make a way forward to stop the destruction of our ecological system. These methods are:

Accommodation: it involves dealing with the problem with an element of self-sacrifice. The individual sets aside his own concerns to maintain peace. The person tries to see the problem of the people and what they want, displaying a form of selflessness (ikpanor, 14).

Avoiding: here, one withdraws from the problem in question or the conflict. It deals with the problem through a passive attitude.

It is used mostly when the negative end outweighs the positive outcome. In doing such, the individual ignores the problem, that the conflict will resolve itself (14).

Collaborating: it is a means of cooperating with the other parties involved. Here, communication is an important part of this strategy. In this mechanism, effort is exerted in digging into the issue to identify the needs of the individuals concerned without removing their respective interests or ideals (15).

Competing: competition involves authoritative and assertive behavior. In this style, the aggressive individual aims to instill pressure on the other parties to achieve a goal. The individual tries all means to attain what is right.

Compromising: it is the method of accepting and coming up with a possible resolution between the parties involved. Thus, one party is willing to sacrifice their own sets of goals as long as the others will do the same.

Recommendations

The following recommendations are suggested for proper crisis resolutions between the herders and farmers so as to enhance the good of the ecosystem.

- (i) International modern ranching should be pursued as one of the possible models in areas with lower population densities in the north-east and north-west.
- (ii) The traditional form of pastoralism should continue for of a period of time agreed upon with some improvements.
- (iii) Development of grazing reserves should be encouraged to target pastoralists with large stocks and large milk production.

- (iv) Government should be firm and fair in her resolution and implementation of decisions. Traditional and local leaders should be well involved in finding solutions to herdsmen and farmers' crisis.

Conclusion

The focus of this paper is on herders and farmers' crisis and its effects on the ecological system. The crisis has disrupted government activities and the economy is also affected in its form as there is public panicking everywhere. The government's attempt to end the crisis has proven abortive or ineffective. The crisis has affected the whole country in the aspect of ecology. It is, therefore, an appeal that our government should try and embrace some of the methods mentioned above to enhance the resolutions of the conflict. It is my belief that with the resolution accomplishment, the crisis will come to an end, with some of the ecological problems solved.

Works cited

- Abdulbarikindo and alupsen. *A guide to parenting in islam*. New york: university press, 2017.print.
- <https://biology.duke.edu/major/e>. 5 september 2021.
- <https://en.m.wikipedia.org/wiki>. 4 september 2021.
- Ikpanor, t.e. *Management of herders/farmers conflict: the role of government and traditional rulers in benue and nasarawa states*. Makurdi: aboki publishers, 2020.print.
- Levtzion, n. *The history of islam in africa*. Ohio: university press, 2010.print.
- Mamman, j. And tanko, p. *The intra-ethnic conflict of the ikum/bajju communities and its challenges to peace building in kaduna state*. Obanure, c (ed.). Makurdi: aboki publishers, 2008.print.
- Ngbea, g. "political and religious implication of herdsmen and farmers' crisis in nigeria", in international journal of research in humanities and social studies, vol. 2, 2019.
- Tor ayemga, et al. *Understanding the nature and dynamics of herders/farmers' conflict in the lower benue valley area*. Makurdi: aboki publishers, 2020.print.
- www.esa.org. 5 september 2021.
- www.vanguardngr.com 3 september 2021.

Chapter Sixteen

FOOD SECURITY, TECHNOLOGICAL REVOLUTION AND AFRICA'S QUEST FOR DEVELOPMENT IN THE 21ST CENTURY: EXAMINING THE NEXUS

EGBULE, Philip Onyekachukwu

*Department of Arts and Social Sciences Education,
University of Delta, Agbor, Delta State, Nigeria
pastorp4christ@gmail.com*

&

UZOMAH, Ngozi Louis, PhD

*Department of Geography
University of Nigeria
Nsukka, Enugu State, Nigeria
ngozilouisuzomah@gmail.com*

Executive Summary

Food is the most important of the three basic needs (food, shelter and clothes) for human existence and development. The process (agriculture) that brings about food is the bedrock of every nation's development. One fundamental instrument for its growth is technology. Africa has an opportunity to play a bigger role in the world economy, but first, it must tackle the obstacles of deficit in scientific knowledge as well as technological backwardness. In contemporary Africa, there still exists the challenge of food insecurity, which gives room for endemic, vulnerability of rural poverty and human capital underdevelopment. Popper's philosophy contains ideas that are capable of stimulating the needed knowledge relevant to Africa's quest for development in the 21st century. Therefore, in unison with Popper's philosophy on the above, and bearing in mind that the 21st century is an age where development is largely

determined, not by natural resources any longer, but by knowledge economy and technological revolution - this paper focused on achieving food security through agricultural development, using relevant technologies in advancing agricultural output. In this paper, I also examined the problems militating against agriculture in Africa, as well as how investment in the agriculture and technology can be indispensable tool achieving food security and development. The result from review of related literatures showed that in Africa, there is a high level of food insecurity because of low attention on food production occasioned by the use of crude implements and inconsistency in government's agricultural development policies and programmes, as well as the Covid-19 crisis that is affecting global economies. Conclusively, in Africa, both the citizens and government despise agriculture. Deterioration in technology has long been identified as one of the reasons for poor agricultural production performance and food scarcity in Africa. Workable recommendations are outlined; among others, the researchers recommend that African leaders should mechanize agriculture; also, social protection policies should be channeled to agricultural sector to protect farmers who are vulnerable to threat of life and avert risks associated with farming.

Keywords: Food security, technological revolution, agricultural production, development, Africa

Introduction

The recent literature on development in Africa emphasizes that the agricultural development still needs to play a key role for poverty reduction and food security. As compared to the situation of the Green Revolution in Asia, there are new opportunities for the agricultural development in Africa, but also new challenges. To achieve this, technological revolution policies

must be designed and vigorously implemented (Anderson, Birner, Naseem & Pray, 2018; Kanu & Imatiri 2019a). One of the most distinguishing factors between the developed and developing countries is application of appropriate technology as well as its diffusion to different sectors of the economy (Ekekwe, 2010). The growth in technology transfer across the world especially in the 21st century has greatly affected various sectors of the economy across countries around the world. For example, the rise in technology has brought about growth in cross-border trade, investment, agricultural mechanization, food security and so on.

Technologies have been seen as veritable tools for economic growth and development across the countries of the world especially the developed ones (UNDP, 2008) cited in (Osabuohien, 2010). Technology is simply viewed as the techniques of doing things, while technological revolution imply improved and better ways of getting any task done. The relationship between food security, technological revolution and agriculture development, especially in Africa, cannot be overemphasized. As a roadmap to attaining development, the Millennium Development Goals (MDGs) was adopted in year 2000 and in Africa, 70% of the development target group live in rural areas and are dependent on agriculture for a living (International Food Policy Research Institute, 2004). Invariably, reducing poverty, improving nutrition and general well-being of the population would imply improving the livelihood of this majority and this hinges critically on the performance of the agriculture sector.

For a country to be food sufficient, it needs to make food available, provide easy access to food at any given time, and provide households or families with the ability to afford staple

food (Reisinger, 2014; Kanu & Imatiri 2019b). Adedeyi (1989) cited in Atang and Ugo (2014) see development as a process of socio-economic and political transformation of structures in a society, in such a way that it leads to improvement in the level of living of the people including education, housing, health and nutrition and other related social services, decreasing inequality in the distribution of income, urban-rural imbalances and political and economic opportunities. This paper investigates the contribution of the agriculture sector to food security via technological revolution in Africa. The study also assesses the extent of technological evolution in Africa and suggests how technological revolution can further engender development.

Conceptualizing Food Security

Food is any substance, either solid or liquid taken into the body for nourishment and sustenance of life. Food security in its most basic form is defined as the access to food needed for a healthy life at all times. However, in a simple language, a country is food-secured when majority of its population have access to food of adequate quantity and quality, consistent with decent existence at all times (Reutlinger, 1985; Idachaba, 2004) cited in (Ojo & Adebayo, 2012). According to the Food and Agricultural Organization (2008), food security is when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary and food preferences for an active and real life. In other words, food security can be taken to mean access by all people at all times to sufficient food for an active and healthy life. Its central elements are: (a) the availability of food (b) accessibility of food, and (c) food adequacy.

Conceptualizing Technology, Biotechnology and Technological Evolution

Technology is a broad concept that deals with the usage and knowledge of tools, crafts and how it affects man's ability to

control and adapt to his environment. It is quite difficult to have a generally acceptable definition of technology. Mostly, it simply refers to material objects of use to humanity, such as machines, hardware or utensils and many others (Franklin, 1989). It equally means the application of scientific knowledge in solving man's problems and improving his living condition.

Biotechnology is the kind of technological revolution that is based on biology, especially concerning agriculture, food science, and medicine. It is regarded as any technological application that uses biological systems, dead organisms, or their derivatives in making or modifying products or processes for given usage (United Nations Convention on Biological Diversity, 2002). Today, biotechnology represents a scientific advance in agriculture with far reaching potentials in increasing food production in an environmentally sustainable manner. Agricultural biotechnology includes using genetics to modify crops and plants to produce more nutritious food, cloning of livestock; tissue culture technique and genetic engineering. Apart from its potential to produce higher yields the one of biotechnology gives shorter gestation and maturity periods to crops, plants and livestock as well as will continue to use biotechnology to produce genetically modified foods.

Technological revolution, on the other hand, connotes total or radical change, as well as improvements of previous technologies to a better one. Technological revolutions have reduced barriers to communication, which have made people interact more freely within and across countries on a global space (National Science Foundation, 2002). The production frontier can be enhanced by the efficient use of modern technologies. Technological revolution involves the process of adopting innovations in order to enhance productivity. It is the ability of

technology having a wider impact on the society through its application. Its adoption will enhance human activities in the society. It is disputable fact that technological revolution is a veritable for all-round development. This assertion is supported by the fact that most countries that have attained some measures of development followed the path of technological revolutions. Unfortunately, the situation in Africa has not been as desired. According to Osabuohien and Efobi (2012), the diffusion of appropriate technology is the distinguishing factor between the growth capacities of various countries. The African region is not an exception, which has been known to be amongst the slow growth regions of the world, with rising number of poor.

Technological Revolution and Development of Agricultural Sector in Africa: The Linkages

In Africa, Asia, Latin America and other third world countries, a deterioration in technology or ecology, which lower outputs from given input has long been identified as one of the reasons for poor agricultural production performance (Collier, 2008). It is equally important to note that indigenous techniques like crop rotation and other cultural farming practices that have been used to preserve the soil structure and its fecundity do not seem to be adequate or even relevant in the present efforts to boost food production in most developing countries.

In Africa, deterioration in technology, which lower outputs from given input has long been identified as one of the reasons for poor agricultural production performance and food scarcity. A country that cannot formulate and effectively implement agricultural and food policies may find it difficult to use the citizens as catalyst for sustainable democracy and national development. More so, the very survival of the state is linked to the ability of its economy to meet the material demands of both people and government. As a fundamental factor affecting

humanity globally in this century, technology has provided many opportunities. In fact, it has affected many areas of human life, as well as many sectors of the economy - one of these is agriculture.

The relevance of technological evolution in attaining improved productivity in agriculture sector in Africa cannot be underrated. In Nigeria, the government has embraced the idea of using biotechnology to boost food production as a pre-condition for food security. It established the National Biotechnology Development Agency at Abuja (Federal Capital Territory) setting aside the sum of 26 million naira (about \$185,000) to be invested in the project, and specifically mandating the Institute of Agriculture Research, Ahmadu Bello University, Zaria, to apply biotechnology for the improvement of farming systems for various crops such as Sorghum, maize, cowpea, cotton and sunflower (Vanguard, February 16, 2005).

It is increasingly obvious that technological investment in agriculture has a very pivotal role to play to ensure that food is available globally, thereby serving as a major source of income which enhances households' purchasing power to buy food that has a high rate of nutritional status (Food and Agricultural Organization, 2016). In the field of agriculture, technological revolutions have helped in the production of disease resistant species of crops. The production of crops that attain early maturity as well as improved market and nutrient values has been made possible by technologies like green biotechnology. Similar improvement has been witnessed in animal husbandry where animals with higher nutrient and market values are being raised (Osabuohien, 2010).

The 21st century provides a range of new opportunities and linkages that have become available through scientific advances in a range of fields. Examples include innovations in breeding techniques (for example, precision phnotyping, genomic selection, gene editing) or the use of sensor technologies for agricultural monitoring (with applications, example in irrigation, pest control or animal and pasture monitoring (Odetola & Etumnu, 2013). One promising group of technologies that are increasingly used in developing countries is information and communication technologies (ICTs). There are many opportunities to use ICTs in the agricultural knowledge systems (for example, in research and extension services), as well as in different segments of agricultural value chains.

Innovations in Agricultural Production and Food Security: Opportunities for Africa's Development in the 21st Century

No doubt, food is life; hence, food has become an instrument of national power. One of the big opportunities for African agricultural transformation is that it can take advantage of many technological and institutional innovations that have been developed during the past decades. The World Development Report 2008 (World Bank 2008) as well as other sources, such as the World Bank's Agricultural Innovation Systems Sourcebook (World Bank, 2016), provide ample evidence of such innovations that can facilitate the agricultural transformation in Africa. They include new low-cost land certification schemes that can help to provide security of access and support land rentals; technological innovations, such as drought- and flood-resistant varieties, new types of financial services, and new value chain approaches that bring smallholder farmers into contract farming with agro-industry (Odetola & Etumnu, 2013).

In Africa, agriculture is despised. Able-bodied young men and women do not have interest in agriculture. Both the educated

and the non-educated roam the nooks and crannies of the cities in the urban areas looking for non-existent white-collar jobs. However, agriculture fosters economic growth through its potential to stabilize domestic food production and thereby enhance food security. Periodic food crises undermine both political and economic stability, thereby reducing the level and efficiency of investment (Alesina and Perotti 1993; Barro and Sala-i-Martin 1995) cited in (Daio, Resnick, Hazell and Thurlow, 2006). While food imports may temporarily alleviate such crises, they are not a viable solution for ensuring long-term food security, especially given the possibility of encountering foreign exchange constraints.

Technological revolution and adequate investment in agriculture has the capacity of improving technical knowledge among African farmers, with a view to achieving food security. In fact, adopting innovation in agricultural sector is deemed essential for increasing agricultural output; reduce the vulnerability of rural poverty and consequently, food security. Food security and growth in agricultural output depend on technological usages, which enhance the productive capacity of the agricultural sector. This will reduce problems of food shortage and scarcity, as well as starvation and hunger in the African continent.

Challenges of the 21st Century for African Agriculture and Food Security

Despite the significance of agriculture to Africa's development strive, a number of problems stare it in the face. African agriculture in the 21st century faces several risks and challenges that, if not addressed, could constrain growth and development. The first challenge of the African agricultural development is caused by the diversity of agro-ecologies and cropping systems,

which seriously limits the possibilities to benefit from spill-overs from public and private research and development investments from other regions (World Bank, 2008). However, expenditure on research and development, measured as percentage of agricultural gross domestic product, has remained rather low in Africa and the agricultural research systems have remained fragmented and mostly rather small (Beintema & Stads, 2014).

The second challenge is the relatively low level of market and institutional development in Africa. Supportive market and social institutions underpinned the Green Revolution of the Asian continent. In Mexico, for example, land rights regulation and institutions were restructured before farmers could profitably adopt hybrid maize (Byerlee, de Janvry & Sadoulet, 2009). Kim and Ncube (2014) argue that a key difference between the growth experience of East Asia and Sub-Saharan Africa (SSA) has been the lack of private ownership of land in SSA resulting in a vicious cycle of low investment, low productivity and low incomes. Asia had functional input and credit markets and output markets that Africa lacks, hindering African agricultural development Africa's lack of institutional development that enables private sector activity has been cited as the underlying cause of African. In response to this challenge, the African Union adopted the Comprehensive Africa Agriculture Development Programme (CAADP) in Maputo, Mozambique in 2003. One of the key policies called for member states to increase public agricultural investment to 10% of national budgets per year and for a 6% increase in agricultural productivity per year.

A third challenge for African agricultural development is climate change. As compared to temperate zones, tropical agriculture is more negatively affected by climate change, which exacerbates the already existing challenges of increasing agricultural productivity. For instance, drought reduces agricultural output,

which decreases the rate of available food, and so the meal frequency decreases because the balance of nutrients is insufficient and this leads to malnutrition in children and even adults. (Agwu et al, 2011) cited in (Egbule & Dikenwosi, 2020). Few years ago, the increase in water level has resulted to flooding in some coastal areas of Nigeria. Also, increase in rainfall washed away bridges, houses, destroys properties and settlements as was witnessed in some states like Sokoto, Kebbi, Jigawa, Lagos, Ogun and Bayelsa in 2010 and Benin, Delta, Calabar, and Lagos in 2011.

A fourth challenge, which already existed in the 20th century but became better recognized in the 21st, is the need for environmental protection and sustainable natural resource management. The Green Revolution in Asia has had a range of negative environmental consequences, such as pollution by overuse of pesticides and inorganic fertilizer, depletion of aquifers and loss of biodiversity. This concern, which has been widely acknowledged in the literature, has led to calls for a “doubly green” (Conway, 1997) or “ever-green” revolution (Swaminathan, 2005). The African agricultural transformation not only has to avoid these problems caused through agricultural intensification, there is also a need to address the problems of natural resource degradation that have been caused during the past decades in the prevailing extensive farming systems, such as fertility depletion due to lack of fertilizer use. What makes tackling these problems even more challenging is the lack of any consensus on the strategies that will be most suitable to tackle agro-environmental problems. As the controversies surrounding the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD, 2009) have shown, the global community is deeply divided regarding the question as to the role of modern industrial inputs vis-à-vis agro-

ecological and organic approaches in future agricultural development (Scoones, 2009).

Another major challenge that African agricultural development or transformation has to cope with is globalization. Managing an agricultural transformation under the conditions of an open market economy brings its own challenges, since African governments have fewer possibilities to protect the sector at least initially (“infant industry”) than was the case during the Asian Green Revolution. Moreover, the African agricultural transformation is confronted with highly volatile agricultural prices and with rapidly changing demands of increasingly globalized value chains (de Janvry and Sadoulet, 2010). According Daio, Resnick, Hazell and Thurlow (2006), while the recent “bypass” argument is new in the sense that globalization and trade liberalization provide more export opportunities and make food even cheaper on the international market, the difficulties created by earlier attempts to “bypass” agriculture remain. Most African countries possess a small and inefficient industrial base with an unimpressive growth performance. Turning this performance around in an open trade environment is a daunting task. Not only are fledgling industries expected to compete with the world’s best in export markets, but also trade liberalization is a two-edged sword that also opens domestic markets to imports that can decimate whole swaths of industry before they have a chance to adjust and compete. The approach contrasts sharply with the proven and successful approach of many Asian countries that first nurtured their industries through growth in protected domestic markets and subsidized exports before requiring them to face the full force of international competition.

Lack of political will to support agricultural transformation and large-scale investment in agriculture is another major constraint

in Africa. Political will is a challenging concept. Hammergren (1998) cited in Post et al (2010) characterized it as “the slipperiest concept in the policy lexicon,” calling it “the sine qua non of policy success, which is never defined except by its absence.” There have been various efforts to define political will since then. Post et al (2010) defined political will as “the extent of committed support among key decision-makers for a particular policy solution to a particular problem.” According to Brinkerhoff (2010) focused on the political will to combat corruption. His concept of political will is here adapted to the will to transform agriculture.

Finally, there are still unwarranted public fears to contend with in the safety of genetically modified foods, stemming from scare-stories, reinforced by superstition and crash ignorance, of the danger in the consumption of genetically modified foods. The incontrovertible fact is that without the help of agricultural biotechnology, success in food security will continue to elude Nigeria. Other factors that are militating against agricultural production and food availability in Africa include poor infrastructure and ineffective policies, weak institutional framework, inadequate credit facilities, as well as the bottleneck associated with assessing the available once, inadequate infrastructural facilities, especially accessible roads and so on.

Consequences of Food Insecurity in Africa

In most parts of Africa, agriculture still regarded as a vocation for the illiterates in the rural areas who have nothing better to do. The big farmers – politicians, retired generals and businesspersons – engage largely in crops or animals cultivation that are not common staples. They have pineapple plantations, ostrich and other exotic farms that add nothing to our quest for food security – mainly for export. The lack of mechanized

farming is certainly something to worry about. In contemporary Africa, there still exists the challenge of food insecurity, which gives room for endemic, vulnerability of rural poverty and human capital underdevelopment. In view of the foregoing, the attainment of food security is imperative in any country. This is why all developed and developing countries make considerable efforts to increase their food production capacity. The United Nations (UN) Secretary General, Ban Kimoon, laid out these sobering statistics as he kicked off a three-day summit on world food security in Rome. "Today, more than one billion people are hungry", he told the assembly leaders. Six million children die of hunger every year, 17,000 every day. Dan Kimoon added that in 2050, the world will need to feed two million more mouths - 9.1 billion in all (Nigerian Compass, November 18, 2009). But hunger, defined here as a situation in which there is an inadequate quantity of available food; and malnutrition which is indicative of intake of unbalanced diets, have been ravaging most developing countries, severely menacing poor families (Macnamara, 1973) in (Ojo & Adebayo, 2012). Both have also had debilitating effects in the productive capacity of the citizens, impacting negatively on the overall economic development of many countries.

The twin problem of hunger and malnutrition is closely linked with poverty. While hunger may be occasioned mostly by lack of jobs, or hyper - inflation that causes reduced purchasing power among others, which may be eliminated or reduced with sound management of the national economy, malnutrition is caused by poor diet and has a very long-term devastating effect as people in many poor countries. Medical and anthropometric evidence has shown, for instance, a very close link between malnutrition and infant mortality, poor growth in children as well as reduced adults' immune system to fight some diseases. To be sure, malnutrition saps the working strength of an economy, cripples

the mind and body of children and consequently deprives the society of its greatest potential that is, its future productive human resources (Salvative & Dowlins, 1977) cited in (Ojo & Adebayo, 2012). In contrast, countries that are food-secure do not have this dreadful situation to contend with (Davies, 2009) cited in (Ojo & Adebayo, 2012).

Africa which reversed from being a key exporter of agricultural commodities into being a net importer, has the highest percentage of undernourished people and has shown less progress on reducing the prevalence of undernourishment in the last 30 years. Chronic food insecurity now affects some 28% of the population that is nearly 200 million people who are suffering from malnutrition. Famines are the most visible and extreme manifestation of acute food insecurity.

Meanwhile, Nigeria is one of the food-deficit countries in Sub-Saharan Africa, although it is arguably better in terms of production than the others are. It has also not suffered any major catastrophe that could precipitate scourges of famine, mass hunger and therefore food crisis. This does not in any way prevent public policy makers from being conscious of avoiding the debilitating impact of food shortages in neighbouring countries that has however made food security become a first order priority of the present African governments. The greatest recommendation of this paper to avoid recapitulation is that public policy makers must as a matter of urgency see food as component of welfarism and as such develop sufficient political will towards agricultural development..

Conclusion

The study appraised the indispensability of technological revolution in achieving development in Africa. Finding from the

study shows that Africa has not experienced much technological revolution, which could be traceable to low investment in education and research. It was also established that there is a significant positive relationship between technological revolution, food security and development. Application of appropriate technology has been noted as one of the distinguishing factors in growth disparities across countries. Thus, this study investigates the place of food security through modern/mechanized agriculture by the instrumentality of technological revolution towards development in Africa. In fact, if Africa must contribute to the global knowledge economy and move on the path of economic progress, the issue of technological revolutions through adequate investment on functional and quality education, among others, needs to be addressed with all serious efforts. Finally, I suggest that other scholars should examine some major agricultural policies and programmes in Africa – their prospects, challenges and the way forward.

Recommendations

This sub-section enumerated the way forward for African agricultural sector. The following measures will improve and ensure increase in agricultural productivity and food availability in Africa:

- African governments should provide more funding for agricultural universities to carry out researches on all areas of agricultural production - this will lead to more exports and improvement in the competitiveness of Africa agriculture production in international markets;
- Also, governments should revive relevant past agricultural policies and programmes, most importantly social protection policies should be channeled to agricultural sector to protect farmers who are vulnerable

to threat of life (for instance, herdsmen-farmers conflict in Nigeria) and avert risks associated with farming;

- African governments should also make adequate provision of finance and credit facilities (with little or no interest) to farmers (including women) and also come up with a stable policy for loan disbursement strategy;
- Governments should mechanize agriculture, supply high yielding seedlings, subsidize the prices of agro-chemical and fertilizer for farmers, provide adequate irrigation scheme and also encourage farmers to adopt modern production technology, as well as the provision of extension services;
- Ensuring food availability via modern storage facilities could stem the rate in food insecurity. In fact, instituting an effective system of food preservation can address hunger and stabilize food prices for both farmers and consumers thereby suppressing hunger and reversing the trend of food insecurity.
- Increased agricultural productivity and food availability can be achieved in Africa through the promotion of functional and skill-oriented education system and investment. This is germane if Africa desires to contribute to the global economy.
- Supports can be provided by governments' relevant agencies, foundations, Non Governmental Organisation (NGOs) and well-meaning individuals, which can be in the form of giving free seeds and fertilizer distribution to low or middle-income farmers in post shocks (post-disaster and post-drought) conditions in a way of recovering quick from shocks and of restarting agricultural production and food security.
- Overcoming the challenges of agricultural productivity and food availability in Africa requires particularly strong

efforts to invest in research and development and to exploit economies of scale in research and development by collaborating within the region;

- Political will to support agricultural transformation and large-scale investment in agriculture is imperative and indispensable in Africa.

References

- Anderson, J. R., Birner, R., Naseem A., & Pray, C. (2018). Promoting the Agricultural Transformation in Africa: How to Create Sufficient Political Will? A paper presented at the 30th International Conference of Agricultural Economists. July 28 – 2 August.
- Atang, R.S.& Udo, E.E. (2014). Transactional leadership: The bone of Nigeria's development. *Niger Delta Journal of education*, 2 (1), 83-94.
- Beintema, N., & Stads, G.J. (2014). Taking Stock of National Agricultural R&D Capacity in Africa South of the Sahara - ASTI Synthesis Report. Washington, D.C.: ASTI Report. International Food Policy Research Institute (IFPRI).
- Brinkerhoff, D. W. (2010). Unpacking the Concept of Political Will to Confront Corruption. Bergen, Norway: U4 Brief, No. 1, Chr. Michelsen Institute.
- Byerlee, D., de Janvry, A. & Sadoulet, E. (2009). Agriculture for Development: Toward a New Paradigm. *Annual Review of Resource Economics* 1(1), 15-31. doi:doi:10.1146/annurev.resource.050708.144239.
- Collier, P. (2008). The Politics of Hunger: How Illusion and Greed Fan the Food Crisis. *Foreign Affairs* 87(6), 67-8. Retrieved from <http://www.foreignaffairs.com/articles/64607/paulcollier/the-politics-of-hunger>

<http://ora.ox.ac.uk/objects/uuid:4a9b6e27-926e-4481-aabc-89c923603b61>.

- Conway, G. (1997). *The Doubly Green Revolution: Food for all in the 21st Century*. New York: Penguin Books.
- Daio, X., Resnick, D., Hazell, P. & Thurlow, J. (2006). *The role of agriculture in development: Implications for Sub-sahara Africa*. DSGD Discussion Paper No: 29. Washington, DC: International Food Policy Research Institute.
- de Janvry, A. & Sadoulet, E. (2010). *Agriculture for development in sub-Saharan Africa: an update*. *African Journal of Agricultural and Resource Economics*, 5 (1), 194-204. Retrieved from <http://www.aaaefrica.org/afjare/1%20%20De%20Janvry%20&%20Sadoulet%20-%20FINAL.pdf>
- Egbule, P.O. & Dikenwosi, C. I. (2020). *The implication of climate change on the environment of Niger Delta region*. *West African Maritime Journal*, 1 (1), 310-316.
- Ekekwe, N. (2010). *Nanotechnology and microelectronics: The science, trends and global diffusion*. In N. Ekekwe (Ed.), *Nanotechnology and microelectronics: Global diffusion, economics and policy*. New York, NY: Information Science References. doi:10.4018/978-1-61692-006-7.ch001
- Food and Agricultural Organization (2008). *Global Food Security: Issues and Prospects*. Rome.
- Food and Agricultural Organization. (2016). Latest FAO Food Price Trend Reports Decline in International Cereal Prices Available at <http://www.foodsecurityportal.org/latest-fao-food>. Retrieved online on 06-03-2019.
- Franklin, U. (1989). *Real World of Technology*. Toronto, Canada: House of Anansi Press.
- International Assessment of Agricultural Knowledge, Science and Technology for Development (2009). *Agriculture at a Crossroads: International Assessment of Agricultural*

- Knowledge, Science and Technology for Development - Synthesis Report. Washington, DC: Island Press.
- International Food Policy Research Institute (IFPRI), 2004. Assuring food and nutrition security in Africa by 2020: Prioritizing actions, strengthening actors, and facilitating partnerships. Proceedings of an All-Africa Conference.
- Kanu, I. A. and Imatari E. P. O. (2019a). The Question of Food Security in Arid and Semi-Arid Lands in Africa: Indigenous Knowledge and Implementers of Development. *Journal of African Studies and Sustainable Development*. Vol. 2. No. 8. pp. 190-200.
- Kanu, I. A. and Imatari E. P. O. (2019b). Food Security in Arid and Semi-Arid Lands in Africa. *Journal of African Studies and Sustainable Development*. Vol. 2. No. 8. pp. 50-83.
- Kim, H. S., & Ncube, M. (2014). Agricultural sector development and structural transformation: Sub-Saharan Africa versus East Asia. *Seoul Journal of Economics* 27, 349-386.
- National Science Foundation. (2002). Science and Engineering Indicators (Vol. 2). Washington, DC.
- Odetola, T. & Etumnu, C. (2013). Contribution of Agriculture to Economic Growth in Nigeria. A presented at the 18th Annual Conference of the African Econometric Society (AES) Accra, 22nd and 23rd July.
- Ojo, E.O. & Adebayo, P. F. (2012). Food security in Nigeria: An overview. *European Journal of Sustainable Development*, 1 (2), 199-220.
- Osabuohien, E. S. (2010). Technological Innovations and Africa's Quest for Development in the 21st Century. In N. Ekekwe (Ed.), *Nanotechnology and Microelectronics: Global Diffusion, Economics and Policy* (pp. 382-398).
- Osabuohien, E. S., & Efobi, U. R. (2012). Technology Diffusion and Economic Progress in Africa: Challenges and Opportunities. In N. Ekekwe, & N. Islam (Eds.)

- Disruptive Technologies, Innovation and Global Redesign: Emerging Implications (pp. 425-440).
- Post, L.A., Raile, A.N.W. & Raile, E.D. (2010). Defining political will. *Politics and Policy*, 38(4), 65-76.
- Reisinger, J. (2014). Premise's data in Brazil predicts food; food and agriculture-FAO paper.
- Schultz, Theodore W. 1964. *Transforming Traditional Agriculture*. New Haven: Yale University Press.
- Scoones, I. (2009). The Politics of Global Assessments: The Case of the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD). *Journal of Peasant Studies* 36(3), 547-71.
- Swaminathan, M. S. (2005). Towards an Ever-Green Revolution. In Tuberosa R., Phillips R.L., Gale M. (eds.), *Proceedings of the International Congress "In the Wake of the Double Helix: From the Green Revolution to the Gene Revolution"*, 27-31 May.
- United Nations Convention on Biological Diversity. (2002). *Convention on Biological Diversity*. Montreal, Canada: Secretariat of the Convention on Biological Diversity.
- World Bank. (2016). *World Development Indicators*. <http://data.worldbank.org/datacatalog/world-development-indicators>. Accessed on 08/03/2016.
- World Bank (2008). *World Development Report 2008: Agriculture for Development*. Washington, DC.

Chapter Seventeen

EDUCATION AND THE AFRICAN ENVIRONMENT

OMOJOLA Immaculata Olu, (SSMA), PhD

Department of Business Administration and Management

Villanova Polytechnic, Imesi Ile, Osun State

omojolassma@yahoo.co.uk

Executive Summary

This paper discussed education and the African environment. It paid attention to how formal education has influenced the African environment. The paper was discussed under the following headings: Religion and the African Environment, and Cultural Values and the African Environment. It cherished the fact that the African environment has religious connotations as some trees, rivers and persons among others were considered sacred. Cultural values like sense of community life, sense of good human relations, sense of the sacredness of life, sense of hospitality, sense of religion among others were discussed. It was discovered that Syncretism is being practiced by Africans, in an attempt to strike a balance between Christianity and African traditional religion. Also, cultural values have been replaced with what modernization offers in terms of individualistic instead of communal life, ritual killings as an alternative to sacredness of life and socialization replaced sense of awe in worship among others. The paper did not neglect the fact that education shaped African environment positively. Noted among these positive areas were freedom for women, literacy and better health care. It was then suggested that African cultural values should be inculcated into educational curriculum to avoid them going into extinction, and efficacy of Christianity and Islamic beliefs should be emphasized. Descriptive research of

correlational type was used for this study, since it attempted to solve the problems of education and African environment.

Keywords: Formal education, African Environment, Syncretism, Cultural values, Literacy and Globalization.

Introduction

This paper discussed education and the African environment. It paid attention to how education has influenced the African environment especially the Western part of Africa. Africa is the second largest continent, covering almost five fifth of the total land surface of earth. The continent is bounded on the west by the Atlantic Ocean and on the North by the Mediterranean Ocean. On the East, by the Red Sea and the Indian Ocean, on the South the mingling waters of the Atlantic and Indian oceans. West Africa is in the western part of Africa. According to United Nations, it has seventeen countries- Benin, Burkina Faso, Cape Verde, The Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Saint Helena. According to Paul (2021), the population of West Africa is estimated at about 381 million people.

African environment can be described in line with African life in its totality. They are rich in natural resources, in form of tropical timber, cocoa beans and tropical fruits among others. They have rivers that serve as their source of water supply. All these natural resources are useful to them and they are part and parcel of their environment. They cultivate the land to earn their living. Africans also have rules and regulations guiding them within their environment according to experiences of each ethic group. Africans uphold moral values that are being taught from one generation to another and strictly adhered to. Traditional

Africans fear God and revered Him deeply! Everything they did was translated through their experiences of God within their environment. Africans belief in Almighty God and serve him through other gods. Religion gave meaning to them and every other thing flow from it. They served and honored God in their environmental experiences.

Sharing this view, Amelia (2020) contends that:

The relationship between the African people and their environment is much like the two sides of a coin – inextricably connected yet in constant opposition. The people, one side of the coin, live in close dependence on the service-value of natural resources. On the other side of the coin is the environment: the land, climate, water resources which are so intimately connected in a physical sense to the African people. (p. 7).

This is to say that Africans and their environment are more or less the same.

African environment could be understood through their philosophy and culture.

Omojola (2020a) while reviewing Kanu's Sources of *Igwebuике* Philosophy: Towards A Socio-Cultural Foundation asserted that "African philosophy and culture are always learnt and taught by each ethnic group and would be passed on from one generation to another either through oral tradition or through their signs and symbols." (p. 83). Therefore, African could be understood within their environment in the following areas as stated by Kanu as source of *Igwebuике* Philosophy: Names that Africa give to their children/or used as titles ascribed to God, African proverbs and African songs which is a normal way of African culture, Art may come in form of painting or sculpture by individuals or by a group of people with the same

understanding, Folktales emphasize the community value and virtues, African symbols come in form of image to represent the relationship between the visible and invisible, African mythology gives meaning and full explanation to the life of a given community in African.

African society regarded education as a means to an end not as an end in itself. Education was generally for an immediate induction into society and preparation for adulthood. In particular, African education emphasized social responsibility, job orientation, political participation, spiritual and moral values. According to vanguard news online (2018), while quoting Fafunwa identified the following as the seven goals of African education: To develop the child's latent physical skill, to develop character, to indicate respect for elders and those in position of authority, to develop intellectual skills, to acquire specific vocational training and to develop a healthy attitude towards honest labor, to develop a sense of belonging and to participate actively in family and community affairs, to develop, appreciate and promote the cultural heritage of the community at large.

Supporting this view, Omojola and Kanu (2020) opined that:

African education comes from what to do and how to behave well. For example, at rising, children are taught to greet elders, sweep the surroundings, they are also taught from time to time to respect elders, to have value of honesty, charity, industriousness, cleanness, humility, support- members helping themselves in developing someone's project, as a group or people of the same trade helping themselves. (p. 2).

This is to establish the fact that Africans have traditional education that promotes African values.

Europeans introduced formal education to Africa as a means of Evangelization which entails getting people converted to Christianity from African Traditional Religion. Adewuya (2004) represented this idea in this form: "The first documented literature on the entry of Education to Africa by the colonialist in latter part of the nineteenth century mentioned 1842 when evangelization was brought in to replace the slave trade that had ravaged the peoples of the Western and Eastern coast of Africa about five centuries" (p. 1). Therefore, schools were later built along side with churches and many Africans were attending schools free of charge in some areas and also attending churches. They were also participating in the celebration of their regular festivals quietly.

In the mind of Mbiti (1969), while reflecting on Christianity in Africa in relation to schools averred that "schools became the nurseries of Christian congregation, and converts earned the name of "Readers". The same buildings were used as schools from Monday to Friday, and as churches on Saturday (for catechumen lessons) and Sunday (for worship). As we saw, it is Africans who have been to school that are most deeply affected by modern changes" (p. 232). By implications, it was the enlightenment gained through education that brought about transformation to the lives of those who participated in the formal education. In the same vain, Nbefo (1996) affirmed that "The missionaries, on the other hand, saw the schools as a means of winning the war against Satan by making the new generation going through schools Christian" (p. 49).

Religion and the African Environment

One of the most prominent activities in African environment was religion. Africans were able to see God in their environment and worship Him accordingly. In the opinion of Mbiti (1969), "... all African peoples associate God with the sky or heaven, in one way or another." To corroborate this claim, Kwesi (1984), stated that:

Generally speaking, however, the environment has a special meaning for the Africans; he loves the environment, he fears it, and he senses something mysterious about it. The elements, plants and animals, the land and all that is within and on it - these plays a vital role in the African apprehension of reality" (p. 49).

Accordingly, Onwubiko (1991) in his reflection on Sacred objects and places in Africa maintained that "...the shrines of deities, some streams and rivers together with the fish in them... are sacred. Some images are sacred... , some persons too are sacred-these are the religious personnel in African religion" p.63.

Consequently, Kanu, Omojola and Bazza (2020) while citing Idowu opined that:

Usually, women are more religious ones who are more frequently caught in this practice by wayside shrines, sacred trees, sacred brooks, at cross-roads, or at any other places marked with some sacred signs, asking for a blessing on their journey, their work, their wares, their family or their private undertakings. (p. 5).

It is, therefore, important to appreciate the fact that African environment has religious inferences. So, separating Africans from their environment would be tantamount to removing them from their natural habitat; since their religion being practiced in their environment represents their ways of life.

Cultural Values and the African Environment

All society develop values from their regular experiences to guide their day to day activities and to keep their environment peaceful and in good relationship with one another. These values form peoples' character and keep them from unwanted misunderstandings. There are lots of cultural values in Africa but for the purpose of this work those values that are common to many Africans will be selected and how these values have been influenced by education will later be discussed. The most collective cultural values in Africa as identified by Onwubiko (1991) are as follows: "Sense of community life, sense of good human relations, sense of the sacredness of life, sense of hospitality, sense of the sacred and of religion, sense of time, sense of respect for authority and for elders, sense of the language and proverbs as cohesive of the community based on the truth" p.13. It was a taboo for any member of a given community in Africa not to adhere to these values.

The above values were cherished by Africans as they lived a communal life to support and care for one another. In this process, the idea of good relationship became easy as it was already in their life style, as solidarity was a must. Therefore, there was consideration and compassion for others. Africans respects human life as there was punishment for whoever kills. The idea of shedding of blood apart from that of animals was not allowed, to the extent that the blood of virginity was celebrated to show that life has been preserved as Onwubiko (1991), while citing Davidson pronounced in this statement "the blood of virginity is the symbol that life has been preserved, that the spring of life has not already been flowing wastefully, and that both the girl and her relatives has preserved the sanctity of human reproduction" p.23. African sense of the sacred and of religion was second to none. They held religion in high reverence and they had religious celebrations with complete sense of awe.

Africans derived joy in sharing, hence their sense of hospitality was superb. Everyone in the community shared whatever they had in common, no matter how small. Therefore, nobody lacked anything. In their sense of religion, morality, coming from these cultural values were simply the fruits of their religion and it was impossible to separate them. Religion was not just a practice of worship but a fountain and source of virtues. Therefore, the outcome of religious worship was translated and lived out within the community through their good relationship with one another.

In their value of time, Africans had control over their time as “socialized time, here is the use of time which does not sacrifice social duties and human relations on the alter of clock-time punctuality” (Onwubiko 1991, p. 25). In the same vain, Omojola (2021) averred that:

Time is planned at every stage – time to begin work, time to marry and time to have projects as achievement because, time to Africans also means what one has achieved in life in terms of family, wealth and societal status. There is evaluation from time to time especially when peer groups are compared. Peer group societies are formed to support, encourage and mainly for evaluation (p. 110).

Africans had deep respect for elders and old age. They equally held parents in high esteem. Whoever disrespect elders were collectively punished. Above all, Africans sense of the language and proverbs as cohesive of the community based on the truth was paramount as this was the vehicle of proper communication and proverbs were ways of given better explanation to every spoken word.

Cultural values in Africa were ways with which they lived within the environment. It worked for them because of taboos attached and penalty incurred on those who did not do the right thing according to the culture. These values are gradually disappearing based on the impact of education and they are being replaced with western culture received through education.

Negative Influence of Education on the African Environment

Formal education has much effect on African environment in a more confusing manner. In African traditional religion, deities, rivers and rocks among others were worshiped and they translated this devotion into action through their art, culture and philosophy. At the arrival of Christianity and Islamic religions, some Africans accepted to be dedicated to these beliefs and later turned it to syncretism in an attempt to strike a balance. In the mind of Nbefo (1996) although referring to Igbo tradition in particular opined that "... the ambivalence of Christian practice in which Christian worship the Christian God as well as the gods of the traditional shrines has led professor Nwoga to question the existence of the idea of a Supreme Being in the Igbo traditional thought" (p. 49).

To support this view, Famoriyo in Igbekele (2021), as he was applying the issue of signs and wonders in the sacred scriptures to the contemporary age preached that Christians "still refuse to change, but instead rush to places where they are often deceived by charlatans" (p.315). This is to establish the fact that Africans are not comfortable with Christianity which was introduced through education but still seek solutions to their problems elsewhere. Therefore, Kanu, Omojola and Bazza (2020a), although reflecting on Sacrifice in Yoruba culture, orated that "civilization has reduced the frequency of this practice, (offering sacrifices to gods) not making an emphatic statement that they

are no longer in practice but that they are done most of the time in secret” (p. 140).

In the areas of cultural values, Africans appear to be losing their ethics on the platform of civilization as Kanu and Omojola (2020) discoursed in this statement “African people have been able to transfer smoothly, their indigenous knowledge from one generation to another until the arrival of the colonial masters, who through civilization and modernization reduced the consideration for African indigenous knowledge” (p.185). The sense of community life of communal living has been exchanged with individualistic life where technology has succeeded in taking the place of African togetherness. Since closeness is gradually declining, sense of good human relations is not likely to flourish. The issue of the sacredness of life has drastically deteriorated. Today in some of African countries, blood of virginity that Onwubiko (1999) was celebrating as one of the ways of keeping life sacred is nothing to write home about. It has become a thing of the past in this generation where virgins are considered to be fools!

Ritual killings are common and people can do anything to make money even killing of immediate family members. Africans sense of the sacred and of religion has been substituted with socialization. Religious leaders display and demonstrate during worship in the name of working miracles. The knowledge of science has watered down the importance of reference in religion. The sense of hospitality has turned to stealing and cheating where thieves would disguise as guests to steal from charitable people. There is need to think twice before helping those in dear need to avoid trouble.

Sense of the sacred and of religion has been replaced with moral decadence, pornography, indecent dressing and syncretism. Africans still struggle to keep sense of time. Instead, they perform Western programs like education in African time stuff as Omojola (2021) ranted:

Universities seem to be administered in the light of African time where academic events are performed behind schedule. Sometimes, academic calendar is not available as at when due to give directions; there is lateness in commencement of classes, examination papers are delayed and results are not available to time. Many a time, events like matriculation and convocation do not begin as intended and students and guests are seated for a long time (p. 107).

Laziness is common as against Africa life style. Sense of respect for authority and for elders is dwindling. Rudeness and lack of discipline are the order of the day. As for sense of the language and proverbs as cohesive of the community based on the truth, learning foreign languages is being celebrated while African languages are being termed vernacular. All these are evaluation to help Africans retrace their paths. Although, education has a lot of positive side that added value to African life.

Positive Influence of Education on the African Environment

Education became the vehicle of enlightenment since inception and it has not stopped to function as that. The first noted influence of education on Africans is literacy. Many Africans can now read and write with knowledge of Arithmetic. This is helping Africans to have proper documentation of their values and to move with time. It has also contributed to their easy flow of business. An average business man can cope with buying and selling as against trade by barter of old. This is because they are now knowledgeable through the influence of education.

Another prominent area is freedom for women as being a woman could be considered a cause in the past according to Nbefo (1996) that "From the view point of western civilization, it is correct to say that women lead a difficult life" (p.141). In typical African setting, women were used as part of men's or husband's property. Widowhood was common and nothing happens if the woman dies before the man. Then, wife of the deceased was given out to a member of his family as inheritance. Women were living at the mercy of men; they hardly do anything without the approval of the husband. In connection with this assertion, Kanu, Omojola and Bazza (2020b) submitted that women in Yoruba culture depended on their husbands in this statement: "Their rank traditionally depends on that of their husbands. Therefore, wives of kings, chiefs and *Ifa* priests were honored more than those that were married to ordinary members of the community' (p.2).

Part of these positive areas was the influence of education on the issue of killing of twins. Imaging killing of children that a woman carried in her womb for nine months in the name of culture. This is to establish that women were really tortured and suppressed at a time. At this time as well, child mortality was common and thanks to better health care brought through education that has greatly influenced this. With education therefore, things are better for women and they too can now enjoy a bit of good life, unlike before. "Education is the major channel through which confidence can be gained to make major improvement in the society, through acquisition of values that will be common to all, against ethnic values that individual gained in the home training. From these educational communal values, majority can think alike and share the same views from their broad orientation" (Omojola 2020b, p.182.).

Recommendation

Based on the discussions above, the following recommendations are offered:

1. Efficacy of Christianity should be emphasized by religious leaders to Christians to avoid confusions and those who are willing to remain in traditional African Religion should be given enough freedom to practice their belief.
2. Cultural values should be taught in schools under language to enable passing on the core values of Africans to the next generations for continuity.
3. Those areas that education has influenced positively should be celebrated while African should be eternally grateful for this impact, like in the case of killing of twins that has been eradicated from Africans soil, widowhood that is gradually fading and education for girls.
4. African scholars can now develop are encouraged to develop more literatures on African life style and to also develop African environment to a better standard.

Conclusion

This paper discussed education as it affects the African environment. Both formal and informal education have the purpose of training a child physically, developing his character, vocational training and respect for the elders and peers; only that formal education is done in an organized manner and it has academic disposition. African environment was characterized by many forests full of animals of numerous types. With formal education therefore, there are lots of deforestation and most of these lands have been used to build schools, churches and hospitals among others. This is really having a lot of effects on climate change, which cause African environment to be disassembled and made collegiality, communal life and connectivity difficult. This has then been replaced with

technology. Getting connected with family and friends is only possible now with social media.

Also, rivers and streams are polluted and interchanged with pipe borne water. All the creatures that Africans marveled at and worship in the past are no longer visible to this generation as African environment is becoming populated with people of different cultures. It is, therefore, important that African scholars come up with suggestions on how African values can be inculcated to educational curriculum so as to make meaning to this generation.

References

- Adewuya S.A (2004). Comparative Education. Unpublished lesson notes of the then University of Ado- Ekiti. Ekiti State. Nigeria.
- Amelia C.P (2020). Africa, Environment & Fragments of an Ethics from Within. RETRIEVED 5/10/2021 ([DOC](#)) [Africa, Environment & Fragments of an Ethic From Within | Amelia Peterson - Academia.edu](#)
- Igbekele A.O (2021). With Jesus on my side. A daily spiritual reflection. A Publication of SS. Peter and Paul Major Seminary Bodija, Ibadan.
- International Monetary Fund, 2001. [ISBN 1-58906-014-8](#). Retrieved 5/10/2021. [West Africa - Wikipedia](#)
- Kanu I.A, Omojola I.O and Bazza M.B (2020b). The Concept of Sacrifice in Yoruba Religion and Culture. *AMAMIHE: Journal of Applied Philosophy*. Vol. 18. No. 2. 2020. ISSN: 1597-0779. Department of Philosophy, Imo State University. 140
- Kanu I.A, Omojola I.O and Bazza M.B (2020a). Women in Yoruba Religion and Culture. *Tolle Lege: An Augustinian*

Journal of Philosophy and Theology Vol. 2. No. 2. 2020. ISSN: 2672-5010 (Online) 2672-5002 (Print)

- Kwesi A. D. (1984). *Theology in Africa*. New York. Maryknool
- Nbefo L. N. (1996). *Christian Theology and Christian Heritage*. Nigeria. Spritan Publications.
- Mbiti, J. S. (1969). *African Religions and Philosophy*. (2nd Ed). England. Clays Ltd, St Ives Plc.
- Omojola I.O. (2020a). Review of Kanu's "Sources of Igwebuiké Philosophy: Towards A Socio-Cultural Foundation" *AMAMIHE: Journal of Applied Philosophy*. Vol.18. No. 1. 2020. ISSN: 1597-0779
- Omojola I.O. (2020b). Education for Peace-Building in Nigeria. *IGWEBUIKE: An African Journal of Arts and Humanities*. Vol. 6. No. 5. ISSN: 2488-9210 (Print) 2504-9038 (Online) 2020. Department of Philosophy and Religious Studies, Tansian University.
- Omojola I.O. and Kanu I.A (2020). Mitigation of African Indigenous Knowledge. *African Scholar Publications & Research International*. Vol 17. No 8.
- Omojola I.O. (2021). African Time and Administration of Universities in Nigeria. *AMAMIHE: Journal of Applied Philosophy*, ISSN: 1597 – 0779, Vol. 19, No. 3, 2021. Department of Philosophy, Imo State University, Owerri, Nigeria.
- Onwubiko O.A (1991). *African Thought, Religion and Culture*. Nigeria. SNAAP press.
- Paul R. Masson, Catherine Anne Pattillo, "Monetary union in West Africa (ECOWAS): is it desirable and how could it be achieved?" (Introduction).
- Vanguard News online (2018). African Traditional Education. Retrieved 5/10/2021 [AFRICAN TRADITIONAL EDUCATION - Vanguard News \(vanguardngr.com\)](https://www.vanguardngr.com)

OMOJOLA Immaculata Olu, (SSMA), PhD

United Nations Department of Economic and Social Affairs,
Population Division (2017). World Population Prospects:
Retrieved 5/10/2021. West Africa - Wikipedia

Chapter Eighteen

LOCAL PRESS, FOOD SECURITY AND THE ENVIRONMENT IN NIGERIA: CRITICAL PERSPECTIVES

Blessing Arsun DAPOET

Department of Mass Communication

University of Jos, Plateau State

dapoetb@unijos.edu.ng, blessingdapoet@gmail.com

Executive Summary

This paper looks at the issues around the role of the local press in promoting food security and curtailing environmental degradation in Nigeria. As well as exploring issues militating against the development of the country, because of insurgency, flood, drought, land alienation and disputes, there is likely to be food insecurity and environmental degradation such as cutting down of trees, gas flaring, this and many more has made the country to be unable to meet its economic potentials. As a result, the press has a critical role to play in addressing factors of food shortage and supply for the populace towards achieving food security and sufficiency for all.

Keywords: Local Press, Media, Food Security, Environment, Nigeria, Africa

Introduction

We may live in an era of remarkable shift in technology, but we still face many challenges that still plague the world. Many regions face the issue of food insecurity, arm banditry, drought, hunger, starvation and climate change which are exacerbating. Food and agriculture feature greatly in the dream towards living in a world with zero hunger, starvation and malnutrition. Today, Nigeria is struggling with different levels of political, economic,

social and environmental insecurity that threatens its stability and development. Persistent weakness on governance, dysfunctional public institutions and reliance on oil to generate foreign exchange and revenue, Boko haram insurgency, arm banditry, and commercial kidnapping is a course for concern challenging farmers and pastoralist thwarting the production of agricultural products towards food security and sustainability. Food security according to the Food and Agricultural Organization (FAO) explains it in five levels (individual, household, national, regional and global) it is when “all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for active and healthy life style” (FAO, 1996; Ayinde et al.2020). The sustainable Development Goals (SDGs) in 2015, at the United Nations General Assembly adopted Goal 2 as one for food security to address the importance of nutrition and food security with the wider agenda and a call to member nations to “end hunger, achieve food security and improve nutrition to promote sustainable agriculture”.

Metu, Okeyika et al (2016) asserts that one of the goals of Nigeria’s agricultural development policy is to ensure that the nation produces enough food and less dependent on importation so as to ensure adequate and affordable food for all. One of the most important debates in the world today is how to provide sufficient food for all citizens of the Nigerian society and the world at large.

Nigeria is faced with critical hunger level as it ranks 98 out of the 107 countries in 2020 global hunger index, with a proportion of 7.6% in 2012 to 12.6% in 2020 of undernourished population. SBM intels report that Food insecurity is a major challenge for

developing nations like Nigeria occasioned by Boko haram terrorists, increase in insecurity, killer herders that have forced farmers to abandon their farmlands, flood, drought, arm banditry, commercial kidnapping, environmental degradation, starvation, poverty and corruption amongst other things like lack of proper storage facilities, climate change, rising cost of energy and logistics, stifling government policies and currency devaluation, coronavirus pandemic and natural disasters. The bureau for statistics reports food inflation has seen a 48.94% rise from 15.04% to 22.95% (Sahara Reporters New York, 2021) The global food security index rank Nigeria as the 100th among other countries.

Therefore, this paper aspires to look at the issues around the role of the local press in promoting food security and curtailing environmental degradation in Nigeria. As well as exploring issues militating against the development of the country, because of insurgency, flood, drought, land alienation and disputes, there is likely to be food insecurity and environmental degradation such as cutting down of trees, gas flaring, this and many more has made the country to be unable to meet its economic potentials. As a result, the press has a critical role to play in addressing factors of food shortage and supply for the populace towards achieving food security and sufficiency for all.

Conceptual Clarification

- a. **Local Press:** This is the press in Nigeria. This includes the media conversant to the local communities within the urban and rural areas in Nigeria. e.g., Television, Radio, Newspaper, Community radio, Traditional leaders, Town crier, Religious leaders. This serves the functions of providing communication and information needs to communities.

- b. Food Security:** Having access to nutritious food for everyone enough/ sufficient, hygienic and healthy food to feed the nation and even export to other countries without threat to life and food supplies. It is a sustainable access to healthy and functional food for the citizens putting together knowledge, access as well as training and support for improved agricultural practices.

- c. Environment:** The Eco system in Nigeria, this includes the human, and natural environment in the light of meeting economic potentials of the country. The concept of the ecosystem helps us to understand the interactions between living organisms and their environment, it provides a way in which the functioning of the biological world and its interaction with the physical environment helps us to understand the behavior of the ecological systems, and predict their response to human or natural environmental changes. The ecosystem provides a convenient atmosphere of structuring and understanding the complex systems which is our world (Dickinson and Murphy, 2007) one or more functional groups together with a defined set of abiotic environmental conditions form an ecosystem and groups of ecosystems who share broad environmental characteristics.

Literature Review

a. The press in Nigeria: A historical sketch

The historical background and development of the Nigerian Press commenced with the printing media on 3rd December 1859 by a Christian Missionary named Reverend Henry Townsend who established the first Newspaper in Nigeria called “Iwe Iroyin fun awon Egba ati Yoruba” which literary means “A

Newspaper for the Egba and Yoruba Nations” (Ese Malemi, 1999) in today’s Abeokuta the Capital city of Ogun State to promote literacy and build up elites among the then EGBAs and not with current serving political motive but as a matter of fact succeeding Newspapers choose contrary with an indelible footprint as far as political history of Nigeria is concerned. The demise of ‘Iwe Iroyin’ later resulted to the emergence of other Newspapers like Anglo-African Lagos Time and Gold Coast Advertiser, Lagos Observer, The Eagle and Lagos Critic, The Mirror, The Nigerian Chronicle

The Lagos Standard, Lagos Weekly Record African Messenger, The West African Pilot, Nigerian Tribune {Reuben Abati, 1998}. The era not only resulted to the emergence of Newspapers in Nigeria but also gave birth to an articulated vibrant and veteran journalist who made judicious use of this created institution {press} to fight Colonialist under nationalist struggle which gradually led to Nigeria Independence in 1960 and as a matter of fact, this has placed them in front role in Nigeria political arena since then. Corroborating this, M. H. Kukah {1999} stated that journalism was the major vehicle through which the anti-colonial struggle in Nigeria was carried out. Many of the Major figures in this struggle are Herbert Macaulay, Nnamdi Azikiwe, Ernest Ikoli, Obafemi Awolowo, Anthony Enahoro, Dutse Mohammed Ali, Mokwugo Okoye to name but a few who were newspaper publishers, journalists, commentators and or editors. Their newspapers served as platform for mobilising the people, spreading nationalist awareness and for opposing the worst manifestation of colonial subjugation and the racialism which is customary to them.

Also Fred Omu (1978) the pre-eminent historian of the Nigerian Press aid the early Nigerian Press provided the most distinguished intellectual forum in Nigeria history. One in which

the high standard of debate, discussion, the quality of thought and expression cannot fail to fascinate the modern reader. Interestingly, Nigerian Press moved beyond publication industry to electronic industry around 1932 when radio broadcasting was introduced as a relay of the British Empire service with the establishment of a Relay Station in Victoria Island (parts of today's Lagos State) through which broadcasting were made to major Cities in Nigeria via wired-wireless called Radiofusion (Goke Raufu, 2003). This was succeeded by Radio Nigeria which was established through Nigerian Broadcasting Corporation (NBC) incorporated and operates under Nigerian Broadcasting Corporation Ordinance of 1956 was subsequently divided along with 3 Regions we have in Nigeria then under the control of the concern Region and headquarter remain in Lagos. The regionalisation introduced then coupled with political bias of Radio Nigeria as well as inadequacy as regards coverage and availability of market to be exploited by commercial broadcasting inter alia instigated the then Western Region spear headed by the Late Legend; Chief Obafemi Awolowo to inaugurate Western Nigeria Broadcasting Corporation (WNBC) around May 1959 and successfully went on air in the same year. The Western Nigeria Broadcasting Corporation (WNBC) was followed on 31st October 1959 by Western Nigeria Television (WNTV) which as a matter of fact served as the first television station in Nigeria and Africa at large and later emulate by other Region around 1962. After the Independence, the Nigerian Press was so developed to the extent that so many Newspapers and Magazines were established, and electronics media such as WNTV, WNRC and NBC among others have been metamorphosed to Nigerian Television Authority (NTA) and Federal Radio Corporation of Nigeria (FRCN) with many

stations across the Nation as well as other stations owned by the State Governments.

Although, private individuals were not empowered to own electronic media as it is for publishing counterparts. The interesting fact about Nigerian Press at this stage of our political development is that men of the press continuously playing their roles which appears as a threat to the selfish desires of some people in government who intend to monopolised and controlled the public space as a result of which instruments available in government were sagacious use to achieve their objectives. Not only that, men of the press move to the extent of informing the people that the primary motive of the Colonialist Successors were not different from the Colonialists themselves as well as shedding light on their competency (Reuben Abati, 1998).

Later on, Politicians gradually employed the press as a strain of ethnical affiliation and avenue for negotiating power and as a matter of fact the Pilot which is non-ethnical then began to participate in ethnic politics to the extent of supporting one candidate against the other and the then practicing regionalisation increased the level of partisanship of the Nigerian Press. The attainment of Independence status in 1960 coincident with the reshaping of the Nigerian press in the sense that most of the Proprietors of the then available Newspapers were Politicians during colonial era and as well saw the presence of the Press as an instrument of acquiring their different aspired office to the extent that those who did not have any print media were motivated to established their own and as a matter of fact those papers were serving their proprietors' interest based on an adage which say: the piper dictates the tune. Corroborating this, Reuben Abati (1998) stated thus: At every moment in Nigeria

history, the press has been in the forefront, manning the barricades.

The centrality to the issues of the day and lives of the people has brought the Nigerian press much travail. From colonial times, it has been treated as a major tool of power. Opposing powers centres which feel threaten by its dynamism invariably seek to control the press through several means in which politician's latter result to misuse of mass media to achieve their selfish desire". And as a matter of fact, this appears to this present writer as one of the major factors that led to the intervention of the Military (through revolution) in our Political Arena in 1966. The transitional government tagged Second Republic which commenced on 1st October 1979 changed the historical development of the Nigerian Press from this point and despite the fact that Nigerians expect the institution to have learnt her lesson, the partisan politics peculiar to the Nigerian Press affect it realization which was caused by political affiliation of the owner of the institution that was finally brought to an end through coup d'état on 31st December 1983. It will interest you to note that one of the commendable achievements of the military government vis-à-vis Nigerian Press is that the government empowered privately owned electronic media in Nigeria by granting license to non-governmental bodies to commence broadcasting in Nigeria upon fulfilment of some requisite.

Different levels of insurgency across the country especially the Northeast are driving limited engagement in agricultural activities, declines in humanitarian access, and displacement, with many populations being internally displaced multiple times. This is as a result of the significantly above-average staple food prices, constrains in household purchasing power and food

access. As a result, Crisis (IPC Phase 3) and Emergency (IPC Phase 4) outcomes are widespread across much of the Northeast. The harvest is expected to somewhat improve outcomes in areas of the region for a short period of time; however, Emergency (IPC Phase 4) outcomes are expected to persist throughout the scenario period in hard-to reach areas.

A risk of Famine (IPC Phase 5) persists in hard-to reach areas of the Northeast. While it is not FEWS NET's most likely scenario, Famine could occur in a worst-case scenario if there is a dramatic uptick or shift in conflict that limits access to typical food and income sources and humanitarian assistance for a prolonged period. As humanitarian access has declined in recent months with increased conflict and continued displacement, many households in hard-to-reach areas are experiencing large food consumption gaps indicative of high levels of acute malnutrition and excess mortality. As these populations face severe difficulty meeting their food needs and are only expected to engage in the ongoing agricultural season at minimal levels, the Risk of Famine persists through at least January 2022.

Considering the available evidence, it is likely notable population areas in the Northwest affected by conflict are in Emergency (IPC Phase 4) and Catastrophe (IPC Phase 5). These areas are of increasing concern as conflict is disrupting household engagement in typical livelihood activities and high levels of displacement. According to IOM, over 690,000 people have been displaced in the Northwest and North-Central areas of the country. Few humanitarian actors are operating in this area to provide needed assistance for those facing food consumption deficits. Additionally, due to the high levels of displacement and continued disruption in livelihood activities, it is expected that the harvest will be significantly impacted for many households, limiting typical seasonal improvements.

Factors Promoting Food Insecurity in Nigeria

Environmental degradation

World Bank (1991) defines the environment as the natural and social conditions surrounding the existence of mankind. Furthermore, the National Conservation Environmental Protection (NCEP) Act in 1987 see the environment as any physical factors of the surrounding of human beings, land, soil, water, atmosphere, sound as well as others. This solidifies the interrelationship that exists between the plants and animals with water, air and land inclusive. However, environmental degradation is the slowing down or deteriorating of the environment without actualizing its full potentials through human activities which lead to contamination of air, water and soil as well as its effects on the ecosystem and the reduction of the value of the environment resulting to poor output in agricultural, animal and human activities.

Environmental degradation has a great impact on economic activities in Nigeria. Insecurity is a major drawback to this effect, increase in different degrees of insecurity, arm banditry, commercial kidnapping, book haram insurgency, terrorism, herder-farmer clashes amongst others has deflated growth and development in all spheres of life. E.g., the incessant killings and destruction of farmlands by Fulani herders has decreased food production resulting to food insecurity, hunger and starvation, recent killings in Miango, Zangam and killings at Rukuba road has resulted to crisis that is taking a religious undertone. And the effects of bombs and explosives leads to damage of land that will be used for food production, pollution on land, water and air, creates extinction of wildlife especially in parts of Nigeria experiencing insecurity.

The global food security index ranks Nigeria at 100th with the overall score of 40.1, affordability 32.9, availability 46.8, quality and safety 41.5, natural resources and resilience 39.3 in the regional ranking in sub-Saharan Africa Nigeria is ranked the 18th. Attah (2012) food is life, just as air is important for human existence. Food security has become an issue of great concern in the world. Nigeria is endowed with great potentials including natural resources. Insecurity, book haram insurgency, commercial kidnapping, flood, environmental degradation among others is major factors militating against food security in Nigeria.

Attah (2012) asserts that Nigeria can realize the potentials of ensuring and achieving food security by implementing rural development, provision of easy access to basic farm inputs, budgetary allocation and high reduction in rural poverty and peasant farmer's education. Cadre harmonise analysis (2019) indicates that there is an estimated 2.6 million people faced with severe food insecurity especially in northern Nigeria. Book haram insurgency has led to recorded cases of displacement, food insecurity, hunger and starvation, low farm production among others food is hardly sufficient to carter for the need of the common man towards attaining zero hunger and achieving food security and sustainability.

Food security cluster (2021) opines that food security in Nigeria has drastically deteriorated, cadre harmonise in an analysis in 2012 projects 4.4 million people will be food insecure across Nigeria especially those faced with different degree of insecurity. The deterioration in food security is linked to the upsurge of insecurity as evident in renewed armed conflicts between government and non-state armed groups (NSAGs) which has led to a new wave of displacements, covid 19 related challenges,

limited access to markets, farming and grazing land which are essential for opportunities to livelihood.

Action against hunger in Nigeria opines that Nigeria is seen as the giant of Africa and the fastest growing economy. Despite its rich natural and human resources majority of the populace live below poverty line, especially Northern Nigeria suffers chronic under nutrition among children as a result of insurgency. This is caused by lack of access to safe water, sanitation and rising degrees of food insecurity, disruption of the basic services due to conflict and poor knowledge of healthy feeding practices for infants and young people, as well as absence of food security, livelihoods, healthcare, education, clean water and domestic violence among others.

Okafor, Aluko and Asaolu (2020) opine that food insecurity in Nigeria is aggravated by communal conflicts, Covid 19, Boko haram violent crisis has compounded the issues towards realizing food security, poor funding, limited mechanized farming, poor rural development, women disenfranchisement of women farmers are pointers to food insecurity, Bloomberg, 2020 asserts that 9 out of 10 Nigerians cannot afford a healthy meals. The environment is everything that makes up our surrounding and influence the ability for us to survive on earth Muarya et al (2020). Environmental degradation is the utmost problem leading to the extinction of several living organisms on the earth. It is seen in the form of loss or disturbances in the ecosystem. Recent developments in civilization are the major causes of degradation in the environment.

Maurya et al (2020) opine that environmental degradation is the deterioration of the environment through depletion of resources

in the environment like the biotic and abiotic elements that form our surrounding thus comprises of air, water, soil, plant, animals and other living and nonliving things. The factors of degradation are is as result of human (deforestation, urbanization, overpopulation and growth) and natural (flood, droughts, fires, climate change) cause. Increase in poisonous gases and smoke in the atmosphere are among the causes of environmental degradation

Use of fertilizer is a major factor of degradation of the quality of the soil, soil erosion, and loss of fertility of agricultural land for food production and the quality of crops produced. Ground water are over exploited in many semi-arid and many arid areas, surface water sources are also highly polluted, fishery yields are declining, water for drinking and irrigation is getting scarce in health (Malix et al, 2014, 2018). Climate change and environmental degradation affects the essential growth in the society they are rapidly affected by many communities in developing countries like Nigeria.

Ecological Problems

Nigeria by virtue of its location within the tropical latitudes has been severely exposed to the destructive influences of climatically induced hazards. These hazards manifest in the forms of soil erosion, flood and drought constituting a bulk of the ecological problems and most of which constraints sustainable land and water development in Nigeria.

The menace of soil erosion, flood and drought has assumed an alarming dimension gaining global interest geared towards addressing issues dangers it poses to our environment. In the past neglects by the public and government have contributed to the magnitude of the present ecological problems. However, sufficient visual destructive impressions and evidences

distributed nationwide there has been increasing concern by these hazards. Various levels of government have often reacted by providing relief materials after the hazards have occurred.

In realization of these facts and in order to tackle the problems, the Federal government of Nigeria set up the department of Soil Erosion and Flood Control (SEFC) in the Federal Ministry of Water Resources and Rural Development in 1990. The department is saddled with the responsibility of managing these ecological problems through disaster forecasting and packing amelioration measures to reduce their impacts. To also formulate policy guidelines to prevent reoccurrences

Soil Erosion and Conservation Issues

Soil erosion is seen as the general removal of the soil by the action of wind and water, which is accelerated by certain human activities (agriculture, construction, deforestation and bush burning) in the past these were peculiar to some Nigerian ecological zones. Today, the problem has spread to other ecological belts of our country for instance gully development is common landmarks in all parts of Nigeria. Erosion is evident in the eastern part of Nigeria like Anambra, Imo, Enugu, Aba, Akwa Ibom and the middle belt like Niger, Plateau, Benue, Kogi and Kwara.

Most water sources are contaminated and silted up; this contributes to rise in the cost of surface water treatment, making it difficult for sustainable water development. The consequences result to land disputes, high process of agricultural produce and over exploitation of agricultural land. Soil erosion is a disastrous form of environmental degradation. Its causal and developmental factors should be determined globally through

coordinated inventory and data analysis system towards a national solution (Kanu & Imatiri 2019a).

Flood and Water Management

Flooding is a common environmental phenomenon associated with inundation of land, which is caused by inadequate drainage of low-lying areas. Other causal factors include high intensity rainfall of long duration, silted channels, urbanization, deforestation and other human activities. Recorded floods incidents have shown phenomenal increase both in extent and destructive power which have resulted in increasing loss of large farm lands, lives and properties. Government on the other hand has spent billions on relief for flood victims. Despite government efforts flood incidents have been frequent on different scales. Indeed, no state is immune to flooding. Government will keep galvanizing efforts towards designing appropriate flood monitoring management strategies and programmed for timely response and adjustment to flood occurrences as well as installation of appropriate structural measures in certain cases.

Drought and Desertification

Drought implies a period of rainfall deficit, reduced stream flow and soil moisture deficit, desertification is the degradation of land in arid and semi-arid areas of Nigeria as a result of climatic variations and human activities. They are two most serious environmental problems facing the Sahel ecological zones of Nigeria a percentage of the land mass is threatened by drought and desertification. Desertified and desert prone land constitutes about 70 percent of Nigeria's land area. This has resulted in socio economic problems especially in northern parts of Nigeria. Desertification and drought are caused by natural climate factors aggravated by human factors including, population pressure, energy crisis, over grazing, bush burning, bad farming practices and rural poverty (Kanu & Imatiri 2019b). Abubakar & Yamuda

(2013) adds that the northern part of Nigeria is endowed with a large expanse of arable land that has over the years provided a vital resource for agriculture and other economic activities. Demographic displacements, Boko Haram insurgency, armed banditry across 11 states in the north have resulted in loss of about 350,000 hectares of land to desert encroachment (Federal Ministry of Environment, 2004).

Record has it that the major Sahelian drought occurred in 1857/1886, 1914/1915, 1943, 44, 1972/73. It has been identified to occur at intervals of approximately 30 years with the duration of 2-3 years. Many livestock perished following loss of pastoral sites, drying up of rivers and the wells as vegetation in the region. There was heavy emigration and migration of humans and livestock from without and within the country thereby causing unexpected large concentration of refugees in certain parts of the country.

Ecological Management Support Systems (EMSS)

The management of flood, soil erosion, drought and desertification required timely data on the variables evident to influence this problem, the conventional methods of acquiring such useful data which is needed to combat ecological problems in Nigeria. Satellite imagery is often an efficient and cost-effective source of environmental information, via satellites; especially those in orbits around the equator and mid latitude regions permit real-time monitoring of transient events especially terrestrial atmospheric phenomena in our sub region. Such environmental data can be acquired with various types of sensors and the combination different wave bands to enhance interpretation and enrich the quality of the data. Earth

observation satellite data are valuable sources of environmental data.

Geographical information system technology is another valuable environmental information management tool that enables the creation of scenarios and production of valuable secondary data from combinations of primary data. Such secondary data are invaluable for the design and implementation of projects especially for natural resources management, environmental monitoring and infrastructural planning.

Effective Management Support System (EMSS) incorporates an information database with linkages to other databases. Such information databases with connectivity to decision support systems greatly enhance the capacity of environmental managers. These are used to identify, monitor, assess and execute environmental programs in the areas of flood, soil erosion, and drought and desertification control. To ensure sustainable use of our land and water resources, government must initiate effective and coordinated programs for the management of ecological problems like flood, soil erosion, drought and desertification.

Socio Cultural Issues

The effects of ecological problems are catastrophic dust from wind erosion, which obscures visibility and pollutes air, causes traffic hazards, fouls machinery and causes problems to human and animal health. Blindness sometimes results, water erosion brings about siltation in open reservoirs and pollutes water in streams and land use problems usually rise. Infra structural damage may be caused to power and communication lines. When communities are forced to shift from their traditional holdings and farming or land use system, the capability to pursue an effective social self-development is brought low. Land

tenure problems and population growth cause difficulties for both social and cultural development. Changes in outdoor recreation pattern brought by the effects of erosion and flooding are a reflection of the level of conflict with interest of land use location, living styles and living standards. This results to forceful introduction of new elements of development culture despite the known culture-based resistance to new innovation and /or technologies in communities.

Institutional Issues

The solution to ecological problems is multi-disciplinary; this shelves off duplication of responsibility as well as misdirection of reports and complaints on the problems. Establishment of the national committee on ecological problems and the ecological funds in the presidency is good for effective planning, execution and funding and monitoring as well as providing checks and balances. These agencies should be kept functioning. International agencies should be recognized appropriately. Well intentioned developmental programs have failed because of the lack of involvement of traditional institutions. Government and NGOs should recognize the important roles local cooperatives; farmers association, youth clubs play a role in implementing result-oriented policies that will enhance improvement of economic, social and cultural conditions in rural communities.

Food Crisis in Nigeria: Which Way Out?

It is common human weakness that when the common man is faced with a difficult or unsolvable problem, they conveniently invent a phrase, give it a palatable name or coating to entice everybody to a bite and thus make them the proverbial Adam and the apple. In this way everyone becomes a sinner and the problem remains unresolved. The topic food crisis in Nigeria

must have been invented by some technocrats. Regardless of who, how and when it was first used in the context of our national campaign for food production, it has become a cliché. Students used it for pedantic reasons; policy makers and politicians wave it at citizens to mobilize them to action while some governments within the federation sing it to beg for subventions from the federal authorities or from some philanthropist organizations. It finds it necessary to address this point to logical way of teaching the heart of our matter in the farmer's language and method if you need to examine the soil you must first remove the weed, dig the soil and then begin the laboratory test. Similarly, in examining the matter of food crisis we must remove all connotations that the cliché may have gathered along the path of its development in order to place the subject in its proper perspective.

In the weeding process we should begin by asking the pertinent questions: is there really food crisis in Nigeria? If so, what kind of crisis; of over supply or scarcity, general or partial? Indeed the crisis is in different dimensions. We may be producing enough quantities of food but the wrong qualities. Again, we may be producing the right quantities and qualities of food stuffs but putting, them into the wrong use we can go on and on. Daniel Arab Moi in a magazine "the African farmer" asserts that "agriculture remains the single most important sector of the economy. We depend on it to generate employment opportunities and income for the populace, we depend on it to meet the nation's food requirements and we depend on it to provide raw materials and much needed foreign exchange to support the economy", though agriculture may not be regarded as the only important sector but it is vital to the Nigerian economy.

The question is to what extent has the Nigerian agriculture fulfilled this expectation? To further explain this confusion that hatched the Never-Ending Triangle (NET) the theory assumes that food protection is a triangle or three prolonged affairs involving the farmer, the government and the consumers. This is illustrated in the form of a triangle. The reason why it is termed never ending triangle that each Centre of activity can also represent members of the other two centers. For example, the government of consumers and the farmers, which farmers are made up of consumers and possibly of members of government. So, in this we can go on extending or projecting the lines of the triangle and forming, further triangles and infinitum.

We shall examine the role of each activity Centre. Basically, the tripartite arrangement, the farmer is the machinery for the production of food in essence he is required to make himself and all his relevant resources available for the production of his area of interest. Thus, physically he is expected to keep it fit and mentally fit. For the job he is faced safe mentally fit for the job he is faced with certain limitations, the extent of his mental, physical and financial facilities that are normally provided by other agencies outside himself (land training) which we shall discuss/in order for the farmer to perform effectively he requires the following resources.

Recommendations

1. Government should strengthen the development of education on environmental issues at all levels as they relate to environmental degradation and water conservation. Comprehensive programs for monitoring and progressive implementation of sustainable projects in ecological distressed zones of the country.

2. All media platforms should be utilized to encourage and promote public awareness on the adverse effects of environmental degradation arising from poor land, water and agricultural management.
3. Government should explore the use of mechanisms for predicting ecological disaster on the environment for effective hazard management and control in Nigeria. Also, there should be public access to early warning information and indicators, strengthen the nation's food security system, public awareness campaigns and enlightenment, promote community education.
4. Measures on environmental degradation. Promoting information sharing among various educational and research agencies, promotion of public awareness on practice contributing to environmental degradation. Sponsoring of publications of environmental degradation, food security and environmental journals, bulletins and periodicals.
5. The press should galvanize support for food security and be a front burner of addressing insurgency as well as liaising with the press to reduce the menace of banditry, commercial kidnapping, hunger and starvation.
6. Provision of adequate security in large farmlands who have invested so much to curb the shortfall of food productions. Government should mechanize agriculture to ensure self-sufficiency in food production for sustainable security.
7. Land alienation mutates individuals who acquire lands not for agricultural production but use them as collaterals for banking facilities that are usually diverted for other uses. This stops the small-scale farmers who could have used it to boost food production.
8. Land disputes if not checked will result to social upheaval following land and hunger. To this end, farmers of grain crops and tuners especially in the rural areas should be

assisted with the best preservation methods in order to curtail waste that usually accompany the harvest season. Agricultural assistance to farmers should be through provision of farm lands, fertilizers and mechanized modern farm implements.

Conclusion

To ensure a sustainable environment towards achieving food security effective policy on agricultural production, soil, water and other environmental resources should be adequately managed to supplement government efforts in ecological problem management, poverty alleviation, zero hunger for the citizenry and the promotion of economic growth and development of the Nigerian society as well as minimize human induced disasters. Government should intensify efforts to ensure a safe and secured environment and curtailing activities that reduce productivity like environmental degradation, arm banditry, commercial kidnapping and other man-made factors that will enable increased food production that will cater for the needs of the populace. Therefore the modern information communication technologies are bridging the digital divide for knowledge and skill empowerment where people can reach other farmers quickly and a platform for sharing new information from general knowledge to specific location, as well as rural computer aided knowledge centres for all age groups is needed towards food sustainability and security.

References

- Abu, O. (2012). Food Security in Nigeria and African Policies and Challenges. *Journal of Human Ecology*. 38 (1) 31-35.
- Adebayo, F.P&Ojo, O.E (2012) Food Security in Nigeria: An overview. *European Journal of Sustainable Development* (2) 199.
- Adegboyega, A. (1988) *Winning the war on food*. Nigeria: National Accord
- Adegbola, J.A, & Bamishaiye, E.I & Daura, A. M. (2011). Food Security in Nigeria: Government's Intervention and the Place of Effective Storage. *Asian Journal Development* (4). 56-63.
- Agbaje, A. (1992). *The Nigerian press, hegemony and the social construction of legitimacy*. New York Edwin Mellin.
- Amuwo, Bach, D.C & Lebeau, Y.(eds) 2001 . Nigeria during the Abacha years (1993-1998). *The domestic and international politics of democratization*. IFRA- Nigeria. Doi:10.4000/books.ifra.623.
- Ayinde, A. I, Otekunrin, O. A. Akinbode, S.O. (2020) Food Security in Nigeria: Impetus for growth and development. *Journal of Agric. Econs*. 6, 808-820.
- CSIS- Centre for Strategic & International Studies: Conflict, Environmental Degradation and Food Security in Northeast Nigeria.
- Danfulani, C. (1989). *The Antidote of Food Crisis*. The Standard Newspaper
- Dickson, G & Murphy, K (2007). *Ecosystems*. London: Routledge.
- Fasoyiro, S. B& Taiwo. K.A (2012). Strategies for increasing food production and food security in Nigeria. *Journal of Agricultural and Food Information*. 13 (4).

- Federal Ministry of Water Resources and Rural Development (1999). *National Policy on Soil Erosion and Flood Control, Drought and Desertification Mitigation*.
- Food Security Cluster (2021). *Nigerian food security sector available* at <https://fscluster.org>nigeriaaboutfoodsecuritycluster>.
- Howard. J & Simmons, E. (2020). *Centre for Strategic International Studies: Risk and resilience: Advancing Food and Nutrition Security in Nigeria through feed the future*. Report of CSIS global food security project.
- Kanu, I. A. and Imatari E. P. O. (2019a). The Question of Food Security in Arid and Semi-Arid Lands in Africa: Indigenous Knowledge and Implementers of Development. *Journal of African Studies and Sustainable Development*. Vol. 2. No. 8. pp. 190-200.
- Kanu, I. A. and Imatari E. P. O. (2019b). Food Security in Arid and Semi-Arid Lands in Africa. *Journal of African Studies and Sustainable Development*. Vol. 2. No. 8. pp. 50-83.
- Kralovec. S.(2020) *Food security in Nigeria : an analysis of the impact of climate change , economic development and conflict on food security*. MA Thesis. Malmo University.
- Kukah , M(1999)*Nigerian newspaper and survival in the digital age*. Sabinet available at <https://journals.co.za/doi/pdf/10.10520/EJC159485>
- Kumar, V., Singh, J., Kumar P. (2020). *Environmental Degradation: Causes and Remediation Strategies vol 1*. Agro environ media, India. Available at <https://books.google.com.ng>books>
- Environmental crisis and development in Nigeria. Available at <https://citeseerx.ist.psu.edu/view/doc/download.Doi-10.1.1.460.7133>.

<https://reliefweb.int/report/nigerianfood-security-outlook,june2021tojanuary2022>.

<https://reliefweb.int/report/nigeria/nigerian-food-security-outlook-june-2021-januanry-2022>.

Metu, A., Okeyika, K. & Maduka, D. (2016). *Achieving Sustainable Food Security in Nigeria: Challenges and Way Forward in 3rd International Conference on African Development Issues*. Nigeria: (CU-ICAD) Covenant University Ota.

Nwozor, A., Olanrewsaju. S. J, Ake, B. M. (2019) National insecurity and the challenges of food security in Nigeria. *Academic Journal Of Inter Disciplinary Studies* 8(4). 9.

Sahara reporters (2021). *Nigeria ranks available at* <https://globalhungerindex.org>nigeria>

History of the Nigerian press from 1859-2015 in *indr.com* latest versions available at <https://tsutonma.inoxdvr.com/28.html>

Radio development in Nigeria. doc available at <https://www.coursehero.com/file/79329068/radio-development-in-nigeria.docx>.

Lal, O. & Pate U. (ed). *Mass media and society in Nigeria*. Lagos: Malt house Press Ltd.

Tijanni, A (1989). *Food Crisis in Nigeria: which way out? A Paper presented at the annual dinner, Nigeria Institute of Food Science and Technology, Kaduna state*. The Reporter Newspaper.

Ngoddy, P. (1988). *Developing Food Technology in Nigeria*. The Standard. Keynote address at the 12th Annual Conference of the Nigerian Institute of Food Science and Technology (NIFST). The University of Maiduguri, 18th October.

Chapter Nineteen

ROLE OF THE PRESS IN CURBING ECOLOGICAL CRISIS IN NIGERIA: AN APPRAISAL

Tahna'an Rosemary MOVEN

Department of Mass Communication

University of Jos, Nigeria

rosetahnaan@gmail.com

Executive Summary

This chapter focuses on the role of the press in curbing ecological crisis in Nigeria. It observes that ecological problems are global in nature; hence the entire globe is making attempts to address them. World leaders and indeed nations are in agreement on the need to stem the tide. The press has been globally recognized as a critical stakeholder in keeping the public informed on current happenings. Ecological problems have not been properly captured by the press across the world. Although TV, Radio, Newspapers have given occasional attention to these issues, however, most focus on other sensational areas of news other than the environment, focusing mostly on. Most media reports regarding the environment amplify problems and conflicts, rather than solutions; in other cases the media covers environmental issues and fills such with a barrage of skewed uncertainties and misinformation. This, however, should not discourage coverage.

Keywords: Mass Media, Press, Ecology, Africa, Nigeria, Environment, Drought, Erosion

Background

The discourse around ecological problems ranging from drought, desertification, soil erosion, deforestation, land and

water pollution, air pollution, solid waste disposal, etc., have assumed prominence globally. This has called the attention of the world to the need to preserve, protect and maintain a stable and healthy environment (Ezeonyejiaku, 2018). These ecological problems are now compounded by the emergence of other environmental challenges which are global in nature and whose impacts threaten the very survival of humanity.

These global environmental threats will have a far reaching effect on Africa and thus the need for the nations of the world to join forces in the search for solutions to ensure the survival of the ecological system. The activities of human beings have also contributed to the bad ecological situation in many countries of the world including Nigeria, environmental specialists and indeed all stakeholders remain concerned about such activities that have the potential to endanger the environment (Ezeonyejiaku, 2018). Buttressing this position, Oyeshola (2008) pointed out that human beings are now introducing an unacceptable negative influence that the earth's ecosystem may not be able to accommodate if its continuous existence is to be guaranteed.

The environment which houses both living and non-living things has become increasingly tenuous. This in turn has begun to threaten the quality of life, both for humans and nonhumans on the planet (Oyeshola, 2008). There is, therefore, the need to involve all critical stakeholders in the quest to address the ecological crisis the world and in particular Nigeria is confronted with. There is a growing demand from the public for more and more information on environmental issues and a great link between awareness and action. Environment and environmental news and information have become prominent topics of

discussion for the public and elites. Hence, mass media plays a significant role in covering news and information on environmental incidences, issues and problems (Pompper, 2004). The mass media has been credited with the capacity to reach a large section of the population, hence their capacity to keep the public informed and enlightened on pressing national issues including environmental issues. Soola (1993; in Ezeonyejiaku, 2018) maintained that “The mass reach and simultaneity of the mass media have remained unparalleled by any other medium.” This stresses the importance and pivotal role of the mass media in addressing national problems including ecological problems. Nwosu (2005; in Ezeonyejiaku 2018) stressed this point when he posited that the role of the mass media is informing the people, mobilizing the people, harnessing their resources and championing the course of development.

The mass media has the capacity to disseminate relevant information that can create awareness on the need for a healthy and sustainable environment through their various public affairs programmes (Owuamlam, 2016). This places a great responsibility on the media to provide veritable channels for human beings to be better informed and educated on principles and practices that can protect the environment from degradation (Ezeonyejiaku, 2018).

Conceptual Spadework

a. Press

The traditional press (or the media) is made up of Newspapers, Magazines, Radio, Television and their likes which play a key role in society. They disseminate information to the society by performing three key functions which include surveillance on the environment, correcting the society and transmitting social heritage from generation to generation. These functions can be carried out in various ways in form of news reporting, editorials,

criticism and commentaries of government activities (Audu & Yibeikas, 2019).

b. Ecological Crisis

According to Balasubramanian, (2019), ecology refers basically to a branch of biology. It deals with study of interactions among organisms and their biophysical environment. This biophysical environment includes both biotic and abiotic components. The biophysical environment in which all interactive mechanisms happen is called ecosystem. Ecology deals with organisms, populations, communities, ecosystems and the biosphere. The place of living is the organism's environment. Hence, ecology is sometimes called as environmental biology. In general, ecology is recognized as one of the natural sciences. It is considered to be a science concerned with the nature and interrelations of living world. The term ecology has been derived from the Greek word "oikos" meaning "habitation" or "house" or "living place."

Taylor (2009) describes ecological crises as rapid and largely unexpected changes in environmental quality that are difficult if not impossible to reverse. These changes usually occur over a period of time; mostly immediately noticed or noticed in the long-term. Examples would be major extinctions and significant degradations of an ecosystem.

Theoretical Framework

a. Agenda Setting Theory

The agenda setting theory was made popular by the quote of Bernard Cohen (1963), saying that the press "may not be successful much of the time in telling people what to think, but it is successful in telling its readers what to think about". There is plenty of evidence that the media have a strong influence on

people's perception of which issues are important and which problems they want their government to do something about. The influence of news mass media increases when the need for orientation among the viewers is much. The need for agenda setting in democratic issues is necessary here. On the other hand, the agenda setting effect is lower for unpleasant issues that people can observe directly, as well as for other issues that the audience is well informed about.

The media have little power to set the agenda when people have sufficient political knowledge to counter-argue the claims made by the media. Therefore, the agenda-setting effect is stronger for concrete issues that are easy to visualize than for abstract issues. Agenda setting for issues of democracy must be concrete and result oriented not issues that are products of sentiments otherwise the audience may be dissuaded from accepting the news (McCombs and Reynolds, 2002; Yagede and Dozier, 1990; Yengar et. al, 1982).

b. Agenda Building Theory

Lang and Lang (1983) contributed a study on the relationship between the press and public opinion in the Watergate crisis and discovered that the original notion of Agenda Setting needs to be improved upon in development communication. The theory by Mcvail Driving from Everrette Roger's Diffusion of Innovation Theory and Daniel Lerner's Modernization Theory sees media and communication as propelling modernization and modern physical and economic development in their environments and societies (Wole- Abu, 2018).

The innovation and diffusion theory pounded by Everrette Roger's in 1986 proposed using communication and diffusion to transfer technology and innovation from development agencies

to clients which raises the appetite in them for change through creating modernization among members of the public.

c. Framing Theory

The basis of the framing theory is that the media focuses attention on certain events and then places them within a field of meaning. The theory assumes that the media draws the public attention to certain topics, it decides what people think about; the journalists select the topics. This is the original agenda setting “thought.” Framing theory and the concept of framing suggests that how something is presented (the frame) influences the choices people make. Communication itself comes with a frame.

The elements of the communication frame include: A message, an audience, a messenger, a medium, images, a context and especially, higher-level moral and conceptual frames. The choice of language is, of course, vital, but it is vital because language evokes frames – moral and conceptual frames. Baran and Davis (2009) explain that the framing theory examines the idea about how people use expectations to make sense of everyday life. The basis of framing theory is that the media focuses attention on certain events and then places them within a field of meaning.

Literature Review and Discussion

a. The Press in Nigeria: Its Role and Duties

According to Audu and Yibeikas (2015), Audu and Yibeikas (2019), the 1999 Constitution (as amended 2010); Chapter 2, Section 22 states “The press, radio, television and other agencies of the mass media shall at all times be free to uphold the fundamental objectives contained in this Chapter and uphold the responsibility and accountability of the government to the

people." According to the code of ethics for Nigerian Journalists (1998), item (2) – Accuracy and Fairness

A journalist should refrain from publishing inaccurate and misleading information. Where such information has been inadvertently published, prompt correction should be made. A journalist must hold the right to reply as a cardinal rule of practice. In the cause of his dailies, a journalist should strive to separate facts from conjecture and comments.

Also, item (12) - Social Responsibility states that a journalist should promote universal principles of human rights, democracy, justice, equity, peace and international understanding (Audu & Yibeikas, 2015; Audu & Yibeikas 2019).

b. Press-Coverage of Environmental Problems

Scholars have alleged that news coverage is poisoned by inconsistencies, distortions, cyclical and sporadic attention, and a misrepresentation of data (Adler 1992; Boyle 1993; Greider 1992; Nitz, Jarvis 1998; Shanahan, McComas 1997; Nitz, 2001). While some media outlets employ a reporter on environmental beat, a "rule of least effort" seems to be generally applicable to the large majority of environmental issues (Griffin, Dunwoody 1995: p 281; Nitz, 2001). In an effort to be sensational, timely, and simple, the media tend to underemphasize risks and over-dramatized spins on disputes in environmental reporting (Sachsman 1991; Nitz 2001). Most media reports regarding the environment amplify problems and conflicts, rather than solutions (Jaehne 1990; Nitz, 2001). Most agree that the media often cover the environment with a barrage of skewed uncertainties and misinformation (Cantrill 1993; Chepesiuk 1993; Stavins 1995; Nitz, 2001).

Audu and Yibeikas (2019) further elaborate on the position of critics complaining that media as the watchdogs are barking of

the wrong things. As a result, many fears are exaggerated which often lead to unnecessary measures and legislation which culminates in “gonzo justice” in the parlance of media (Kadiri et al. (2015). Furthermore, media critics have not only criticized the media of wrong doing in many other areas of social endeavor including democracy, health and even the environment. For example, many media have suppressed information about the health hazards of smoking due to pressure from advertisers (Cirino, 1973; Audu and Yibeikas, 2019).

Manifestation of Ecological Crisis in Nigeria

Salau (1993) captures what he describes as major local ecological problems. This accordingly captures the Nigerian situation as follows; (a) Drought and desertification, (b) Soil erosion, (c) Deforestation, (d) Land and water pollution (e) Air pollution, and (f) Solid waste disposal. Ezeonyejiaku (2019), went further to divide these ecological problems into two broad classifications, namely urban and rural. Drought, desertification, soil erosion and deforestation are ecological problems predominant in rural areas while land, water and air pollution (with the exception of Niger Delta areas), solid waste disposal are ecological problems predominant in urban areas.

a. Drought and Desertification

Desertification in Nigeria is currently most prominently manifested in the semi-arid zone of the country which is a transitional zone between the humid areas to the South and Sahara Desert to the North (Salau, 1993 & Ezeonyejiaku, 2019). This area is populated by more than 28 million people and 58 million livestock and includes substantial parts of Borno, Kano, Katsina and Sokoto states and a small portion of Bauchi state (NEST, 1991).

The problem of drought is countrywide and not restricted to the northern part like desertification. Drought constitutes an important factor of desertification with its variable nature of rainfall from year to year. There is an evidence of cyclical pattern of climate in Nigeria with alternating years of paucity of rainfall when the natural vegetation suffers a great moisture stress than usual. Records indicate that droughts had occurred frequently in the past in different parts of Nigeria with some of those especially in the 19th century resulting in famines.

From the beginning of this century rainfall data indicate great fluctuations in rainfall received in the different parts of Nigeria with many years receiving amount below average. According to Ayoade (1988), progressive decline in rainfall became noticeable; resulting in the drought affected mostly the extreme northern parts of Nigeria and resulted in wide-spread crop failures and death of thousands of livestock and herds.

Drought has also led to a drastic lowering of the water table, considerable drop in the levels of major rivers like Niger and Benue, contraction of Lake Chad and large scale migration of people from the North and rural areas of the South and urban centres respectively. At the end of the 1982 harvest season, the New Nigeria Newspaper reported that about five million metric tonnes of grain valued at N4.2 billion would have been lost to the drought of that year. In 1988, the Punch Newspaper reports that several villages were buried by sand dunes in Borno State (Salau, 1993).

b. Soil Erosion

Soil erosion is another ecological crisis in Nigeria considering the number of states that are affected by it. Erosion is disastrous not only in the havoc it is able to cause but also in the fact that it can go on unnoticed until it is too late for its effects to be reversed.

There are many types of soil erosion in Nigeria. The gully types are the more obvious because of their remarkable effects on the landscape. According to a study (Ofomata, 1981), 70% of South-Eastern Nigeria is affected by one form of erosion or another. Abia, Anambra, Enugu and Imo States are the worst affected areas where gully erosion reportedly washed away many farmlands totalling over 25,000 ha and homes which caused few deaths (Aladejana and Adesiyan, 1982). Ezeonyejiaku (2019) confirms this position and identifies more areas to include Ebonyi, Edo, Ondo, Jigawa, Kebbi, Gombe, Sokoto and Zamfara as additional states most affected by gullies.

There is also substantial evidence of land degradation by mining and quarrying activities in various parts of Nigeria. Tin Mining in Jos Plateau with its open cast mining operations which started in early 1900 has caused the existence of large earth mounds, dried out ponds, puddles and open reservoirs rendering large areas virtually useless for agriculture. Mining of limestone in Nkalagu (Anambra State) and Odukpani (Cross Rivers State) as well as dredging/quarrying of sand and gravels along river banks, particularly in the Southern parts of Nigeria deprive the soil surface of its vegetation and contributing to slidding, slumping and gully development resulting in land degradation. World Bank (1987) places Nigeria's annual mean soil loss through erosion estimated to be 25 million tonnes. In Jos Plateau area alone, it is estimated that about 100 million tonnes of soil must have been lost within a period of 10 years. General decreases in soil fertility and diminution of cultivatable land have also been noticed as a result of sheet erosion and the occurrence and expansion of gullies. According to a World Bank and I.M.F. report, soil erosion in parts of Nigeria has reduced maize yields from 6.5 tons a hectare to 1 ton (World Bank, 1987).

c. Deforestation

Deforestation is a very serious problem in Nigeria. Although the issue of deforestation in the tropics has assumed large political significance on the international level due to the role of the tropical rain forest as a natural sink for greenhouse gases (particularly carbon dioxide), to the average rural dweller the problem of deforestation relates more to the scarcity of firewood for cooking. Although the extent of deforestation in Nigeria is unknown due to lack of data, fragmentary information from many sources paints a rather grim picture. According to the World Resources' 1990-1991 Report, the rate of deforestation in Nigeria in the 1980s is estimated to be 400,000 hectares annually while reforestation was merely of the order of 32,000 hectares. This translates to the rate of forest loss of 2.7% annually. If that trend continues, it means that all our forest would be gone before the middle of the next century. At present, the country is estimated to have only 30% forest cover (about 277,132 sq.km).

According to Nwoboshi (1986), there were 60 million hectares of forest and woodland in 1897 which had been reduced to about 9.6 million hectares by 1986. One of the factors responsible for the high rate of deforestation is the uncontrolled cutting of wood for firewood and charcoal. Shortages of firewood which were very critical in most northern states particularly Kano, Jigawa, Katsina, Kaduna, Sokoto, Kebbi, Bauchi and Borno have now become national. In the North where 75% of the total cooking fuel is derived from plants, annual deficit of fire wood is put at about 5-8 million cubic metres. Another factor is the indiscriminate bush burning by farmers and others. For example, in 1982/83 dry season over 1700 hectares of forest plantations were burnt in the country.

There is so much pressure on the forest, due to rising demand for fuel wood, pulpwood, poles, and other types of wood for

building purposes. The Federal Government estimated that the annual harvest of sown timber from the high forest was 1.5 million cubic meters in 1975 and at that rate would take between 25 to 30 years to denude the forests of mature timber (Aina and Salau, 1992; p. 36, Ezeonyejiaku, 2019). Nigeria's forests are of very important socio-economic and ecological significance. The forests have traditionally provided three important economic benefits: timber exports, traditional hunting and non-wood product gathering and fuel wood. Timber products still make an important contribution to GDP, representing about 7% of the agricultural product for the country but exports have declined drastically while domestic demand has risen considerably (World Bank, 1990).

A major effect of deforestation is the depletion of wildlife and loss of biodiversity. Biodiversity refers to the variety of all species of plants, animals, and microorganisms, their genetic make-up, habitats and ecological processes. Saving biodiversity is very important to us all as the utility of the various species is increasing and the fact that it is crucial to the intricate connections that nature has established. It is estimated that in Nigeria there are more than 4600 plants species of which about 205 are endemic (that is they cannot be found elsewhere.) Of these, about 484 plants in 112 families are threatened with extinction. Many animals and birds are also threatened with extinction (Salau, 1993).

Deforestation has also been associated with aggravating other ecological problems such as soil erosion, desertification and flooding. Forests constitute a major factor in carbon exchange with the atmosphere and, after the oceans, are the biggest sink in

which atmospheric carbon may be stored. Thus the importance of conserving our forests cannot be overemphasized.

d. Land and Water Pollution

Land and water pollution exist in all parts of Nigeria though to a varying degree. In view of the incipient stage of industrialization in Nigeria, pollution of land and water by industries is still a minor and spatially restricted problem. Pollution from industrial effluents and urban sewage disposal have been of significance especially in the major industrial centres like Lagos, Kano, Kaduna, Aba and Port Harcourt. Hardly any of the cities has a central sewage and effluents disposal. Most residents in the low income areas depend on pit or bucket latrines. The materials from the pit latrines seep into the ground water without obstruction and may pollute nearby sources of drinking water especially wells.

The waste materials from the bucket latrines are usually disposed raw into nearby streams or rivers. In the middle and upper areas, most houses are provided with septic tanks (Salau, 1993). Almost all the industries discharge their effluent without prior treatment into rivers, lagoons, streams, or the sea. This is due to the fact that there is no effluent discharge guideline in the country until recently. Many industrial effluents are toxic as they include mercury, dyes, cadmium, etc. Some of the dyes used in the textile factories are believed to be carcinogenic (Salau, 1993).

e. Oil Spillage

One of the major factors of land and water pollution in Nigeria is the oil exploration and exploitation. This is a very serious problem but it is restricted more to the areas of operation of the oil companies. The Niger Delta particularly has experienced the worst environmental impacts from the oil industry (Salau, 1993 & Ezeonyejiaku, 2019). Some of the effects of the oil industry on

the environment include (Osuno, 1982): (a) destruction of vegetation and farmlands during exploration and for siting of locations as well as laying of pipelines. (b) the continuous presence of light, heat, noise and in some cases sooty emission from flares (c) oil pollution of the environment through accidental blowouts, leakages of oil pipeline and storage tanks and effluents from production and refinery operations. There have been many incidents of oil spillage in the eastern portion of the Niger Delta. These spillages and blowouts had occurred both on-shore and off-shore. The causes of the spillages are numerous with the most important being due to: (a) break-up of, or damage to oil tank or storage vessel, (b) damage to leakage or leakage of oil pipeline (c) overflow of oil storage tank. (d) rupture or failure of loading, floating or underbuoy hose and (e) human interference, carelessness, or sabotage of oil pipelines.

According to Osuno (1982) within six months after the spillage, mangrove vegetation started dying, and in the contaminated waters, crabs, molluscs and periwinkles died. The damage from this incident also resulted in a compensation of over N12 million being paid to affected individuals or groups. Oil spillages have caused tremendous damage to fishing and farming which are the primary occupations of the inhabitants of the Niger Delta. The resulting pollution often affects rivers, creeks, ponds and wells from which people obtain water for drinking and other purposes.

f. Air Pollution

There has been little concern for monitoring the quality of the air in Nigeria because of the belief that this is still a very minor problem. As the scale and tempo of industrialization increase, the direct health effects of gaseous particles are becoming more

obvious. However, there are many other sources of air pollution in the country and among these are (a) the flaring of natural gas (b) exhaust emission from automobiles and (c) noxious gases (oxides of nitrogen, sulphur dioxide, carbon dioxide, carbon monoxide, etc) from furnace and industrial machinery and from refinery wastes. Air pollution is fairly intensive at the oil and gas production stage.

Atmospheric contaminants from refinery are affected with the flaring of gas as is happening in most Nigerian oil fields. It was estimated that by 1986, the country was flaring 16.8 billion M³ of natural gas per year resulting in annual emissions of 2.7×10^6 kg of particular matter, 1.6×10^5 kg of Nox oxides with attendant environmental consequences. Perhaps more important is the finding in a study of the impact of gas flaring on the environment which revealed that there was about 100% loss in yield in all crops cultivated about 200 metres away from the Izombe station, 45% loss for those about 600 metres away and about 10% loss in yield in all crops cultivated about 200 metres away from the Izombe station, 45% loss for those about 600 metres away and about 10% loss in yield for crops about one kilometre away from the flare (Okezie and Okeke, 1987; Salau 1993). Bush burning which is very rampant in Nigeria is another veritable source of air pollution. It is estimated that about 260,000 hectares per year of forest and 10,000 hectares per year of Savanna are burned annually (Osemebo, 1988).

g. Solid Waste Disposal

Heaps of refuse and garbage have become common sights in most Nigerian urban centres. According to a Federal Government publication, the problem of solid waste disposal has today become the number one serious environmental problem facing the country with its consequent effects on the pollution of water, air and land, not to mention its hazards to health and

other natural resources of social and economic importance (Salau, 1993 & Ezeonyejiaku, 2019).

The ineffective solid waste disposal system has often resulted in wastes being indiscriminately dumped on open plots and even streets and roads, converting them into unsightly junk yards, unsuitable for almost any use and promoting destructive flooding across the country.

Factors Responsible for Ecological Crisis

The factors responsible for the current ecological/environmental problems in Nigeria as in most developing nations are many, complex and interrelated. However, the genesis of the problems and the reason for their aggravation cannot be fully comprehended unless our analysis is placed within a broader and historical context. An analysis of the environmental heritage which encompasses attitudes, structures, and behavioural patterns in relation to the natural environment is a starting point at uncovering the reason for the current problems.

a. Globalization

The transformation from the pre-colonial period to the present has been identified as a major factor (Aina and Salau, 1992). During the pre-colonial period, the level of environmental awareness of the people of Nigeria was much higher. As the people relied more directly on the nature for their sustenance, the relationships with the environment was in the direction of conservation, respect, good husbandry and efficient use of natural resources. The clearest evidence of this was to be found in traditional land use and human settlement patterns, in folklores and rituals, and in various technologies that rely on environmental resources. In most communities, land was

regarded as sacred with each generation holding it in trust for the succeeding generations.

Although each has the right to beneficial usage, no member of the family has the right to alienate any portion of it to others. Folkloric taboos and rituals were also used as tools of conservation. The regulation of hunting, fishing and fuelwood collection, and the linking of these activities to festivals or some cultural rites were other devices for conservation of natural resources. Individual and collective behaviors towards the environment were regulated by the community. The cleaning of individual homes and their surroundings were the responsibility of the household while communal grounds were maintained collectively. Because of their close interaction with their surroundings, the people had an intimate knowledge of the natural environment and thus were able to devise simple but effective technologies distilled over centuries.

Traditional management techniques were also utilized to safeguard the natural resources. Examples of such management techniques to improve the land for cultivation such as rotational system, legume seeding, intercropping, ridging and heaping, agro forestry, and alley farming once spurned or labeled as "primitive" are now well appreciated.

b. Colonial Exploration

Colonialism effected a major change in environmental awareness and existing relationship of the people with the environment. A notion of development whose major thrust was the exploitation and resources; primarily for the benefit of the colonial rulers was introduced (Salau 1993).

c. Organized Employment

There was a mental shift in the perception of natural environment from being a factor to work with to secure sustenance to being a factor that had to be overcome, subdued or transformed to promote human welfare. Further, the introduction of a monetized economy weakened the effectiveness of communal approaches to using environmental resources, while new imported religious ideas undermined traditional beliefs and the bases for many protective practices towards the environment. Colonization in particular affected land use. Land became just another commodity with the result that previous measures and practices which are environmentally compatible became less important. Land was turned into open access resources with no management or control over use by individuals.

Within the exploitative logic of the colonial enterprise, it was not surprising that the British colonial regime in Nigeria placed the environment on a very low level in its priorities vis-a-vis economic exploitation and political pacification. It was equally not surprising that the colonial state, in its bid to maximize its extraction from the colony for export to the British metropole, emphasized a state-centric planning strategy. Unfortunately the post-colonial period has seen the continuation of the strategy and ethos of development of the colonial administrators (Salau, 1993).

d. Industrialization

The development styles adopted by the governments were based on the quest for faster rate of economic growth and industrialization in particular. In the process little attention was paid to some section of the population which became

increasingly marginalized. The style of development and the accompanying sectorial policies have also undermined food production and environmental management. The rural areas lost the initiatives and became less and less important in the scheme of things. More of the lands in the rural areas are being converted to urban and industrial uses or to cash crop monoculture. Energy and water go to rich urban users or expensive irrigation projects. Development policies have also promoted demographic imbalance, rural exodus, exponential urban growth, and increasing population which is putting so much pressure on the natural resources base (Salau, 1993 & Maaketstad, 2016).

e. Technology

The adopted style of development has also placed undue emphasis on technology. Technology engendered the feeling that man could totally dominate his environment at no cost. The result is that technological solutions are often applied to problems which are more social or economic in nature or origin. For example, big dams are built for; among other reasons, providing water for irrigation but these have often drawn attention away from the real problems of poor land management and archaic land tenure system. In another sense, the transfer of technology to developing nations has been found to have negative effects on their social and natural environment (Farvar and Milton, 1972).

Widespread adoption of mechanized farming and the application of new inputs like inorganic fertilizers, pesticides and herbicides have precipitated in the long run other environmental problems. The ideology of man over nature bred by technology has also discouraged the traditional methods of coping with the environment. Ecologically sound traditional

practices were thus spurned in favour of ill adapted western technologies (Salau, 1993 & Maaketstad, 2016).

c. Rapid Population Growth

Population dynamic is now regarded as important factor in environmental degradation (Salau, 1993 & Maaketstad, 2016). Although there is no simple correlation between population growth and the state of the environment, there is no doubt that the exploding rate of population growth puts tremendous strain on the natural resources. The population factor cannot be ignored especially in the case of a country like Nigeria with a relatively large and rapidly growing population. With respect to the size, although the country's total population is now estimated at about 90 million, the rate of growth is one of the highest in the world.

Three important aspects of the demographic variables in this respect are the rate of urbanization. The rate of urbanization is now estimated to be over 5% per annum. The urban segment of the population currently estimated at 30% is expected to increase to about 50% by the year 2000. The rate of population growth and urbanization has continued to outstrip the rate of economic growth. A unique feature of the demographic structure in Nigeria as in most developing nations is the high proportion of young age group (under 15 years and who have to depend on the shrinking working age group).

The pattern of population distribution is another source of concern. While there is under -population in few areas, there is an over-population in other areas. Population pressure has also been identified as an important factor in desertification. The northern semi-arid areas area believed to be overstocked with

animals. The pressure on land use due to increased population in the length of fallow period has led to impoverishment and loss of top soil (Salau, 1993 & Maaketstad, 2016).

Application of Theoretical Frameworks

Within the context of the Agenda Setting Theory, the mass media can set the agenda about the state of Nigeria's environment and the ecological crisis it is confronted with and they will become a major issue. This will create the much needed attention for the raging ecological problems. Akeeni et al (2013) sees the ability of the media to order and organize our world for us as one of the important effect mass communication has on our society (Audu & Yibeikas, 2019).

The Agenda Building Theory shows how the traditional media can be used to support development programmes by disseminating information that will stimulate participation and support for projects that impact on salvaging the environment (Audu & Yibeikas, 2019).

Agenda Building Theory shows how the field of meaning created by the media can have an effect on the audience's beliefs, attitudes and behaviours, by connecting a particular meaning or interpretation on an issue (Audu & Yibeikas 2015; Audu & Yibeikas, 2019). Hence the media can ensure that the public have the right attitudes regarding environmental reports by focusing on the main issues that were not made known to be of importance.

Conclusion

Ecological problems are global in nature; hence the entire globe is making attempts to address them. World leaders and indeed nations are in agreement on the need to stem the tide. The press has been globally recognized as a critical stakeholder in keeping

the public informed on current happenings. Ecological problems have not been properly captured by the press across the world. Although TV, Radio, Newspapers have given occasional attention to these issues, however, most focus on other sensational areas of news other than the environment, focusing mostly on. Most media reports regarding the environment amplify problems and conflicts, rather than solutions; in other cases the media covers environmental issues and fills such with a barrage of skewed uncertainties and misinformation. This, however, should not discourage coverage. There is a convergence of arguments as regards the importance of factual and accurate reportage for action.

Recommendations

There is need to provide funding and packages for ecological reporting. This would be attractive to Media Houses and Media Practitioners towards promoting ecological news. There is also need for town hall meetings and partnership symposiums to engage government and media practitioners to ensure that the media takes ownership and responsibility of ensuring that proper ecological information is disseminated to the public in order to mobilize them to support efforts that would curb current ecological crises. Proper consultations should be made to help media practitioners cover ecological problems within unsafe and inaccessible regions like the North-East and the creeks of the South-South.

There is need for close partnership and cooperation between the media and security agencies to ensure that status reports for ecological sites within crises areas are forwarded and made available to media practitioners for proper reportage. The media must pay more attention to development issues relating to

environmental protection rather than focusing on environmental crises alone. The media needs to diversify their information sources on the ecological stories they report. The media must also develop a watchdog role by monitoring progress on developmental projects aimed at mitigating environmental degradation by government and report to the public when the government is not living up to its responsibilities.

References

- Ahmed, S (2020). The ecological crisis, apocalypticism and the internalization of unfreedom. *Author World Review of Political Economy*. Vol. 11, No. 1 [115-140].
- Audu, W.W & Yibeikas, A. A (2019). Media relevance towards attaining sustainable development goals (SDGs) in Nigeria. *NTA TVC Journal of Communication*. Vol 3, No.1 [73-81].
- Balasubramanian, A (2019). *Introduction to ecology*. <https://www.researchgate.net/publication/335715336>. Accessed 14/10/2021.
- Betts, A.K & Gibson, E (2012). *Environmental journalism revised*. www.researchgate.net/publication/325974479. Accessed 14/10/2021.
- Ezeonyejiaku, N.P (2018). The role of the mass media towards environmental sustainability in Nigeria. *NTA TVC Journal of Communication*. Vol 2, No. 1 [28-42].
- Ferdous, S & Khatun, M (2020). News coverage on environmental issues: A study on print media of Bangladesh. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)* Vol. 25, Is. 4, Series 8 [53-59].
- Jhrotia A. K (Nd.). Role of media in enhancement of environmental awareness. *Tecnia Institute of Advanced Studies, GGSIP University, Delhi*. www.researchgate.net. Accessed 14/10/2021.

- Isife, C.T (2012). *Environmental problems in Nigeria: A review*. www.researchgate.net/publication/319448956. Accessed 14/10/2021.
- Maakestad, C (2016). *Ecological crisis of the twenty-first century: Through the lens of our socio-economic system*. www.researchgate.net/publication/298439540. Accessed 14/10/2021.
- Nitz, E. M (2001). *Media coverage of environmental issues*. H. J. Kleinsteuber (ed.), *Aktuelle Medientrends in den USA* - Springer Fachmedien Wiesbaden.
- UNEP, (2006). *Environmental reporting for African journalists: A handbook of key environmental issues and concepts*. UNEP Job number: DPD/0833/NA.
- Salau, A. (1993). *Environmental crisis and development in Nigeria. An Inaugural Lecture*. University of Port Harcourt Inaugural Lectures Series No. 13.
- Taylor, M.S (2009). *Environmental crises: Past, present and future* department of economics. University of Calgary Forthcoming as the Innis Lecture, *Canadian Journal of Economics*. [1-2].

Chapter Twenty

ECO-MEDIA AND GREENHOUSE GAS EMISSIONS IN NIGERIA: AN EMPIRICAL STUDY

Justine John DYIKUK

Department of Mass Communication, Faculty of Arts

University of Jos, Nigeria

justinejohnnyikuk@gmail.com

Executive Summary

We are living in a country amidst huge concerns about Greenhouse Gas Emissions (GHG) which threatens the ecosystem. Inspired by the dearth of literature on eco-media as a potential for mitigating GHGs in Nigeria, the chapter titled “Eco-media and Greenhouse Gas Emissions in Nigeria: An Empirical Study” relied on the *traditional and modern media theory* to assess the situation qualitatively. The study found oil exploration by multinational companies, indiscriminate felling of trees, bush burning and deforestation as unwholesome activities which degrade the environment. It recommended media campaigns, training in eco-media and holding multinational companies accountable as possible remedies. While urging the press to show the way, it concluded that providing alternative sources of energy and promoting corporate media reporting are huge resources for reducing GHGs in Nigeria.

Keywords: Eco-media, Emissions, Gas, Nigeria, Soot, Green House, Environment

Background

Reporting ecology-related issues is an emerging beat in journalism. Globally, there are various concerns about bio-safety as the universe is being threatened by unwholesome activities.

Although the universe is a mother who holds all things in being, it is constantly being violated. The situation in Nigeria is not different. Various illicit activities put the ecosystem at risk. In northern Nigeria for instance, there is a looming danger of desertification due to lack of planting trees and use of charcoal as source of energy which emboldens locals to cut down trees at will for domestic and commercial purposes. In the face of Greenhouse Gas Emissions (GHG), the environment is under attack. As it were, “there is a great deal of potential to cause several and avoidable environmental harm by unchecked Oil and Gas exploration activities” (Ironkwe & Ordu, 2016,p.1) in Nigeria.

The activities of multinational companies in the rich oil Niger Delta have affected agricultural activities such as fishing and farming. What is more, oil spillage and lack of clean-up by these companies has put host communities in a sorry state without clean drinking water and a means of livelihood. Despite government’s guidelines that oil companies should visit host within 24 hours to access the situation, these companies do not comply. For example, decoders identified 89 oil spills which were photographed but these companies did not publish the pictures in their report. In the end, they blame the situation on sabotage by criminals. However, the Niger Delta has been adjudged as “one of the most polluted places on earth” (Amnesty International, 2021). This empirical study shall demonstrate the gap in literature on eco-reportage in a view to making valuable recommendations for an environment that is media friendly and secure for all Nigerians.

Conceptual Framework

a. Eco-media

In this chapter, eco-media also referred to as eco-reportage or corporate environmental reporting is conceived as establishing a link or interface between environmental issues and the media. It also deals with the relationship between the ecosystem and the world of media production, distribution and consumption. Eco-media provides a basic understanding of the environment as it relates with media impacts. It clarifies issues around media productions and cultural perceptions about the environment (Rust, Monani & Cubitt, 2016) towards a safe and clean environment.

b. Greenhouse Gas Emissions

In this study, the operational definition for Greenhouse Gas Emissions (GHG) encapsulates the violation of the ecosystem through unwholesome activities like fossil fuels combustion. It is a gamut of activities which debases or degrades the environment.

Theoretical Framework

This study is anchored on the *traditional and modern media theory* (Nnaemeka & Ezebuenyi, 2021) which describes the synergistic application of both traditional and modern media in clearly setting up goals for achieving communication objectives irrespective of one's location and environment. This theory favours the fusion of two broad media channels namely trado-modern media in actualizing communication goals through social campaigns. The theory canvasses support for more understanding and connection between media and ecological concerns. Since this theory cannot be domesticated within a particular environment, it is appropriate for the study because it argues for employing eco-media as a medium for reducing gaseous emissions across the length and breadth of Nigeria.

Methodology

Through the qualitative method which involves review of extant data on recent studies on the subject matter, this chapter aspires to account for corporate environmental reporting in a country that is contending with gas emissions towards providing a direction for policy makers in addressing a menace that is threatening the establishment of a green and safe environment for everyone.

Literature Review and Discussion

a. Eco-Media: Accounting for an Emerging Field in Nigeria

Most studies in corporate environmental reporting have been confined to developed nations like Korea, Hong Kong, Malaysia and Singapore. Even in Africa, only South Africa and Egypt fall into that category (Belal, 2001 & Uwuigbe, 2012). This shows that in developing countries like Nigeria, the concept of eco-media or corporate environmental reporting studies is a fairly new occurrence. Although eco-media is a recently new entrant in media studies, the phenomenon has always been with man.

In Africa, eco-media was part and parcel of the traditional society. From teaching kids basic communication skills early in life to actually taking them to the farm so as to teach them the names of various trees and plants, eco-media has always been part of the life of every African. Parents used every opportunity they had to encourage the young to plant trees. In some families, children were given little plants to plant. Everyone was expected to water his or hers and nurture it to adulthood. The kids were often excited to see the plant grow as those whose trees die are often laughed at. They were involved in practical farming, fishing, cooking, carving and knitting. Part of their intellectual training included the study of local history, knowing about the

environment (Local geography, plants and animals), poetry, reasoning, riddles, proverbs, story-telling and story relays (VML, 2021).

It was the responsibility of the head of each family to teach members of the family about the importance of taking care of trees. This is why in most villages in Nigeria, it is almost difficult to visit any house without seeing a tree. This provided shelter for members of the family. Sometimes, village meetings were held under such trees. When there are visitors, they are sometimes entertained under the tree in situations where the house is small. This practice was weaved around the general ontology that there is a relationship between nature and the human person. In Africa, "media systems are materially imbedded in ecological systems" (Willoquet, 2015) as people are dependent on natural resources for their existence. To this end, any complicity in the ecological arrangement breeds crisis.

Eco-media provides people with an understanding of the current global challenge of climate change. This is to confront environmental issues. Since it covers various interrelated media formats and frames used in analysing broadcast media (Brereton, 2016), in the Nigerian society, local media or trado-rural media provides members of the community with an opportunity to reflect on the issues that affect them and how to address them. Eco-media provides a plethora of opportunities for people to relish the essential features of the planetary ecosystem by contributing to the solution of climate chaos, biodiversity loss, ocean acidification, deforestation and water contamination (2021, Lopez, 2021).

From a background of a fair familiarity with ecological and media concerns at a tender age to the relevance of the town-crier in various communities, Nigerians are able to relate with their

environment and as well as nature. Notwithstanding the current sharp practices which violate the environment across the country, in every community, there are there are huge potentials for eco-media otherwise known as essential elements of eco-media. These include object-oriented ontology, ontology of the underworld, climatic mediatization, new materialism and green mediatization. If harnessed, these huge resources are capable of enhancing a sound relationship between human beings and the aquatic world as well as nature in general. Cubitt's recent book on Eco-media argues that "Technology has a unique position in mediating between the human world and the natural" (Cubitt, 2017). Despite the fact that eco-media remains a hidden treasure in Nigeria, only few authors have debuted works in this area of study especially as it relates to how gas emissions have potency to destroy the environment.

Green House Emissions in Africa's Most Populous Nation

The issues of Greenhouse Gas Emissions (GHG) in Nigeria are rife. For instance, a factsheet in 2014 which included an overview of emissions by sector, changes in emissions, information on carbon intensity and climate change mitigation targets and plans provided that Nigeria's total GHG emissions in that years were 492.44 million metric tons of carbon dioxide equivalent (MtCO₂e), totaling 1.01 percent of global GHG emissions. According to the report, 38.2 percent of GHG emissions were from land-use change and forestry sector as well as energy, waste, agriculture and industrial processes sector which contributed 32.6 percent, 14.0, 13.0 percent and 2.1 percent to GHG emissions in that order. The WRI CAIT data reported that Nigeria's GHG emissions increased by 25% (98.22 MtCO₂e) from 1990 to 2014 and noted that the average annual change in total emissions was 1% (USAID, 2019).

In 2009, there was a dip in Nigeria's GHG emissions. Experts attribute it to the global financial crisis which brought about decrease in economic production. Between 1996 and 2001, Nigeria experienced a drastic decrease in GHG emissions. However, the *International Energy Association* which gave the recent *Greenhouse Gas Emissions Level Report in Nigeria* indicated that it was 104.27 MtCO₂e as at 2018. The figure represents an increase of 271.6% from 1990 levels. This indicates an increment of 271.60% from 1990 which demonstrates that GHG in the country are consistently rising - a troubling trend for future emissions' projections. Nigeria's total GHG emissions is mainly comprised of carbon dioxide at 61.74%, followed by methane at 27.82%, nitrous oxide at 7.77%, and fluorinated gas at 2.66% (Hansen, 2020). Instructively, CO₂ emissions for Nigeria were 100.2 million tons in 2019. Despite fluctuations in recent years, it has increased between to 100.2 million tons from 1970-2019 (Knoema, 2019).

In Nigeria, there is no concrete policy to decrease GHG emissions or mitigate climate change. Although analysts are skeptical about making progress in this area, the country is blessed with huge sources for renewable energy. However, besides lack of due process and follow-up, the nation's handlers lack the requisite political-will to harness these resources for both electricity and a clean environment. The issue is of climate change or environmental degradation in Nigeria has to do with bad governance (Hansen, 2020). Scholars like Hansen (2020) have opined that though Nigeria does not produce nearly as much greenhouse gas pollution as the U S and China, it nonetheless produces the 3rd highest amount of GHG in Africa behind South Africa and Zambia. In 2016, Nigeria was solely responsible for 0.97% of the total GHG emissions in the world. The absence of a significant policy intervention in Nigeria has frustrated efforts to slow down these rates.

Nigeria: Investigating Sources of Green House Emissions

a. Black Soot

People of the Niger Delta have been complaining about pollution due to black soot. The country's oil producing region is witnessing this due to the activities of oil refineries. For example, those living in the southeastern city of Port Harcourt claim that there is a literal cloud hanging over the region. Clothes they dry are often covered in soot. The streets too are covered in soot. Black soot which is a by-product of both legal and illegal refineries has huge health implications. For the residents, the soot has become a hellish phenomenon they have to live with (Giles, 2018 & Elem, 2021).

b. Bush Burning

Bush fires in Nigeria are a recurrent decimal. Experts are of the view that more than half of bush fires in Nigeria which costs damages amounting to millions of naira annually are deliberately lit. This causes environmental pollution, health hazards as well as depletes the ozone layer. Bush burning fires also destroy natural nutrients in soil such as fertilizer elements, trees, plants and wildlife (Idris, 2008). It has been established that "Burning of biomass is a major source of many air borne particles and traces gases that influence the concentration of ozone at ground level" (Hamid, Usman, Elaigwu, & Zubair, 2010, p.244).

c. Gas Flaring

Although gas flaring was officially banned across the country in 1984, the practice still persists. According to the *World Bank's Global Gas Flaring Reduction Partnership* rankings from July 2018, Nigeria is the sixth-largest gas-flaring country globally. The World Bank emphasizes that gas flaring is a significant contributor to global warming. It equally notes that gas flares

also contribute to climate change through the emission of millions of tons of CO₂ to the atmosphere (Anjorin, 2020). Nigeria still ranks in the top 10 gas flaring countries in the world, with 7.4 billion cubic feet in 2018 accounting for 6.9% (PwC, 2021).

d. Air Pollutants (Carbon Dioxide and Methane)

Carbon dioxide emissions are those stemming from the burning of fossil fuels and the manufacture of cement. They include carbon dioxide produced during consumption of solid, liquid and gas fuels. For instance, in Nigeria, carbon (CO₂) emissions for 2018 was 130,670.00; a 15.72% increase from 2017 (Macrotrends, 2021). The pollutants have adverse effects on human health especially children who are the most vulnerable. Also, sulphur dioxide, nitrogen dioxide gaseous substances are fingered to cause respiratory tract illnesses like asthma and lung infection (Oluwatoyin, Osabohien, Fasina & Fasina, 2018).

e. Fossil Fuels Combustion

While “Global CO₂ emissions from fuel combustion remained relatively flat at 33.62 GtCO₂ in 2019 after peaking at 33.63 Gt in 2018,” (IEA, 2021) in Nigeria, the case is different. We are told that “at 75 million tonnes of CO₂ equivalent a year, they outstrip the emissions from all 200 million Nigerians’ use of transport or electricity” (Lo, 2021). This is linked to health problems especially among communities in the rich oil Niger Delta where gas flaring activities are common. Fuel combustion process is the source of gaseous emissions which include oxides of nitrogen, oxides of sulfur, oxides of carbon and volatile organic compounds and hydrogen sulfide (Lo, 2021; Mishra & Siddiqui, 2014).

f. Cement Manufacturing Fossils

Cement manufacturing **emissions also stare the nation in the face**. Cement industry is potential anthropogenic source for air pollution. Typical among gaseous emissions to air from cement

production are NO_x, SO_x, CO, CO₂, H₂S, VOCs, dioxins, furans and particulate matters. Also, quarrying, drilling, blasting, hauling, cement mill, fuel preparation, packaging, road cleaning and stacks are sources of particulate matter in the form of dust and carbon particles (Mishra, & Siddiqui, 2014) which are harmful to human beings especially those residing in host communities where cement factories are domiciled.

g. Wrong Land Use Purposes

The phenomenon of wrong use of land abounds in various states across the country. Over-tilling or over-cultivation amounts to land abuses which give rise to erosion. For example, lands that are supposed to be used for agricultural purposes are converted for building houses (Dada, 2018). This could lead to food crisis especially in communities where there is no space for farming activities due to shortage of arable land. As we saw, quarrying, drilling, blasting, hauling, road cleaning and stacks (Mishra, & Siddiqui, 2014) degrades the land (Amnesty International, 2021).

Corporate Environmental Reporting in Nigeria: The Existing Gap in Literature

Corporate environmental reporting or eco-media is basically a firm's environmental performance information or public statements about its performance (Ironkwe & Ordu, 2016) or communication with its publics. The oil and gas industry guidelines provide that there should be relevance, transparency and consistency, accuracy and completeness of information (API, 2004) in reporting on GHG. These shall be highlighted thus:

a. Relevance: This requires that both internal and external information that is released should be meaningful and useful to both the company and the public.

b. Transparency: The information to be passed should be unambiguous, clear, understandable, factual, coherent in a way that it would facilitate independent review. Here, the degree to which information processes, procedures, assumptions and limitations are undertaken should be considered.

c. Consistency: Consistency in the gathering, processing and dissemination of information is essential to making a report credible. This relates to what is reported and how it is reported. This further facilitates the way in which a company's performance could be evaluated over time towards improving its services in a competitive market.

d. Completeness: Completeness has to do with ensuring that both internal and external delivery of information conforms with the mission and vision of the organisation. Every report ought to have its operational boundaries and scope as regards who it is meant for.

e. Accuracy – Accuracy is at the heart of reportage as every information is expected to be sufficiently accurate and straight to the point. This makes consumers to understand the import of the message so as to comply with it. It deals with the levels of certainty or uncertainty of a report in a way that users tell its usefulness, reliability and limitations (API, 2004; Ironkwe & Ordu, 2016).

Where it is practiced, corporate environmental reporting improves processes for efficient data collection, creates new opportunities for internal and external benchmarking, demonstrates the commitment of the industry for consistent and transparent reportage, facilitates stakeholder feedback, engagement and dialogue processes and improves processes, strategies and actions (Ironkwe & Ordu, 2016). It also improves

data collection and enhances consistency leading to improving quality of lives. The current challenge is that the emerging trend of reporting the environment is one in which companies only report activities to win the trust of stakeholders in the areas of assurance processes, materiality, value chain and performance benchmarking (API, 2005).

There is little or no room for fulfilling the demands of relevance, transparency and consistency, accuracy and completeness of information (API, 2004) as earlier outlined. **Eco-media or environmental reporting is also beset by the absence of reliable and consistent data and information.** This stands in the way of policy direction and decision (Majoroh, 2015). More worrisome is the fact that a web-based corporate environmental reporting does not exist in Nigeria (Uwuigbe, 2012). Despite the practice of sourcing data from multiple sources and variation in the size of an organisation, corporate environmental reporting is still a far cry in the country. Perhaps this is because although companies report about environmental issues through websites, they nonetheless, do not engage in robust environmental reporting (Iredele, 2020).

Recommendations: Eco-Media as a Catalyst for Reducing Gas Emissions in Nigeria

a. Media/Tree Planting Campaigns

Experts in the media industry should canvas support for media/tree planting campaigns on the need to safeguard the environment. This should encapsulated calling the attention of Nigerians on the dangers of bush burning and environmental degradation as well as encouraging people to plant trees. Also, “there is need for a clear understanding of the causes and effects of bushfires so that bushfire policies can address the undesirable

effects with respect to forestry, arable agriculture, rangeland, soil conservation and wildlife” (Hamid, Usman, Elaigwu, & Zubair, 2010, pp.248-249). In this respect, media/tree planting campaign is a *sine qua non* for the promotion of eco-media and curbing gas emissions in Nigeria.

b. Enhancing Rural Media

Since we have established the importance of rural media, it is crucial to enhance this type of reporting towards care for the environment. Journalists ought to shun the current elitist approach to reportage by going into the hinterland to educate the public about the dangers of violating the environment through bush burning and indiscriminate cutting of trees for charcoal and other purposes. The Ministry of Agriculture and Rural Development and the Department of Climate Change in the Federal **Ministry of Environment** has a huge responsibility in this regard.

c. Mass Mobilization

The National Orientation Agency (NOA) in collaboration with the Federal Ministry of Communications and Digital Economy should make mass mobilisation a priority. Education on the importance of preserving the ecosystem would go a long way in helping the populace to further avoid practices which harm the environment. When the masses are duly informed in line with the dictates of the *traditional and modern media theory*, the environment is the better for it. Nigerians should be educated on threats to the environment and inappropriate use of fire (Hamid, Usman, Elaigwu, & Zubair, 2010).

d. Training in Eco-media

To make progress in reducing gas emission across the country, it is important to train journalists on the rudiments of eco-media. Based on the demands of *traditional and modern media theory*

employed in this study, in an industry where most journalists prefer to take to political, judicial and economic reporting, managers of the media should encourage journalists to fall in love with reporting on ecology towards achieving a safe and healthy world. Without a descent and good environment, journalists would not be able to practice their noble profession. As such, it is expedient for more journalists to be trained on eco-media reporting. As a matter of urgency, regulators should compel companies through regulatory instruments to make reporting of environmental information a top priority for policymakers (Iredele, 2020).

e. *Holding Multinational Companies Accountable*

Creating a healthy ecosystem in Nigeria and elsewhere around third world countries entail holding multinational companies such as Shell (normally called Shell Petroleum Development Company - SPDC), Mobil, Chevron, Texaco, Elf and Agip (called Nigeria Agip Oil Company) (Eweje, 2007) accountable in the face of refusal to clean up oil spillages especially in the Niger Delta. This requires enforcing legislation and prosecution to as to restore battered environments and also give the residents of the region the descent life they deserve. “If we want to be a prosperous nation, we must insist that oil and gas companies put down the necessary infrastructure to capture the gas and utilise it” (Anjorin, 2020).

f. *Providing Alternative Sources of Energy*

In a country where majority of the rural populace solely depend on firewood and charcoal as sources of energy for cooking, government ought to encourage citizens to seek alternative sources of energy such as cooking gas and kerosene. For this to happen, government must reduce Value Added Tax (VAT) on

the two products to enable ordinary Nigerians to use these commodities. Huge investments in other sources of renewal energy such as solar should be made through public/private partnership towards making the environment safe and green.

g. *Developing a Robust Policy Framework/Political-will*

The Nigerian government recently announced a COVID-19 plan to remove all subsidies from fuel which will enable it save about \$2 billion per year to debut renewable energy. While this might be a big step in mitigating the effects of climate change, the additional plan to plant 25 million trees towards restoring 4 million hectares of forest is commendable. However, like most government policies, there are no significant signs that this white elephant project would be achieved (Hansen, 2020).

Conclusion

In this study, we saw that the environment is under siege due to indiscriminate felling of tress, bush burning and deforestation. Among other recommendations for a clean and safe ecosystem, the author argued that “deforestation and conservation of land, controlling of wildfire, adopting better methods of combusting residues of crops and effective use of energy by forest dwellers amongst other measures” (Oluwatoyin, Osabohien, Fasina & Fasina, 2018,p.48) would reduce gas emissions and ultimately, improve the ecosystem. There must be concerted efforts at fighting “the business as usual (BAU) emission levels” (USAID, 2019) towards improving energy efficiency and providing renewable sources of energy for rural communities thus ending the flaring of gas (USAID, 2019).

Although the Nigerian government has pledged to end gas flaring by 2030 in line with its climate plan which was recently submitted to the United Nations (Lo, 2021), it is to be seen how that commitment will translate to reality. Recall that in 2017 the

country also pledged to reduce GHG emissions by 20% by 2030 through installing 13,000 MW solar power equipments. Unfortunately till date, GHG emissions from fossil fuels have increased by 17% (USAID, 2019). Most recently, in its bid to rebuild a new plan in the wake of the COVID-19 global health crisis, the government indicated that it would install solar power in 5 million households. While only time will tell the success of this initiative (Hansen, 2020), the media must be on top of its game to hold government accountable if this promised is not fulfilled. Indeed, promoting eco-media has the potential to reduce GHG in Nigeria and the press must show the way.

References

- American Petroleum Institute (API) (2004). Compendium of greenhouse gas emission estimation methodologies for the Oil and Gas industry. Washington, D.C.: American Petroleum Institute.
- American Petroleum Institute (API) (2005). Oil and gas industry guidance on voluntary sustainability reporting: Using environmental, health and safety, social and economic performance indicators. www.ipieca.org. Accessed 31/10/2021.
- Amnesty International (2021). Niger Delta is one of the most polluted places on earth. www.amnesty.org/en/latest/news/2018/03/Niger-Delta-Oil-Spills-Decoders. Accessed 31/10/2021.
- Anjorin, O. (2020). Gas flaring in Nigeria. <https://punchng.com/gas-flaring-in-nigeria/>. Accessed 31/10/2021.
- Belal, A.R. (2001). A study of corporate social disclosures in Bangladesh. *Managerial Auditing Journal*. Vol. 16, No. 5, [274-289].

- Brereton, P. (2015). *Forward - Ecomedia: Key issues*. London: Routledge.
- Cubitt, S. (2017). *Finite Media: Environmental implications of digital technologies*. Duke: University Press.
- Dada, P. (2018). Don laments wrong use of land in Nigeria. <https://punchng.com/don-laments-wrong-use-of-land-in-nigeria/>. Accessed 31/10/2021.
- Elem, M. (2021). Black soot and public health of Rumuolumeni residents in Port Harcourt, Nigeria. *Direct Research Journal of Social Science and Educational Studies*. Vol. 8 [9-13].
- Eweje, G. (2007). Multinational oil companies' CSR initiatives in Nigeria: The skepticism of stakeholders in host communities. *Managerial Law*. 49,5/7 [219-235].
- Giles, C. (2018). Port Harcourt: Why is this Nigerian city covered in a strange black soot? <https://edition.cnn.com/2018/04/26/africa/nigeria-portharcourt-soot/index.html>. Accessed 31/10/2021.
- Hamid, A.A; Usman, L.A; Elaigwu, S.E & Zubair, M.F. (2010). Environmental and health risk of bush burning. *Advances in Environmental Biology*. Vol. 4(2) [2411-249].
- Hansen, P. (2020). Nigeria has experienced a 271% increase in greenhouse gas emissions since 1990. www.climatecard.org/2020/12/nigeria-has-experienced-a-271-increase-in-greenhouse-gas-emissions-since-1990/. 19/08/2021.
- Idris, H. (2008). Nigeria: The menace of bush burning. <https://allafrica.com/stories/200803171177.html>. Accessed 31/10/2021.
- IEA, (2021). CO2 emissions from fuel combustion. <http://energyatlas.iea.org/#!/tellmap/1378539487>. Accessed 31/10/2021.
- Iredele, O.O. (2020). Measuring performance in corporate environmental reporting in Nigeria. *Measuring Business Excellence*. Vol. 24 No. 2, pp. 183-195

- Ironkwe, U & Ordu, P.A. (2016). Environmental reporting in the Oil and Gas industry in Nigeria. *International Journal of Research in Business Studies and Management*. Vol. 3, Is. 11, [1-21].
- Knoema, (2019). CO2 emissions:100.2 (million tonnes) in 2019. <https://knoema.com/atlas/Nigeria/CO2-emissions.19/08/2021>.
- Lo, J. (2021). Nigeria to end gas flaring by 2030, under national climate plan. www.climatechangenews.com/2021/08/13/nigeria-end-gas-flaring-2030-national-climate-plan/. Accessed 31/10/2021.
- Lopez, A. (2021). Ecomedia literacy: Integrating ecology into media education. London: Routledge.
- Macrotrends, LLC. (2021). Nigeria carbon (CO2) emissions 1960-2021. www.macrotrends.net/countries/NGA/nigeria/carbon-co2-emissions. Accessed 31/10/2021.
- Majoroh, E. (2015). Challenges of environmental regulation and governance in Nigeria. <https://nigerianenvironment.wordpress.com/2015/11/20/challenges-of-environmental-regulation-and-governance-in-nigeria/>. Accessed 31/10/2021.
- Mishra, S & Siddiqui, N.A. (2014). A review on environmental and health impacts of cement manufacturing emissions. *International Journal of Geology, Agriculture and Environmental Sciences*. Vol. 2 Is. 3 [26-31].
- Nnaemeka, F.O & Ezebuenyi, E.E. (2021). Exploring the convergence of trade-modern media strategies as imperative for peace initiatives against terrorism. *Journal of Arts and Humanities*. Vol. 3(No. 3) [41-48].

- Oluwatoyin, M; Osabohien, R; Fasina, F & Fasina, A. (2018). Greenhouse gas emissions and health outcomes in Nigeria: Empirical insight from ARDL technique. *International Journal of Energy Economics and Policy*. **8(3)**, [43-50].
- PwC, (2021). Assessing the impact of gas flaring on the Nigerian economy. www.pwc.com/ng/en/publications/impact-of-gas-flaring-on-the-nigerian-economy.html. Accessed 31/10/2021.
- Rust, S; Monani, S & Cubitt, S, eds. (2016). *Ecomedia: Key Issues*. London: Routledge.
- USAID, (2019). Greenhouse as emissions factsheet: Nigeria. www.climatelinks.org/resources/greenhouse-gas-emissions-factsheet-nigeria. Accessed 19/08/2021.
- Uwuigbe, U. (2012). Web-based corporate environmental reporting in Nigeria: A study of listed companies. *Informatica Economică*. Vol. 16, No. 3 [27-36].
- Vanguard Media Limited, (2021). African traditional education. <https://www.vanguardngr.com/2018/12/african-traditional-education/>. Accessed 31/10/2021.
- Willoquet, P. (2015). *Forward - Ecomedia: Key issues*. London: Routledge.

Chapter Twenty One

A QUALITATIVE INVESTIGATION OF THE IMPACTS OF COVID-19 LOCKDOWN ON RESPONSIBLE CONSUMPTION AMONG WOMEN IN ENUGU STATE, NIGERIA

Catherine Chiugo Kanu, Ph.D., Uchenna SolomonAgbo, Ph.D., Chinyere Anita Anetu

*Department of Business Education
University of Nigeria, Nsukka
Enugu State, Nigeria*

Corresponding Author: catherine.kanu@unn.edu.ng

Abstract

This study investigates the effects of the COVID-19 lockdown on sustainable consumption pattern of women in Enugu state, Nigeria. Several studies have investigated the impact of COVID-19 on consumer behaviour in Nigeria but none focused on how the pandemic affected the consumers' responsible consumption pattern. This study is a qualitative one in which semi-structured interview was used to gather data for the study. Seventy participants were recruited using purposive sampling technique. All participants had strongly held views and provided unique insights into their experiences. Thematic analysis was applied to all interview transcripts. Findings revealed that consumers reduced quantity of products consumed and transformed products in sustainable ways during the COVID-19 lockdown. The study however found that the COVID-19 lockdown did not make most of the consumers to dispose of waste more responsibly. The findings of this study contribute to existing literature on responsible consumption and consumer behavior and could be used by producers, retailers, relevant government

organisations and campaigners to promote and sustain responsible consumption.

Keywords: Consumption, Responsible, Consumption, Sustainable Consumption, COVID-19, Lockdown

Acknowledgement: This research was supported by a grant to the authors from Feedback Hall Limited for the research, authorship and publication of this article.

Consumption generally means the using up of utilities. Thus, neoclassical economists consider consumption to be the final purpose of economic activities (Carroll, 2021). Featherstone in Smith (2014) describes consumption as a key stimulus for production, an inducement for workers to work, a major source of social status, and a significant channel for aspirations and pleasures. In the context of consumer responsibility, consumption is an extensive concept that begins even before an actual purchase is made and continues after the product is disposed of (Kanu, 2020). Consumption involves understanding, acknowledging and consenting to the product's behind-the-scenes practices (such as how it was produced), purchasing the products, using the products for their entire lifetime, disposing of or transforming the products and giving feedback on the products (Gonzalez, 2019). This description underscores the relationship between consumption and needs satisfaction. It shows that people consume to satisfy needs and thus, consumption can also be described as the satisfaction of needs. The Abraham Maslow's Hierarchy of Needs model indicates that the kind of needs that humans can seek to satisfy includes: physiological, security, psychological and social needs.

Consumption expenditure is high in most countries. Gonzalez (2019) reported that, in 2019, consumption expenditure represented 60 percent of global GDP. In the same year, consumption expenditure in Nigeria represented 80.17 percent of national GDP, and in 2020, it was 78.34 percent, representing 338,667 Billion US\$ (World Bank, 2021). Meanwhile, there is sufficient evidence that many people are consuming in careless and mindless ways. For example each year globally, an estimated one third of all food produced – equivalent to 1.3 billion tonnes worth around \$1 trillion – ends up rotting in the bins of consumers and retailers; two billion people are obsessed or overweight while almost 2 billion people go hungry or undernourished (United Nations Development Programme, 2021). Consequently, governments, civil societies, businesses and individual citizens have been called upon to take urgent actions to avoid the terrible effects of climate change. Consumers need to use information to support buying decisions, give information and feedback, reuse products, as well as recycle and reduce waste. In fact, the achievement of the SDG goal 12 (responsible consumption and production) require both business and individual consumers to be earth-minded when: making purchase decisions, using goods or raw materials purchased; obtaining and using natural resources, and disposing of toxic wastes and pollutants.

Reports show that mindless consumption among consumers and businesses contribute to major global challenges such as climate change. The United Nations Intergovernmental Panel on Climate Change (IPCC, 2018) state that temperature is currently rising at between 0.1°C and 0.1°C per decade and may reach 1.5°C in 2030. The Paris Agreement (an International Treaty signed by almost all countries in the world at COP21 in Paris in 2015) sets a target to keep the global average temperature to ‘well

below' 2 degrees above pre-industrial levels, ideally 1.5 °C degrees; strengthen the ability to adapt to climate change and build resilience; and align all finance flows with 'a pathway towards low greenhouse gas emissions and climate-resilient development' (Aberg, 2021) However, WMO (2020) state that "we are currently way off track to meeting either the 1.5 °C or 2 °C that the Paris Agreement calls for. However, even at 1.5°C, all living things including humans, animals and plants will face drastically increased risks, and such consequences are already apparent. In 2019, when global temperature was 1.1 °C, heat waves, combined with long periods of drought, were linked to wild fires of unprecedented size in Australia, where millions of hectares were set ablaze as well as in Siberia and other arctic regions (WVMO, 2020). In Nigeria, floods drought, and rising sea levels are becoming more severe and may get worse and threaten lives and livelihoods if far-reaching actions are not taken to halt the effects of climate change.

To achieve these climate goals, business and individual consumers must take the recommended climate actions consistently including reducing consumption as well as reusing and recycling waste . Consistency in this context is about doing the right things at all times - in good times and in challenging times. The corona virus pandemic which is the situation in focus in this study presented unique challenges. China was the first country to face the mass spread of the corona virus (Benett, 2020). From China, the highly contagious disease immediately spread to almost all countries in the world. Given that there was no vaccine to curb the spread of the virus; most countries around the world were completely locked down. Lockdown is an emergency response imposed by the government, directing people to stay indoors in the event of an outbreak (Ajide, Ibrahim & Alimi, 2020). Elements of the lockdown included restriction of

mass gatherings stay at home order, border closure, curfew, interstate travel ban and limited access to unessential products. A major consequence of the lockdown in Nigeria was the halting of production as well as the local and international supply chains. Essential services such as hospitals and healthcare facilities, the media, security sector, and some business establishments such as those that provide energy, petroleum and food (United Nations Economic Commission for Africa, 2020) were exempted from the lockdown as consumption of these essential products and services must be sustained for the existence of the human life.

While the corona virus era is definitely challenging and uncomfortable, it presents a lot of opportunities to make shifts towards better ways of living and working. Thus, We believe, as United nations (n.d.) states, that the corona virus crisis is an opportunity for a profound systematic shift to a more sustainable economy that works for both people and the planet and that people should build back better and transition their production and consumption patterns towards more sustainable practices. There is no doubt that government regulations, restrictions, personal motivations and economic challenges that usually accompany pandemics would change consumer priorities and consumption patterns, but the question is whether the changes were towards a more sustainable pattern or towards a less sustainable pattern. The behavior of consumers during epidemic outbreaks such as EBOLA, SARS, swine flu and dengue have been studied in the past (Balinska & Rizzo, 2009). In addition, many scholars have studied the impact of COVID-19 on general consumer behavior (such as Verma & Naveen, 2020; & Ulpiano, et. Al, 2020) but none has focused on how the virus affected responsible consumption patterns. Thus, it is still uncertain how conditions created by the COVID-19 affected responsible

consumption. We believe that findings about how the coronavirus affected sustainable consumption is a necessary input in designing the processes of increasing and sustaining positive shifts. To explore and address this gap, this study is designed to follow a qualitative research process to answer the following questions:

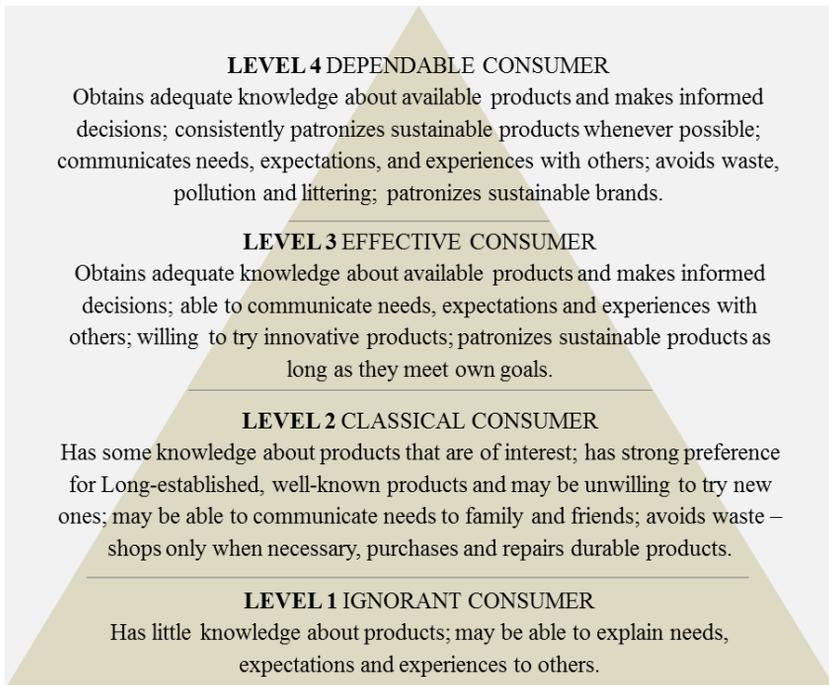
1. What are the perceived effects of COVID-19 lockdown on responsible product purchase among women in Enugu State?
1. What are the perceived effects of COVID-19 lockdown on responsible product usage among women in Enugu State?
2. What are the perceived effects of COVID-19 lockdown on responsible product disposal among women in Enugu State?

Responsible Consumption

Responsible consumption is gradually becoming non-optional if man and other beings will survive and be happy in this world. Responsible consumption is about consistently choosing, using and disposing of or transforming products in ways that are decent and fair to oneself, other beings and the environment (Kanu, 2020). Consistency is important in this context. In addition, rationality and decency are important components of discussions on responsible consumption as scholars, across decades, have described responsible consumption as rational and efficient use of resources (Balderjahn, 1988; Hobson, 2002; Marchand and Walker, 2008; Ulusoy, 2016). It entails consuming in ways that have less negative impact or more positive impact on the environment, society, the self and other beings (Ulusoy, 2016).

In light of the above, responsible consumers minimize waste, make informed purchase decisions, choose sustainable options

when possible and put pressure on businesses to adopt sustainable practices (United Nations, 2016). Accordingly, Nigeria's Federal Competition and Consumer Protection Commission (2020) as well as the Consumer Affairs Commission, Jamaica (2020) state that consumer responsibilities include: gathering information and facts about available products to make informed decisions; being alert to quality and safety of products; thinking independently; speaking out; being ethical; complaining when necessary; sharing product experiences with other consumers; and respecting the environment - reducing consumption, reusing products and recycling waste. Not all consumers are able to meet all the responsibilities as a result of individual consumer's background, awareness level, exposure and personal beliefs among others. Therefore, consumers are responsible to different degrees. The hierarchy of responsible consumption is shown in the model presented in figure 1.



Hierarchy of Responsible Consumption (Kanu, 2020)

The A 4-level hierarchy of responsible consumption was developed based on insights from 1) research in consumer behaviour, social psychology and environmental sustainability; 2) theories in psychology and marketing; and 3) the expectations of a responsible consumer based on United Nations guideline for consumer protection. At the top of the hierarchy is the level 4 – the dependable consumer. Level 4 reflects wholistic responsibility consumers at this level possess the responsible behaviours of consumers at the lower levels but in addition, they possess some earth and future minded behaviours that are driven by selflessness and self-control (Kanu, 2020).

A Focus on Environmental Sustainability

Responsible consumption is a broad concept that includes various kinds of consumption practices such as sustainable consumption, ethical consumption, socially responsible consumption, consumer citizenship and green consumption (Ulusoy, 2016). This study focuses on sustainable consumption – the kind of consumption that increases resource efficiency, preserves the environment and promotes sustainable development. Sustainable consumption has been comprehensively described by UNEP (2001) as a term that brings together a number of key issues such as meeting needs, enhancing quality of life, improving efficiency, minimising waste, taking a lifecycle perspective; taking into account the equity dimension; and integrating these component parts in the central question of how to provide the same or better services to meet the basic requirements of life and the aspiration for improvement for both current and future generations, while continually reducing environmental damage and the risk to human health. In summary, sustainable consumption entails having a basic understanding that while the needs and wants of man are unlimited, nature’s ability to satisfy them is limited. The United Nations estimates that if the global population reaches 9.6 billion by 2050, the equivalent of almost three planets could be required to provide the natural resources needed to sustain current lifestyles. Since there is only one planet earth, this estimate underscores the need for people to consume in ways that nature can cope with the demands of current and future generations.

Based on the foregoing, it is important for consumers to reduce their consumption of scarce resources and substitute their current products for ones that are ecologically less damaging (Fisk, 1973; Scott & Jobber, 2000). Adopting sustainable

consumption patterns require consumers to intentionally make informed choices of goods and services to consume and to dispose of whatever remains with due regard for the economic, social and environmental impacts of their acquisitions and use (United Nations Conference on Trade and Development (UNCTAD, 2019). Therefore, availability and price of sustainable products are determinants of consumer purchase decision-making (Vermeir & Verbeke, 2004; Kaufmann, Panni & Orphanidou, 2012; Brittany, 2020). Availability, in this context, refers to the level of ease or difficulty of obtaining or consuming a specific product (Kaufmann, Panni & Orphanidou, 2012). This means that consumers need to be offered and supported with more responsible options for consumption. In addition, transforming and using the products in sustainable ways require adequate product information and guidelines on how to use the products and dispose of waste sustainably. Several waste disposal methods have been identified in literature but not all of them are sustainable. For instance, recycling, incineration and composting have been identified as sustainable waste disposal methods while open dumping, burning, land filling are considered unsustainable (Seneca Resource Recovery, 2019; Nnamdi Ikpeze, 2014; Arogundade, 2019; Ogunmakinde, Sher & Maund, 2019). Reducing and reusing has been reported by the United States Environmental Protection Agency (EPA, 2020) as the most effective way to reduce waste, save natural resources, protect the environment and save money.

Methodology

This is a qualitative study that used the phenomenological research design. Phenomenology is focused on individuals' meaning making as the quintessential element of the human experience and thus, phenomenological inquiry holds the assumption that there is an essence or essences to shared

experience (Patton, 2002). The phenomenological research design is well-suited for studying affective, emotional, and often intense human experiences” (Merriam, 2009) and used when there is need to understand a social and psychological phenomenon from the perspectives of those involved (Moutstakas, 1994; Welman& Kruger, 1999). This design is appropriate for this study because the COVID-19 pandemic is an intense human experience, especially when viewed from the light of the fact the that for most people, COVID-19 is their first experience of a wide spread pandemic. The approach in this studyIt is used in this study used in this study to describe how the conditions created by COVID-19 pandemic affected sustainable consumption among consumers. Semi-structured interview was conducted to allow for elaborate exploration of issues (Britten, 1995). Interviews conducted in this study allowed the researcher to ask questions that are open enough to elicit the rich individual responses that are required in this kind of studies. The research was conducted in Enugu State, Nigeria. The state is located in the South-Eastern part of Nigeria and spreads its borders to the States of Kogi and Benue to the north, Ebonyi to the east, Abia and Imo to the south and Anambra to the west. Purposive sampling technique was used to select participants for the study. Women were selected for the study because in the South-east Nigeria, women are mainly responsible for purchasing and converting or transforming most products for family consumption. Recruitment of participants continued until data saturation was achieved resulting in total of 70 participants. Semi-structured interviews were conducted one-on-one, face-to-face and via telephone between July and August, 2021. A semi-structured interview guide was developed by the researcher, in association with five experts in psychology, business management and environmental sciences. The areas of questioning included: relevant background information

(education levels, occupation, age range) as well as how COVID-19 lockdown affected responsible product purchase, use and disposal among working class women in Enugu State

Each interview session lasted between 12-20 minutes. All interviews were recorded and written down with permission from the participants. The interview records were subsequently transcribed verbatim by the researcher. To protect participants' anonymity, participants were assigned code from C1-C70.

Data analysis was conducted using the explicitation process described by Hycner (1999). This model was chosen because it allows data to emerge organically, captures the description in terms of the interviewee and enables the explicitation to be conducted in a structured manner. The process which has five stages includes: Bracketing and phenomenal reduction, delineating units of meaning, clustering of units of meaning to form themes, summarizing each interview and where necessary, validating and modifying it: extracting general and unique themes from all interviews and summarizing. Following this process, the researcher listened to the interviews repeatedly and identified the keywords from the interviews, created themes by grouping related parts. The key issues, ideas and concepts raised by participants formed the major themes. In situations where any point made by a participant was unclear, the researcher returned to the participant to ensure that correct perspective was captured. A composite summary of the findings was presented and the themes were graphically represented.

Results

Participants (n=70) represented a range of ages and distribution across various sectors and educational qualifications.

Table 1: Participants Characteristics

Characteristics	Category	Number of participants (n=60)
Age (Years) (Mean \pm SD)	NA	40 \pm 9
Highest Educational Level	SSCE	6
	NCE/OND	3
	BSC/HND	36
	MSC	18
	PHD	7
Occupation	Self-employed	24
	Private sector employee	14
	Civil/Public servant	32

Thematic analysis was done for each research question and presented in tables in the following sections. To supplement the qualitative analysis, a summation of how many participants cited a particular view was included. As expected, most of the women cited multiple views which were reflected in the frequency column.

Table 2 *The impact of COVID-19 on sustainable products purchase*

Theme	Sub-theme	Theme Dimension	#Cited
Accessibility	Availability of sustainable products	Generally available	32
		More available in rural areas	15
		More available in informal/ street markets	21

		Available because I buy in bulk and store	7
		Fresh foods not offered online in Nigeria	2
	Ease of access to sustainable products	Easy to access	26
		Difficult to access due to reduced means of transportation	13
		Difficult to access as markets were shut down	19
		Difficult to access as retailers stayed home	18
		Difficult to access due to retailers' hoarding of goods	9
Price	Price increase	Prices increased due to the lockdown	16
		Prices of fresh food products reduced in rural areas because of limited means of transport	7
		Transportation challenges during the hiked prices	22
		Inflation increased prices of sustainable products	14

A Qualitative Investigation Of The Impacts Of Covid-19 Lockdown On Responsible Consumption Among Women In Enugu State, Nigeria

		Importation-related challenges increased prices	20
	Reactions to price change	Reduced the quantity of products purchased	41
		Purchased immediate needs	22
		Purchased only important products	29
		Switched over to less sustainable substitutes	14
		Avoided impulse buying	8
Payment	Method of Payment	Paid cash to local sellers	43
		Paid cash to avoid scam	5
		Used mainly online transfer	13
		Used both cash and online transfer	23
		Used online transfer due to bulk buying	6
		Used POS for convenience	13
	Type of payment	Instant payment	45
		Credit purchases	21
		On Installments	3

Accessibility of sustainable products during the COVID-19 lockdown

Most participants were of the view that sustainable products were available during the lockdown. However, some of the participants mentioned that sustainable products were available in rural areas during the lockdown than they were in the urban areas. Many of the participants reported that sustainable products were easy to access during the lockdown while many reported that it was difficult due to reduced means of transportation, closing of markets, retailers' compliance with the sit-at home-order and hoarding of goods. The main sustainable products that participants referred to in the interview were food, groceries, personal care and healthcare. Some of the participants stated thus:

I live in the rural area and since there was limited transportation to move the goods out, we had more than enough (C26)

Sustainable products were available but I had difficulty accessing them during the lockdown as the market close in my residence was completely shut down. C57

Some natural products were not available at the peak of the COVID-19 lockdown because the sellers were not around. (C8)

Restriction in transportation made it difficult to find some sustainable products during the lockdown as traders didn't have adequate means of transportation. (C22)

Sustainable products were scarce during the lockdown because some traders were hoarding the products so as to increase the prices. (C51)

Price

Most of the participants reported that there was increase in prices of sustainable products as a result of difficulty in

movement of goods, inflation and limited importation activities. However, those in rural areas had the food products in abundance because they couldn't easily move the goods out as usual. Some of the participants stated:

Prices of sustainable products were very high, especially food products. There was inflation during that period (C4)

The prices of goods went high because of limited means of moving them around but even now that the lockdown is over, prices are still high (60)

The participants shared how they were able to cope with the increase in prices of the products during the period. Most participants reported that they reduced the quantity of sustainable products purchased. Some said they bought only important goods. Some satisfied only immediate needs while others avoided impulse buying.

The hike in price made me purchase less quantity of products. (C31)

Whenever sustainable options were too high, I went for less sustainable ones. Those ones are usually cheaper than anything they tell you it's natural or organic, especially with spices and cosmetics (C34)

I had my shopping list and I stuck to it. I resisted anything that was not in my list that was calling for my attention in the market (C70)

Due reduced purchasing power, I only purchased immediate needs, not buying in bulk for storage (C38)

I had to buy only what my family and I really needed, that is, those things we cannot do without. (C58)

Few participants stated that they switched over to food products that were more sustainable because they were cheaper than the other alternatives.

When I couldn't afford my usual stock, I bough alternatives that were more sustainable. For example, instead of buying semolina

I bought maize flour, mixed it with cassava flour and it was a lot cheaper. (C11)

Because of the lockdown, I looked for substitutes that were cheaper and improvised. I have a garden in my house so I ate whatever vegetable I found in my garden (C45)

Payment

Most participants reported that they used mainly cash as their method of payment. They said that they bought what they needed from the local markets and paid cash since most traders in local markets accepted only cash. Some participants reported that they used both cash and transfer, while few mentioned that they made mainly online transfers due to bulk buying while some used Point of Sale (POS) machines for convenience during the lockdown. Some of their reasons included the fact that they bought essential products in bulk and that they bought from shopping malls during the lockdown hence, they could use POS. with respect to kind payment made, most of the participants reported that they made instant payment while many bought on credit. Only a few reported that they paid on installments.

Table 3: *The impact of Covid-19 lockdown on responsible product usage*

Theme	Sub-theme	Theme Dimension	#Cited
Conversion	Product Transformation	Learnt about healthier ways of cooking various dishes	36
		Motivated to cook in sustainable ways in order to avoid/manage weight gain	18

		Prepare healthier meals because there was adequate time	24
		Could not transform products in sustainable ways during the lockdown due to the stress of managing children	8
		Could not transform products in sustainable ways due to domestic challenges and violence	5
Utilization	Consumption Rate	Reduced usage because of hike in prices of goods	41
		Reduced consumption due to fear of weight gain	14
		Reduced consumption to reduce frequency of visiting open markets/shops due to fear of contracting coronavirus	8
		Reduced consumption due to	28

	reduced purchasing power	
	Reduced consumption due to feeling of the need to save as future was uncertain	4
	Increased usage of sustainable products due to idleness/staying home	18
	Used essential products normally as before the corona virus pandemic	4
Defective Products	Did not use defective products	47
	Used spoiled food products	8
	Used expired groceries	12
	Used expired cosmetics	12
	Consumed poorly prepared meals	9

Conversion

Most participants reported that they transformed food products in more sustainable ways as a result of the lockdown. Many of the participants learnt about healthier ways of cooking and they prepared healthier meals because they had a lot of time due to

the movement restrictions. Some of the participants also reported that they cooked in healthier ways because they were gaining weight due to idleness and needed to prevent weight gain or manage their weights.

I had enough time to read about and practice how to prepare meals in healthier ways (C62)

I Processed and packaged avocado pear into a spread for my family and then refrigerate it so we were using it for bread instead of margarine. (C4)

However, some participants reported that some consequences of staying at home did not allow them to transform goods in sustainable ways:

My children were not going to school; they were a handful for me so I made meals that were easy and fast like noodles and bread.

Frequent arguments and fight at home during the lockdown took my time and energy. ...food was not even one of the things on my mind let alone preparing it sustainably.

Utilization

Most participants reported that they reduced their usage of essential products as a result of the lockdown. Some reasons they gave for reducing usage of essential products were because of the hike in price, watching of weight, fear of contracting the virus if they go out to the markets, not knowing when the lockdown would end and the fact that they were not earning during the lockdown and cannot afford to spend the way they did before the lockdown.

I reduced my usage of essential products during the lockdown in order to avoid going to the market frequently and reduce possibility of contacting coronavirus. (C2)

I had to reduce my use of essential products during the lockdown because I was not earning. ... I didn't have enough money to purchase essential products so I had to reduce it. (C16)

I reduced food consumption because I was not doing anything at the peak of the COVID and I was conscious of my weight. (C59)

Conversely, some participants reported that they increased their usage of essential products especially food as a result of the lockdown. They stated that the fact they stayed at home made them consume more. Others reported that because all the members of their families were around during the lockdown, their general consumption increased.

I think we consumed more food during the lockdown because we were at home all through and did not spend money on any other thing except food. (C4)

Our usage of essential products increased during the lockdown because all the members of my family were at home, we ate more during the lockdown. (C58)

Only few participants admitted that their usage of essential products was just the way it is even before the lockdown. To them, the lockdown did not affect their usage of essential products. Few participants even reported that they used defective products as a result of the lockdown on several occasions.

During the lockdown, I used vegetables that were not fresh because. (C27)

During the lockdown, I consumed defective loaf of bread. I couldn't get the brand that I used to purchase before the lockdown. (C8)

Meanwhile, a few participants reported that they used defective products as a result of the lockdown on several occasions.

I bought a fake vegetable oil during the lock down and it increased my cholesterol level. (C10)

I used vegetables that were not fresh because of the lockdown because I couldn't go out to buy fresh ones. (C27)

I used my expired lotion because li wasn't available so I couldn't replace it (C66)

During the lockdown, members of family were practicing new ways of cooking different things, even the boys, so we allowed them and we were eating all sorts because we couldn't throw whatever they prepared away. (C8)

Table 3: *Impact of Covid-19 lockdown on responsible product disposal*

Theme	Sub-theme	Theme dimension	#Cited
Waste Reduction	Product Reuse	The lockdown did not cause me to reuse any product I was not reusing before	30
		Reused products due to economic hardships	28
		Reused products due to limited movement to buy	9
		Reused products because of the need to save	18
		Reused packages because there was adequate time to explore various ways of re-using them	3
		Reused packaging materials to create arts in order to occupy idle time	2

	Product Repair	Did not repair products because of the lockdown	31
		Amended clothes because of the lockdown	17
		Motorcycle was repaired to save fuel that would have been used in cars	4
		Television was repaired to get news since movement was restricted	7
		Household equipments were repaired to avoid buying new ones because of economic hardship	12
		Android phones were repaired to help keep busy during the lockdown	9
Waste Recycling	Recycling	did not recycle any product	51
		recycled Iron metals during the lockdown	2
		recycled old clothes	7
		recycled nylon bags	7
		Movement restrictions hindered my usual recycling activities	2
Waste Disposal	Disposal methods	Designated refuse dump	48
		Burning	16
		Compost	12

	Bush	14
Effect on choice of method	Conditions created by the lockdown did not affect my method of waste disposal	42
	More Composting during the lockdown	19
	More burning during the lockdown	11

Waste Reduction

Many participants reported that they did not reuse products because of the lockdown while more than half of the participants stated that did due to economic hardship, limited movement and availability of adequate time to figure out how products and packages can be reused. Some of the items reused include empty bottled water containers, empty beverage containers, wipes, nose masks, etc. some of the participants stated that if not for the lockdown, they would not have imagined that such products can be reused.

I washed and reused my baby's wipes during the lockdown. I didn't really like the idea but I was forced to do that in order to reduce expenses to the barest minimum. (C16)

The lockdown made me to stop buying bottled water and start boiling and filtering my drinking water so I reused bottled water containers for putting my water in the fridge. (C24)

Few participants reported that they had to repair things they were not intending to repair because of the lockdown. Some of things the participants repaired are motorcycles, Televisions, android phones and clothes. Participants gave different reasons for the repairs including availability of time to amend things,

economic challenges, need to save, needs to be current and need to reduce idleness and boredom.

...because of the lockdown, I had the time to mend my clothes which I wanted to dispose of. (C19)

Since my car consume more fuel than my motorcycle, I repaired my motor cycle during the lockdown to avoid using my car and then save money for fuel. (C58)

I repaired my television because of the covid-19 lockdown. I was at home most of the time so I repaired it so that I can see what was happening around the world. (C44)

Waste Recycling

Most of the participants reported that the conditions created by the lockdown did not make them recycle during the lockdown. Two participants stated that they recycled metals.

I recycled some iron metals I wanted to dispose of during the lockdown C26

I recycled some old clothes I wanted to dispose into new dresses for my daughter (C64)

Waste Disposal

Several waste disposal methods were used by participants during the lockdown. Some of them include refuse dump, burning, composting and throwing waste in the bush. Most participants explained that they disposed their waste in a refuse dump. Many participants reported that they burn waste, few said they use compost for waste that can decay and very few said they throw their waste in the bush. Some participants combined two methods. However, more than half of the participants reported that the lockdown did not affect their method of

disposing waste. Some of the participants however stated that did more burning than they used to do because movement restrictions and waste management agencies not functioning normally. Some said they composting more than usual because of movement restrictions and uncertainty about getting fertilizer.

I dispose of my waste in a refuse dump but that was how I was disposing waste even before the lockdown. (C8)

I threw some waste in my garden to serve as manure. I was not sure that there will be fertilizer that year. (C61)

Waste management agencies were not working well during the lockdown so we burnt our waste (C63)

I throw my waste in the bush. We don't have local government designated refuse dump in my area. That's how I have been disposing of waste even before the lockdown. (C62)

Discussion of Findings

Overall, eight dominant themes and fourteen sub-themes were identified. The study identified real-life experiences of consumers in Enugu State during the COVID-19 lockdown with respect to consumer behavior, responsible consumption and sustainable consumption and the findings add to existing knowledge in these areas. It was found that essential sustainable products were available during the lockdown. This made it easier for people to consume healthy products. Availability has been reported to be a factor that aids responsible consumption (Vermeir & Verbeke, 2004; Kaufmann, Panni & Orphanidou, 2012). in addition, price was a major determinant of participants' decision-making while purchasing during the lockdown. The increase in prices of sustainable products, to a great extent, encouraged responsible consumption. This is in contrast to the findings of Kaufmann, Panni & Orphanidou, 2012 which found that unfair pricing is a factor that affects responsible purchasing negatively. The COVID-19 lockdown gave consumers the

opportunity to purchase only the things that are really needed and considered as essential.

With respect to method of payment, most participants reported that they paid cash for goods during the lockdown. This is in contrast to the findings of a study conducted by Brittany (2020) in Canada. Brittany found that consumers were spending, with a dramatic shift towards e-commerce.

This study also found that some consumers purchased immediate needs, avoided impulse buying and switched over to more organic substitutes during the lockdown. Prices of consumers' preferred options increased during the lockdown and their availability was also limited. These were the reasons participants cited for making the positive changes, which have been previously reported as responsible consumption practices (Fisk, 1973; Scott & Jobber, 2000; Oslo Symposium, 1994). The finding that many consumers reduced their usage of essential products during the COVID-19 lockdown is regarded as a positive change since UNCTAD (2019); Fisk (1973) and Scott & Jobber (2000) reported that reducing consumption is a responsible consumption practice. Some reasons the participants gave for reducing usage of essential products were: increase in prices of goods, watching of weight for health and aesthetic reasons, fear of and contracting the virus if they consistently go out, not knowing when the lockdown would end and thus, the need to save money, the fact that they were not earning during the lockdown.

Increased usage of products and usage of defective products are considered unsustainable practices that may be detrimental to health. Increasing usage of products and using defective products does not impact on the self and others positively and so

are not considered responsible (Ulusoy, 2016). in addition, UNDP (2020) states that almost 2 billion people go hungry or are undernourished while 2 billion people are overweight or obese. These statistics underscore the need to for consumers to reduce consumption as much as possible.

Many participants reused and repaired products as a result of the lockdown with the main aim of saving money, while only a few recycled with the aim of reducing waste. Reusing, repairing and recycling are methods of reducing waste generation and have been considered as responsible consumption practices (United Nations, 2016). In fact, these methods have been reported as the most effective ways to reduce waste, save natural resources, protect the environment and save money (EPA, 2020; United Nations, 2016).

Waste disposal methods cited by participants included refuse dumping at designated places, burning, indiscriminate throwing of refuse into bushes and compost. Only the latter is a sustainable method of disposing waste as reported by different literatures on sustainable waste disposal. (Seneca Resource Recovery, 2019; NnamdiIkpeze, 2014; Ogunmakinde, Sher&Maund, 2019). Most refuse dumps used by participants are open dumps which are burnt after some time. Every type of waste is disposed of in an open dump which is usually located within a community or outside different homes in a community and then burnt after a number of days (Arogundade, 2019). Burning should be discouraged because of the negative impact it has on our health and environment. Most participants reported that the COVID-19 lockdown did not affect waste disposal methods used by them but a few stated that the lockdown made them compost and burn more because of restricted movement and ineffectiveness of waste management agencies at that time.

Conclusion and Recommendations

COVID-19 lockdown came with a lot of challenges. However, just like other difficult times, it also came with some positive consequences. Our study found that the lockdown aided responsible consumption as participants reported that they purchased less, reduced their consumption, found more sustainable ways of transforming products to use and preserve them. Consumers also reused products they would have disposed of, if not for the lockdown. In view of the findings, international organizations interested in sustainability as well as government agencies and NGOs should organize consumer education campaigns, especially in the area of waste disposal. The campaign should be inclusive and should capture attention of different kinds of audience. In addition, governments can use regulations to sustain and improve the positive changes that happened during the lockdown, we believe that since the changes consumers made and why they took the steps are now clear, it is easier for government to formulate regulations that are balanced and fair but have capacity to sustainable lifestyles/

References

- Ajide, K. B., Ibrahim, R. L., & Alimi, O. Y. (2020). Estimating the impacts of lockdown on Covid-19 cases in Nigeria. *Transportation Research Interdisciplinary Perspectives*, 7. doi:<https://doi.org/10.1016/j.trip.2020.100217>
- Amer, C. & Amer, S. (1977). *Dictionary of Business and Economics*. New York, NY: The Free Press
- Arogundade, S. (2020). *Waste disposal methods: Perspectives for Africa*. Retrieved from

<https://www.bioenergyconsult.com/waste-disposal-methods-africa/>

- Balderjahn, I. (1988). Personality variables and environmental attitudes as predictors of ecologically responsible consumption patterns. *Journal of Business Research*. 17(1), 51-56. doi: 10.1016/0148-2963(88)90022-7
- Brittany, T. (2020, April 27). How COVID-19 will change consumer behavior + purchase patterns. [Blog post]. Retrieved from <https://www.hkstrategies.com/how-covid-19-will-change-consumer-behavior-purchase-patterns/>
- Britten N. (1995). Qualitative interviews in medical research. *Bmj*, 311(6999), 251-253.
- Carroll, C. D. (2021). *Consumption*. *Encyclopedia Britannica*. Retrieved from <https://www.britannica.com/topic/consumption>
- Carroll, D. (2020) in *Encyclopedia Britannica*. *Consumption*. Retrieved from <https://www.britannica.com/topic/consumption/Consumption-and-the-business-cycle>
- Caruana, R. (2007). A sociological perspective of consumption morality. *Journal of Consumer Behaviour*, 6, 287-304.
- Consumer Affairs Commission, Jamaica (2020). *Consumer rights & responsibilities*. Retrieved from <https://www.consumeraffairsjamaica.gov.jm/portal/index.php/consumer-laws/106-consumer-rights-responsibilities>
- Corporate Finance Institute. (2020). *What is consumption?* Retrieved from <https://corporatefinanceinstitute.com/resources/knowledge/economics/consumption/>
- Doogan, C., Buntine, W., Linger, H., & Brunt, S. (2020). Public perceptions and attitudes towards covid-19 non-

- pharmaceutical interventions across six countries: A topic modeling analysis of twitter data. *Journal of Medical Internet Research*.22(9).doi: 10.2196/21419
- Federal Competition and Consumer Protection Commission.(2020). *Consumer responsibilities*. Retrieved from <http://fccpc.gov.ng/consumers?responsibilities/>
- Fisk, G. (1973). Criteria for a theory of responsible consumption. *Journal of Marketing*, 37 24-31
- Flaxman, S., Mishra, S., Gandy, A. et al. (2020). Estimating the effects of non-pharmaceutical interventions on COVID-19 in Europe. *Nature*.584, 257-261 doi: <https://doi.org/10.1038/s41586-020-2405-7>
- Follows, S. B. & Jobber, D. (2000). Environmentally responsible purchase behaviour: A test of a consumer model. *European Journal of Marketing*.34(5/6), 723-746.
- Gonzalez, B.L. (2019). *Why responsible consumption is everyone's business*. Retrieved from <https://www.weforum.org/agenda/2019/09/why-responsible-consumption-is-everyone-s-business/>
- Grossoehme, D. H. (2014). Research Methodology Overview of qualitative research. *Journal Health Care Chaplain*.20(3) 109-22.doi: 10.1080/08854726.2014.925660.
- Hair, J. F., Wolfinbarger, M. F., Ortinau, D. J., Bush, R.P. (2010). *Essentials of marketing research*. Irwin: McGraw-Hill.
- Hill, A. (2003). *What is Consumption in Economics? Definition & Theory*. Retrieved from <https://study.com/academy/lesson/what-is-consumption-in-economics-definition-theory.html>
- Hobson, K. (2002). Competing discourses of sustainable consumption: Does the 'rationalization of lifestyles' make sense? *Environmental Politics*, 11(2), 95-120

- Holloway, I. (1997). Basic concepts for qualitative research. Oxford: Blackwell Science.
- Homburg, A., & Matthies, E. (2010). Sustainable consumption - introduction to the main topic. *Environmental Psychology*. 14(2), 4-8.
- Hycner, R. H. (1999). Some guidelines for the phenomenological analysis of interview data. In A. Bryman & R.G. Burgess (Eds.), *Qualitative research* (3rd ed., pp. 143-164). London: Sage.
- Ikpeze, N. (2014). Safe disposal of municipal wastes in Nigeria: Perspectives on a rights based approach. *Journal of Sustainable Development Law and Policy*. 3(1), 72-86. Retrieved from https://www.researchgate.net/publication/286453717_SAFE_DISPOSAL_OF_MUNICIPAL_WASTES_IN_NIGERIA_PERSPECTIVES_ON_A_RIGHTS_BASED_APPROACH
- Inter-governmental Panel on Climate Change (IPCC). (2018). Climate change and land: An IPCC special report on climate change, desertification, land degradation, sustainable land management, food security and greenhouse gas fluxes in terrestrial ecosystems. Retrieved from <https://www.ipcc.ch/srccl/>
- Jay, V. (n.d.) Retrieved from <https://www.economiecirculaire.org/static/h/responsible-consumption.html>
- Kanu, C. C. (2020). Promoting Responsible Consumption for Sustainable Family Survival in the 21st Century: Creativity, Innovations and Research Issues. *Journal of Home Economics Research*
- Kaufmann, H. R., Panni, M. F., & Orphanidou, Y. (2012). Factors affecting consumers' green purchasing behavior: An integrated conceptual framework. *Amfiteatru Economic*

- Journal*.14(31), 50-69. doi:
<http://hdl.handle.net/10419/168746>.
- Marchand, A. & Walker, S. (2008). Product development and responsible consumption: Designing alternatives for sustainable lifestyles. *Journal of Cleaner Production*. 16(11), 1163-1169.
- Maypole, J., & Davies, T. G. (2001). Students' perceptions of constructivist learning in a community college American history II. *Community College Review*, 29(2), 54-80.
- Medical Research Council (2008). Framework for complex interventions. London: MRC
- Miles, M. B., & Huberman, A. M. (1984). Qualitative data analysis, a sourcebook of new methods. Newbury Park, CA: Sage.
- Mostafa, M.M. (2007). Gender differences in Egyptian consumer's green purchase behavior: The effects of environmental knowledge, concern and attitude. *International Journal of Consumer Studies*.31(3), 220-229. Retrieved from <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1470-6431.2006.00523.x>
- Moustakas, C. (1994). Phenomenological research methods. Thousand Oaks, CA: Sage.
- Ogunmakinde, O. E., Sher, W., & Maund, K. (2019). An assessment of material waste disposal methods in the Nigerian construction industry. *Recycling*4(13), doi: 10.3390/recycling4010013
- Organisation for Economic Co-operation and Development (OECD, 2008). *Promoting Sustainable Consumption: Good practices in OECD countries*. Retrieved from <http://www.oecd.org/greengrowth/40317373.pdf>
- Oslo Symposium on Sustainable Consumption.(1994). Oslo Roundtable on Sustainable Production and Consumption, Norwegian Ministry of Environment.

- Royal Pharmaceutical Society. (2020). *Everything you should know about the coronavirus outbreak*.<https://www.pharmaceutical-journal.com/news-and-analysis/features/everything-you-should-know-about-the-coronavirus-outbreak/20207629.article>
- Seneca Resource Recovery. (2019). *What are the most sustainable waste disposal methods?* Retrieved from <https://www.careysplc.co.uk/seneca-resource-recovery/news/what-are-the-most-sustainable-waste-disposal-methods>
- Shicara, H. (2016). *What Is Consumer Education? - Definition & Importance*. Retrieved from <https://study.com/academy/lesson/what-is-consumer-education-definition-importance-quiz.html>.
- Smith, T. (2014). *The Meaning of Consumption*. In H. Kaufmann, & M. Panni (Eds.), *Handbook of Research on Consumerism in Business and Marketing: Concepts and Practices* (pp. 202-224). IGI Global. <http://doi:10.4018/978-1-4666-5880-6.ch010>
- The Nigeria Centre for Disease Control (NCDC, 2020). *COVID-19 Nigeria*. Retrieved from <https://covid19.ncdc.gov.ng/>
- J. Vazquez-Martínez, Ph.D.a, Javier Morales-Medianob, Antonio L. Leal-Rodríguez, Ph.D (2020), alhaji p he impact of the COVID-19 crisis on consumer purchasing motivationand behaviorUlpiano**
- Ulusoy, E. (2016). *Experiential responsible consumption*. *Journal of Business Research*, 69(1), 284-297.
- United Nations (2020). *Responsible consumption and production: Why it matters*. Retrieved from <https://www.un.org/sustainabledevelopment/wp-content/uploads/2016/08/12.pdf>

- United Nations Conference on Trade and Development.(2019).*The contribution of consumer protection to sustainable consumption*. Retrieved from https://unctad.org/meetings/en/SessionalDocuments/cicplpd17_en.pdf
- United Nations Economic Commission for Africa (ECA, 2020).*COVID-19 lockdown exit strategies for Africa*. Retrieved from https://www.uneca.org/sites/default/files/PublicationFiles/ecarppt_covidexitstrategis_eng_9may.pdf
- United States Environmental Protection Agency (EPA, 2020). *Managing and reducing wastes: A guide for commercial buildings*. Retrieved from <https://www.epa.gov/smm/managing-and-reducing-wastes-guide-commercial-buildings>
- Vermeir, I., & Verbeke, W. (2006). Sustainable food consumption: Exploring the consumer attitude-behaviour gap. *Journal of Agricultural and Environmental Ethics*.19(2), 169–194. Retrieved from https://www.researchgate.net/publication/226354722_Sustainable_Food_Consumption_Exploring_the_Consumer_Attitude_-_Behavioral_Intention_Gap
- Welman, J. C., & Kruger, S. J. (1999).*Research methodology for the business and administrative sciences*. Johannesburg, South Africa: International Thompson.
- World Health Organization (WHO).(2020). *Coronavirus disease (COVID-19) pandemic*.Retrieved from <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-coronaviruses#:~:text=symptoms>
- World Health Organization (WHO).(2020). *Coronavirus disease (COVID-19) pandemic*.Retrieved from <https://www.who.int/emergencies/diseases/novel->

coronavirus-2019/question-and-answers-hub/q-a-detail/q-a-how-is-covid-19-transmitted?gclid=CjwKCAjwzvX7BRAeEiwAsXExo7VR8I5NkgPUMlaQsJhfxqC6C2P-vFYEefSGR5CICnrK1qX8X9KAKBoCn44QAvD_BwE

World Health Organization (WHO). (2020). *WHO Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020*. Retrieved from <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19--11-march-2020>

World Meteorological Organization.(2020). WMO statement on the state of the global climate in 2019. Retrieved from <https://reliefweb.int/sites/reliefweb.int/files/resources/WMO%20Statement%20on%20the%20State%20of%20the%20Global%20Climate%20in%202019.pdf>

World bank (2021) final consumption expenditure (% of GDP). Retrieved from <https://data.worldbank.org/indicator/NE.CON.TOTL.ZS?end=2020&locations=NG&start=1987>

UNEP 2001. *Consumption Opportunities: Strategies for change*, United Nations Environment Programme, Paris.

Verma, M and Naveen, B. R. (2021) COVID-19 Impact on Buying Behaviour. *VIKALPA The Journal for Decision Makers* 46(1) 27–40. DOI: 10.1177/02560909211018885 journals.sagepub.com/home/vik

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Patton, M.Q. (2002). *Qualitative research & evaluation methods* (3rd ed.). Thousand Oaks, CA: Sage.



A Publication of
Association for the
Promotion of African Studies