



Some Indigenous Solutions to African Environmental Problems: An Appraisal

Leonard Nwoye

PhD Candidate, Department of Philosophy, University of Calabar, Cross River State, Nigeria.

E-Mail: leonard4lifeus@yahoo.com.

Abstract: The paper, *Some Indigenous Solutions to African Environmental Problems: An Appraisal*, is written to examine the relevance of African Environmental Philosophies to addressing African environmental problems. African environmental problems include: water pollution, air pollution, land pollution, climate change, flood and many more. Researchers have shown that these problems are caused by phenomena like coal mining, nuclear waste, deforestation, overfishing, wars, etc. It is a known fact that attempts have been made over the years to resolve these problems, with pockets of successes, yet more needs to be done. Nigeria's Niger Delta Development Commission, Kenya's Bio-safety Act 2009, The National Environment Policy of Ghana, Oil Pipeline Act 2004, Nuclear Safety and Radiation Protection Act 2004 are a good example of such attempts with pockets of successes and challenges. This work uses the methods of rational speculation and critical analysis to examine aboriginal approaches to resolving African environmental challenges as recorded in Mark Omorovie Ikeke's Philosophical Consciences, Caroline N. Mbonu's Ecospiritualism, Thaddeus Metz's Model Relationalism, and Chimakonam Jonathan Okeke's Ohanifism. This work charged African environmental policymakers, Lecturers, and Students with the responsibility to understand and apply the theoretical foundation for sustainable living as recorded in the above philosophies. This is the time when Africans must use indigenous African methods and principles to proffer solutions to African environmental problems.

Keywords: Environment, Indigenous Solutions, Taboo, Totem.

INTRODUCTION

This paper identifies several African environmental problems which include: extreme temperature, air pollution, land pollution, flooding, and loss of soil fertility, low agricultural productions (both crops and livestock), biodiversity, and risk of water stress and prevalence of various diseases with the aim to identify indigenous solutions to them. In recent decades, African environmental problems have become globalised in terms of their existence and impacts, as well as the ethical implications and socioeconomic forces that generate them. African environmental problems became more common and apparent with industrialisation and urbanisation. In Nigeria for example, air and water pollution from factories and dense urban living conditions attracted growing attention throughout the last few decades, and by the 1980s became recognised as significant problems. Concern over air and water pollution rapidly spread to a range of other conditions- soil erosion, pesticide contamination, deforestation, declining animal populations and species. There is the issue of nuclear bombs risk [1]. Indeed attempts have been made over the years to resolve these problems, with pockets of successes. Nigeria's Niger Delta Development Commission, Kenya's Biosafety Act 2009, The National Environment Policy of Ghana, Oil Pipeline Act 2004, Nuclear Safety, Land Use Act, Sea Fisheries Act, Cap 07, The National Oil Spill Detection and Response Agency Act 2005 (NOSDRA), Harmful Waste (Special Criminal Provision) Act and Radiation Protection Act 2004 are good examples of such attempts, yet more needs to be done. We need to get our theoretical framework right before any meaningful contribution can be made in addressing African environmental problems. This is what this paper tends to achieve.

African continent has come to a point where we must seek the solution to our environmental problems from African environmental philosophies. Researchers have shown that nature blessed Africa and her countries with traditional philosophies, principles, and methods to address her environmental challenges. This work charge African environmental policymakers, Lecturers and Students with the responsibility to understand and apply the theoretical foundation for sustainable living, and the need for Philosophical Conscienceism, Ecospiritualism, African Modal Relationalism, and Ohanifism as powerful scholastic tools and social foundations in proffering indigenous solutions to African environmental problems. There is a time when Africans must use indigenous African methods and principles to proffer solutions to African environmental problems. That time is now!

WHAT IS THE ENVIRONMENT?

The environment is that which surrounds us. Our environment consists of anything outside us. The environment of man consists of anything outside man. Anything outside a particular organism becomes the environment for that organism. The environment includes the land, air, water and all the physical structure around us [2]. The biosphere environment consists of all living organisms together with their physical surroundings. It is the life sphere, which comprises of various gases, minerals, pure air, water vapour, tiny particles, cloud, plants, and animals, all together forming a giving self-regulative and self-sustaining ecological system (ecosystem) balance.

The hydrosphere environment refers to the water sphere. This sphere includes the oceans, rivers, streams, swamps, seas, lakes, groundwater, the glaciers, and the atmospheric water vapour. It occupies over 70% of the entire earth surface [2].

Another sphere of the environment is the human cosmic environment. This sphere is referred to as the entire universe and its contents.

WHAT IS ENVIRONMENTAL PHILOSOPHY?

To avoid the difficulties associated with defining philosophy, many scholars resort to tracing the etymological meaning of this keyword. Two Greek words are conjoined to give us the etymological meaning of Philosophy. These two Greek words are: *Philo* means **love** and *Sophia*, which means **wisdom**, which when literally translated into English words, means: **Love of Wisdom** [3]. Philosophers love wisdom. They want to know more about their environment and personality. They ask questions and seek answers about everything around them. With the above explanation the meaning of Philosophy suggest a field or an enterprise which ask fundamental questions about reality and attempt to answer them.

Environmental Philosophy is thus the application of philosophical tools to the issues of the environment. Philosophy of environment also known as ecological philosophy or ecophilosophy is the application of the wisdom inherent in philosophy in a bid to understand the relationship between man and the rest of the nature [4].

MAJOR BRANCHES OF ENVIRONMENTAL PHILOSOPHY

Ecological Theology: This aspect of Environmental philosophy advocates for a philosophical study of the environment that puts into consideration the relationship that exists between human religions and spiritual worldviews and environmental problems [4]. This branch of environmental philosophy embodies arguments for and against the Christian axiom that nature has no reason to exist except to serve man.

Environmental Aesthetics: This branch of environmental philosophy calls for an aesthetical understanding of the environment as a study. Environmental aesthetics seeks to understand nature as nature. The outline of environmental aesthetics listed by Ronald Hepburn in his article "Contemporary Aesthetics and Neglect of Natural Beauty" shows that he frowned at the pretension of man in thinking that aesthetics can ever be what it should be without giving a serious place to the beauty inherent in nature [5]. About two schools have been identified in environmental aesthetics. They are: Cognitivism (the view that aesthetic appreciation of nature or the environment is truly possible when the observer or admirer does it with the prior knowledge of natural science like geology, biology, zoology etc.) and Non-Cognitivism (the view that an environmental philosopher should immerse himself in the natural environment and drastically reduces the distance and dichotomy between him, the appreciator and nature.)

Environmental Ethics: Environmental Ethics can be defined as a systematic search for moral values and ethical principles in human relations with the natural world" [6]. Environmental ethics is an area of study that investigates the subject of which ethical norms are suitable for governing human relations with the natural environment [1].

APPROACHES TO ENVIRONMENTAL ETHICS

Researchers have shown that in a bid to understanding the human value and how men ought to relate with nature or the environment, philosophers make use of one or more of these approaches: **Anthropocentric Environmental Ethics** (based on the assumption that all other parts of nature exists to serve the good of man) [7] and **Naturalistic Ethics** (environmental ethics on wise use, sustainability,

and population control that will keep the earth habitable for future generations of all creatures). Other approaches to environmental ethics include: **Sentientism** (based on advocacy for the right of sentient beings like animals), **Biocentrism** (based on the assumption that life should be the superintending value in ethical consideration), **Ecologism** (based on the assumption that the earth is one big family of interdependent beings, some of which are biotic and abiotic).

WHAT IS AFRICAN ENVIRONMENTAL PROBLEMS?

African environmental problems include air pollution, water pollution, soil pollution and many more. Air pollution is the addition of a harmful substance to the atmosphere resulting in damage to the African environment, human health, and quality of life [8]. According to John Heart, Air pollution occurs inside homes, schools, and office, etc (Air pollution Encarta). In other words, air pollution is not restricted to some section of our lives. This kind of pollution is changing African's atmosphere and the world at large. When the air is polluted, the air we breathe becomes unclean. The World Health Organization (WHO, 1990) defined air pollution as "limited to situations in which the outer ambient atmosphere contains materials in concentrations which are harmful to man and his environment" [9]. In Nigeria, the most populous Black Country many rural towns that had in the past enjoyed clean and fresh air is currently experiencing air pollution problem.

Fossil fuel is a natural fuel such as coal or gas, formed in the geological past from the remains of living organisms. It is a fuel formed by natural processes such as anaerobic decomposition of buried dead organism, containing energy originating in ancient photosynthesis. The sulfur dioxide emitted from the combustion of fossil fuels like coal, petroleum and other factory combustibles are one of the major causes of air pollution. Other channels from which we pollute the air include trucks, jeeps, cars, trains, and airplanes. They emit immense amount of pollution. Agricultural activities: The use of insecticides, pesticides, and fertilizers in agricultural activities has grown quite a lot. They emit harmful chemicals into the air and causes air pollution. Exhaust from factories and industries: Research over the years have proved that manufacturing industries release large amount of carbon monoxide, hydrocarbons and chemicals into the air thereby depleting the quality of air.

Every human being breathes air. The effect of air pollution is a serious problem. It causes several respiratory and heart conditions along with cancer and other threats to the human body.

Acid Rain: Research has shown that harmful gases like nitrogen oxides and sulfur oxides are often released into the atmosphere during the burning of fossil fuels. When it rains, the water droplets combine with these air pollutants and become acidic and fall in the form of acid rain. Effect on wildlife: Just like humans, animals also face some devastating effects of air pollution. In addition, toxic chemicals present in the air can cause wildlife species immigration. Toxic chemicals present in the air can kill animals. It can force wildlife species to move to a new place and change their habitat.

The pollution of rivers and streams with chemical contaminants has become one of the most critical environmental problems in Africa. Water pollution is the contamination of streams, lakes, underground water, bays or oceans by substances harmful to living things [10]. Water pollution can kill a large number of fish, birds, and other animals, in some cases killing all members of a species in an affected area. Polluted rivers, streams, lakes and coastal waters look unpleasant to smell and swim in. seafood harvested from polluted waters may be unsafe to eat. It is a known fact that people who ingest polluted water can become ill, and, with prolonged exposure, may develop cancers or bear children with birth defects. In African petroleum products get into water mainly by means of accidental spills from ship, tanker trucks, pipelines, and leaky underground storage tanks. These products pollute rivers and streams, making them poisonous, unclean and unhealthy. Another water pollutant in Africa is from pasture, feedlots, ranches, agricultural chemicals and sediments from erosion.

Land is the surface of the earth that is not sea. Like the sea and ocean, the land is of great importance to humanity. It is used for planting crops and other agricultural activities. The land is endowed with a host of natural recourse by nature. These natural resources include: Crude oil, Gold, Diamond, Brines, Clay, etc. the land serves as important life support for the man and his existence. Researchers have shown that man's continues to use and exploration of the land and its resources has caused harm to the earth's solid surface. Land pollution is the addition of harmful elements to the land resulting in damage to the environment. In Africa, land pollution occurs on land surface and underground. When the land is polluted, it becomes unclean. This incident can result in loss of soil fertility. Land pollution endangers

crops, animals and human life. Land pollution is caused by constant human activities like deforestation, use of toxic chemicals, pesticides and chemical fertilizer, etc.

Another Africa's environmental problem is Noise pollution. According to the Oxford Advanced Learner's Dictionary, sound is something that you can hear. It is a "... continuous rapid movements, that travel through air or water and can be heard when they reach a person's or animal's ear" [11]. A sound, especially when it is loud, unpleasant or disturbing is called noise. Noise pollution can be defined as the production of unpleasant disturbing sound to the ear. This sound sometimes can cause sleep loss, high blood pressure or hearing loss. Noise pollution comes from machines, trucks, and aircraft, etc. Musical instrument and system when played at very high volume can be noisy. Guns firecrackers and some toys are good sources of noise pollution. Oceans are increasingly noisy. There are good numbers of health problems caused by noise pollution. One of such problems is hearing loss. Noise can damage the delicate cells in the cochlea, the structure in the inner ear that converts sound waves into auditory nerve signal. Noise pollution can also cause mental imbalance.

AFRICAN ENVIRONMENTAL PHILOSOPHIES AS SOLUTIONS FOR AFRICAN ENVIRONMENTAL PROBLEMS

Philosophical Consciences

Mark Omorovie Ikeke has argued for an eradication of environmental predicaments in Africa through the teaching of philosophical consciencism [12]. According to this school of thought, the eradication of the environmental predicament in Africa requires that people cannot conscientiously apply themselves to viable and healthy practices that will protect the environment unless they are convinced of those practices. The first point of call is the human conscience.

According to King James Version of the Holy Bible, "...how shall they hear without a preacher?" (Romans 10:14b). In African environmental philosophy the preachers are the philosophers. It behooves philosophy as a field that is totally concerned with the search for knowledge in a critical manner to engage in that work of conscientisation. What this school of African environmental philosophy is talking about, is that environmental sustainability requires right conscience. To combat African environmental challenges successfully we need a systematic and progressive indigenous framework. This paper insists that the time has come when 21st century Africans should acquire the right mental status which will equip them with pure and clean conscience to make moral choices about their environment. Africans have the right philosophical tools and systems to achieve this aim. The human conscience must be liberated through education to know that "...whatever has head or tail end (ihe obula nwere si na odu) is not only a missing link but serves a missing link all at the same time, in the sense of Ibuanyidanda (complementary)" [13]. The implication of Asouzu's claim is that when I pay less attention to oil spill and it destroys a farm land, I am in turn destroying myself. When I violate nuclear safety and radiation protection Act, I am in turn destroying myself. When I destroy our oil pipelines for person gain, I am in turn destroying myself too. We should learn and rise up to defend our continent.

Ecospiritualism

Caroline N. Mbonu, and other scholars have made a case for religion and spirituality as major factors in environmental sustainability [13]. Actors in this school of thought argued that the need for spirituality in this sense would make the human-environmental balance possible. There is need to inject religious faith into the environment debate. Both African religious tradition and the Western Bible have concrete teachings on environmental cultivation and preservation. In the Christian doctrine a good example is the Bible's Genesis Chapter 2:15. It says "And the LORD GOD took the man and put him into the Garden of Eden to dress it and to keep it".

There is need to inject religious faith into the African environmental debate. Many Africans are religious persons [14]. They see the realities of life through a religious *eyes glass*. This is the reason one of the best approaches to pass on environmental information is through religious means. This means and method works. It has worked over the years and can work today. Deforestation is discouraged through religious teachings. Certain forest was classified as evil forest in traditional Africa. By classifying a forest as evil, people were not allowed to carry out farming activities there. This means has helped promote the preservation of our forest till date. In African religious faith, a human person cannot defecate or urinate around the stream (source of clean water) because of the fear of punishment from the

gods. What this school of African environmental philosophy is talking about is that environmental sustainability in African societies requires ecospiritualism mindset. Together we can save and create a better African environment for our children and generation unborn

African Modal Relationalism

According to Thaddeus Metz certain values salient in the African tradition promise to ground animal rights [15]. Metz worked beyond other arguments, like Kai Horsthemke's Animals and African Ethics to establish and provide a plausible ground for the African environment. He pointed out three ideas about morality in African tradition to support his claims and arguments. They are the idea of hierarchy, relationality and community.

In the concept of 'hierarchy' he argued that one idea recurrent amongst indigenous African people has been that entities in the world are ordered in a graded way or form of a 'chain of being' [15]. At the apex is God, the source of everything. After God are the ancestors, wise founders of clan. Next come human beings, animals, plants and rocks, in descending order. According to Metz, this ranking does not imply that human beings have a greater moral importance than animals. This worldview forbids stomping on a caterpillar for the mere fun of it and more generally to prescribe a sense of reverence for all that exists. It is embedded in the rationality of the native Africans to treat each entity with respect.

African traditional thought on environmental morality is the concept of communitarianism or communalism. In his African Modal Relationalism Metz argued that environment sustainability in African religion requires a person entering into communion with others (relationalism) [15]. This communion includes all parts of nature. There are some animals capable of being objects of communal relationship with man, such as cats, mice and dogs. They do have moral status. African Modal Relationalism account of moral environmentalism and argues that we enjoy a sense of togetherness with being capable of communal relationship.

This paper opines that man is not more important than animals. Animals are not more important than plants. And plants are not more important than rocks. The new theoretical framework for African environmental policy makers and all relevant agencies is to make laws that do not place any aspect of reality above the other. It does not stop at the lawmaking process, it transcends to implementation stage. If we impact ourselves with the right consciences as propounded by Ikeke, then we will not find it difficult to implement these environmental laws. The truth is Africa can reduce and overcome her environmental problems when environmental policies are centred on African Modal Relationalism.

Ohanife

Jonathan O. Chimakonam's **Ohanife** is another African environmental philosophy articulated for a new account of the ecosystem, using Africa notion of 'relationship' found in African traditional culture, embedded in the Igbo notion of Ezi n' Ulo (emblem of a relationship of interdependent and complementarity) [16].

Chimakonam divided the entities in the ecosystem into two broad components, namely *Oha*, or the humans, and *Ife*, or the non-humans. He further divided *Ife* into two parts that is *Ife di ndu*, or the living things and *Ife adighi ndu*, or the non-living things [16]. Philosophy Ohanife advocates and argues that the difference in the ontological structure of *Oha* and *Ife* does not suggest a superior-inferior dichotomy rather it shows the difference in architectural spheres (ulosphere and ilosphere). The relationship that exists between the ontological structure of *Oha* and *Ife* is indeed that of mutual and balanced complementation rather than a superior-inferior divide.

Ohanife theory shows that in the ecosystem, everything, whether human or non-human, stands equal to others and represent a necessary link in the network of existents. As far as Chimakonam is concerned, the rupture of this link is what causes environmental in-sustainability in Africa and the world at large. A substantive approach to African environment problems is the application of Ohanife theory to African environmental problems.

This paper opines that everything in the environment is inter-connected in one way or the other. We live in a network of existence. We should develop and implement our environmental laws with Ohanife mindset and theoretical framework. This paper advocates that henceforth Africa environmental policy formulation should be done from a more integrative perspective where actors and policy makers will have a personal conviction of the importance and effectiveness of African philosophies. Africans deserve better. African countries by virtue of their endowment should have overgrown unnecessary

waste of billions of Dollars to oil spillage and its related issues, climate change even when we are not releasing industrial waste compared to developed countries. We should rise up for the challenges ahead. This is our moral duty as a people and we shall perform it with all diligence.

CONCLUSION

In conclusion, the position of this paper is that African policymakers have ignored indigenous environmental ethics. The best way to use the planet's resources ethically remains apparent in many cultural and sociological systems of traditional Africa. The best way to understand behaviour is by studying the reciprocal relationship that exists between individuals and their environment [17]. The local people in African societies have developed integrative knowledge of the natural environment, and preserve biodiversity resources, which they have nurtured and developed since time immemorial. Nobody understands the African environmental issues more than Africans.

This work charge African environmental policymakers, Lecturers and Students with the responsibility to understand and apply the theoretical foundation for sustainable living, and the need to use Philosophical Conscienceism, Ecospiritualism, African Modal Relationalism and Ohanifism as powerful scholastic tools and social foundations in proffering indigenous solutions to African environmental problems. Like Kant pointed out, this duty before African scholars must be done in the spirit of ethical absolutism [18]. The process of environmental policy formulation must not take into account personal gain or differences or extenuating circumstances. There is a time when Africans must use indigenous African methods and principles to proffer solutions to African environmental problems. That time is now!

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