

Traditional African Ethical Perspective on Climate Change

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Abstract

This paper argues that a major contributory factor to climate change is human activities, and an effective solution requires strong philosophic bedrock, which we propose should be hinged on the tenets of traditional African ethical environmental conservation and principles of deep ecology. Our research questions are what is the spirit of African countries' public policies and mitigation strategies for climate change? What is the philosophy of African scientific and environmental exploration, as well as its industrial revivalism? Is it apathetic material reductionism of the western industrial revolution or an empathetic environmentalism? Our theoretical solution explores the traditional African ethical recognition of the equal intrinsic worth of all biota regardless of human wants or needs, as well as the interconnectedness of human beings with the environment in all its plenitude. The paper thematically harnesses the close link between the traditional African ethical environmental concern with Aldo Leopold "land ethic" as an effective and sustainable solution to global warming.

Key words: Africa; Ethics; Climate Change; Deep Ecology; Environment; Eco-metaphor

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INTRODUCTION

The current environmental challenges confronting most African countries ranging from desertification, flooding/gully erosion, water pollution to carbon emissions from cars and machineries used in industries and homes have brought to their door step the reality of climate change. Furthermore, recent adverse climate crisis experienced in other parts of the globe like the extreme heat wave of western Russia in 2010 and Pakistan massive flood of 2010 (Lester Brown, 2011, p.1), massive flooding in Chennai in India in 2015 and the devastating typhoon Haiyan of 2013, which a scientist described "as the strongest storm ever recorded on landfall which killed 6000 people and rendered about 11 million people homeless in the Philippines" (Casey, 2014, p.12) are concrete effects of global warming.

Christiana Figueres, the climate Chief whip of the United Nations, describes the Haiyan typhoon as the "sobering reality of climate change" (Figueres, 2013). While, Casey Rentmeester (ibid) emphasises on the "reluctance of some scientists to directly attribute typhoon Haiyan to anthropogenic climate change". The Climate Vulnerability Monitor of 2012 listed the Asian-Pacific as "severely vulnerable" to climate events. A climate change-induced planet, Casey further states, is "a more severe disaster, which is especially devastating in vulnerable countries, especially the least developed ones" (12). Scientists have identified the aging earth and more impactful anthropogenic activities as two major causes of this phenomenon. In fact, the current environmental damage caused by human activities which increased the frequency of climate-related weather events prove that the consequences of human-induced climate change are already here with us.

Bill McKibben (2010, p.xiii) describes the devastating effect of climate change when he states that "global warming is no longer a philosophical threat, no longer a future threat, no longer a threat at all. It's our reality.

We've changed the planet, changed it in large and fundamental ways." The "new planet" which McKibben calls the "Earth" is one that is simply harsher than the one that we have taken for granted in the 10,000 years of human civilisation. With additional energy in the climate system that comes with climate change, we have more frequent, and more extreme weather events, an increase in airborne disease, an increase in heat waves and droughts in certain regions, and an increase in floods among others, greater stress on water sources, and an increase in environmental refugees as the sea level rises and low-lying coastal regions are submerged (Casey, 2014, p.11).

Casey Rentmeester (2014, p.12) had earlier remarked that the damage done by climate change "does not only affect people in the most vulnerable countries like Brazil, Bangladesh, Nepal, Russia, Pakistan or Philippines. Since climate change is a planetary phenomenon, no country is exempted from its consequences, which the United States has recently discovered." All the above remarks are in line with the remark of United Nations Intergovernmental Panel on Climate Change (IPCC) that:

for a thousand years prior to the industrial revolution, the abundance of (greenhouse) gasses was relatively constant. However, as the world's population increased, emissions of greenhouse gasses...have increased substantially due to industrialisation and changes in agriculture and land use (Houghton J.T. et al., 1990, p. xxxvii).

In its 2007 report, the IPCC states that "the warming of the climate system is unequivocal".

Thus, there is no doubt that one of the major identifiable reason by scientists for the persistence of the climate change problem can be attributed to scientific and functionalist tendency of exploiting natural resources to satisfy immediate human consumerist attitude rather than to conserve the environment. Where this utilitarian orientation seems to be the norm, the important aspects of the environment on conservation are easily neglected, which often leads to the devastating consequences of climate change being experienced in almost all parts of the globe. Hence, our proposal for the application of traditional African ethical environmental conservation as a philosophic bedrock that will hopefully mitigate the effect of climate change not only in Africa but possibly all over the globe. Our research questions are weaved thus: What is the philosophy of current scientific and technological explorations and exploitations of the natural resources in the quest for industrial revivalism? Is it apathetic material reductionism or empathetic environmentalism? Our theoretical solution explores the traditional African empathic attitude towards the environment, which recognises the equal intrinsic worth of all biota regardless of human wants or needs, as well as the interconnectedness of human beings with the environment in all its plenitude. Before we delve into the foregoing, let us explain our conceptual understanding and application of climate change.

CONCEPTUALISING CLIMATE CHANGE

Global warming and climate change are terms often used to describe the observed century-scale rise in the average temperature of the earth's climate system and its related effects. Most scientific research journals and annuals use "global warming" to describe an increasing global average temperature just at the earth's surface and most of these scholarly journals attribute global warming to anthropogenic activities. In this work both global warming and climate change are used to refer to the effect of human activities on earth that are causing or capable of causing future adverse temperature mitigation that will affect the well-being of humans and other flora and fauna inhabiting the environment. Currently, there is an overwhelming agreement among scientists that climate change is real, and is primarily caused and sustained by human use of fossil fuel, which releases carbon dioxide and greenhouse gas emissions into the air, trapping heat within the atmosphere with a range of effects on the ecosystem, including but not limited to rising sea levels, severe weather events, and droughts that render landscapes more susceptible to wildfire, flooding and erosion.

The United Nations Framework Convention on Climate change 21st March 1994 describes climate change as a change of climate which is attributed directly or indirectly to human activities that alter the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods. America's Climate Choices: Panel on Advancing the Science of climate change (2010) observes that "there is a strong credible body of evidence based on multiple lines of research, documenting that climate is changing and that these changes are in large part caused by human activities. While much remains to be learned, the core phenomenal scientific questions and hypothesis have been examined thoroughly and have stood firm in the face of serious scientific debate and careful evaluation of alternative explanation."

The Panel went further to state that "some scientific conclusions or theories have been so thoroughly examined and tested, and supported by so many independent observations and results, that their likelihood of subsequently being found to be wrong is vanishingly small. Such conclusions and theories are then regarded as settled facts. This is the case for the conclusions that the Earth system is warming and that much of this warming is very likely due to human activities." For instance, in the last 100 years, scientific data from different authenticated sources reveal that "the Earth's average surface temperature increased by about two-thirds occurring over just the last three decades largely due to anthropogenic activities" (America's Climate Choice, Washington D.C., 2011, p.15).

The evidence for the drawn conclusions of the above data was taken from a variety of scientific sources to reconstruct the past, inform the present and predict the

future. Petit, J.R., et al (1999, pp.429-436) observe that “reasonable complete global records of surface temperature are available beginning from the mid-late 19th century. For the earlier periods, most of the evidence is indirect. Climate change is inferred from changes in proxies indicators that reflect climates, such as vegetation, ice cores dendrochronology, sea level change and glacial geology.” Gross exploitation of natural resources for scientific experimentation and industrialisation is one of the greatest challenges facing most, if not all, of the African countries today. In fact, leading the list of these environmental challenges are land degradation resulting from deforestation, uncontrolled extraction of faunal and floristic species, soil erosion, alluvial mineral extraction activities, siltation of water courses and pollution (Museka & Madondo 2012, p. 258). Incidentally, this wanton destruction of the natural environment has been going on despite the various efforts of governments of African countries to formulate and implement policies in this direction, hence, the need to explore the alternative of applying the traditional African ethical perspective for its mitigation and management.

TRADITIONAL AFRICAN ETHICAL PERSPECTIVE ON CLIMATE CHANGE

Ethics as a concept and discipline in philosophy is often described as the study of morality and norms of human actions and behaviour. This description presupposes that morality which is the object of ethical reflection existed before its formal articulation in terms of principles and definitions. In fact, while morality deals with the norms of human behaviour, ethics more or less deals with a systematic study of such norms, its definitions and the principles underlining them. Hence, ethics and morality are both different and the same, because ethics is derived from morality, the two concepts are sometimes applied interchangeably as instruments of social control (Ekei, 2001, p.56). For instance, while morality holds that a man ought to live a good life, ethics inquires into the true nature of goodness or what a good life actually represents, “morality will say that man ought to be kind, ethics will be more interested in the nature of moral kindness” (Momoh, 1991, p.26). However, both seem to prescribe and proscribe what ought to be done and what ought to be refrained from.

A critical analysis of the foregoing reveals that morality came into being as a result of man’s first encounter with his environment be it in preliterate or literate culture. In other words, morality is the basis of ethics, which makes ethics “a second order activity” to use Okolo’s (1990, p.32) expression. Hence, morality came into being as an indispensable organ of social control in managing and controlling man’s relationship with his fellow being and the larger environment, thus, invalidating the wrong

views expressed by some early European scholars on African culture, that Africans have no ethics (Basden, 1966; Nadel, 1954; Burton, 1946 etc.). For instance, Basden (1966, p.34) writing about the Igbo of eastern Nigeria states that: “the word morality has no significance in Ibo vocabulary...where the natives have remained untouched by outside influence. There is nothing exactly corresponding to the social evil of European life.” In the same book he contradicts himself when he acknowledges that “in majority of Ibo towns, a very clearly defined code of morals exists theoretically. Infringement of these laws may lead to severe penalties being inflicted, and cases are known where infidelity on the part of a wife has been punished by torture and death of both offenders.” Thus, Basden’s assertion that sanctions were applied when offences were committed is a proof of the existence of a moral code among the traditional Igbo before colonialism cum Christian and Islamic missionary contact with Africa. However, what is really in contention among African scholars is the basis of African traditional moral code. While some argue that African moral code is based on religion, others contend that it is based on rational reflection on human situation in their environment. This paper is not interested in the rightness and wrongness of these two opposing positions, rather that morality in most preliterate societies, whether in traditional African society or elsewhere, need a theological basis without which “they lose the persuasive force and the power of psychological compulsion” (Russell, 1992, p.27). This is in view of the remark of Franz Boaz (1927, p.104) that “in the main, the mental characteristics of man are the same all over the world.”

Hence, scholars in African philosophy and culture have demonstrated in their various studies that African traditional cultures have always maintained a well ordered and clearly defined system of morality and ethics. Mbiti (1967, p.175) observes that “African peoples have a deep sense of right and wrong...this moral sense has produced customs, rules, laws, traditions and taboos which can be observed in each society; for harmonious living with both human and the environment at large.” Every community, town and village in Africa has a system of morals which are preserved in their customs and tradition (Udokang, 2014, p.267). Similarly, Ozumba (1995, p.55) states that “there is no society (in Africa) that has no set of dos and don’ts. A society that has no norms or ethically intelligible way of ascertaining and enforcing good conduct is bound to disappear in the short or long run.”

Hence, Opoku (1978, p.66) maintains that “the solidarity of the community is maintained by laws, customs, taboos and set forms of behavior which constitutes the moral code.” Thus, the above scholars argue that African traditional societies were like every other traditional society existing elsewhere, that maintained their social and ecological order through the strict observance of traditional ethical principles and

customs, which its violation could result in social and environmental disharmony. Asouzu (1998, p.3) further adds that “African traditional society recognizes and holds firmly to certain values ... identified as necessary for correct functioning of the society and the welfare of the individuals. Hence, to violate the order as already prescribed ... is always to risk plunging into anomaly.” In such case the cosmic order has been wronged and must be righted by appropriate rituals and moral acts (Berger, 1967, p.48).

Thus, the foregoing assertions point to the fact that the traditional African conceptual understanding of the environment respects nature, value and dignifies life of all beings, whether animate or inanimate. Their environment conception emphasises interconnectedness, dependency and responsibility towards every being. The traditional African is imbued with a constant consciousness of his/her interconnectedness with the environment and sacred powers associated with it, and continues to maintain balance in relation to these. The above conceptual understanding of life and its relatedness to environment does not give room for wanton exploitation of nature. Its ecological thought pattern perceives all nature in its ultimate origin, order and destiny. It is a holistic cosmology in that both human and the natural environment do not come into conflict with each other, but complement and support each other.

Nwaigbo F. (2015, p.248) affirms the above view with regards to the traditional Igbo of Southeastern Nigeria when he avers that: “in Igbo religious worldviews, the earth and all nature is sacred and energized with spirit forces. The Igbo religious views find the presence of the spirits throughout all of nature and the cosmos. [...] This made the earth/nature no longer the object of manipulation by industrialists or economic forces. This worldview enables them to take in hand their own destiny and bring about communities which are truly humane.” He further states that: “it is the community which gives the African concept of ecology its unique meaning. In this community, human beings are precious and unconditionally protected.” (ibid, p.249). In the same vein, the lives of animals, plants, mountains, seas, which are part of the planet are protected, preserved and taken care of. The unbridled exploitation of natural resources of life, insensitive destruction of the biosphere, and militarisation of the cosmos are taken as acts against nature and humanity, and are therefore prohibited. In the traditional African ecological consciousness, the cardinal idea of existence is that of a community of the living, the dead, the unborn and the environment. The entire environment of both human and ecology are intertwined and dependent on one another. Human beings conceive themselves as part of a larger cosmic order, which embraces land, plants, animals, the sun, the stars, and the moon. To live in balance and harmony with the cosmos is the ultimate aim of traditional Africans. Tillich P. (1965,

p.75) similarly observes that: “human beings live in a religious universe [...], names of people have religious meanings in them. Rocks and boulders are not just empty objects, but religious objects. The sound of the drum speaks a religious language. The eclipse of the sun or the moon is not simply a silent phenomenon of nature, but one which speaks to the community that observes it, often warning of an impending catastrophe.”

Similarly, Museka and Madondo (2012, p.259) writing from Zimbabwean cultural perspective report that “the current Zimbabwean environmental crisis is fundamentally a religio-cultural problem that requires a religio-cultural remedy which is rooted in *unhu/ubuntu* philosophy”. A philosophical perspective that implies collective personhood, in which individual becomes a person through other people. Translated to the vernacular it means *munhu munhu nevanhu/umuntu ngumuntu ngabantu* (Bernett and Patrick, 2011). In simple terms, Museka and Madondo (ibid) explain that *unhu/ubuntu* is a sense of collective solidarity that is internalised and manifests in activities and attitudes such as love, caring, tolerance, respect, empathy, accountability, responsibility, fairness, justice, compassion, unity, compromise, etc. They emphasise that by stressing the centrality of the other person in one’s existence, *unhu/ubuntu* philosophy can be said to be allergic to any form of discrimination. They, however, explain that this definition is too narrow, hence, a broader and compassing one from King and Miller (2006) that *unhu/ubuntu* is a celebration of being in its tripartite manifestation that is the human, natural and spiritual forms. In this tripartite nature *unhu/ubuntu* gives a complete and unique system of thought that explains the universe, how resources in this universe interrelate and how humans fit into the complete picture. The philosophy is applicable to issues of sustainability as it portrays the traditional African approach to life which cannot be expunged from their culture. Hence, *unhu/ubuntu* not only reflects life experiences and histories of traditional African communities, but also a life force that helps to uphold and maintain the equilibrium of natural, spiritual and human forces in the cosmos. As such, it is a way of living that contributes positively to the welfare of all members that make up the universe. Due to its theocentric and/or spiritual worldview, the philosophy, according to Museka and Madondo, perceives the cosmos as inhabited by mutually dependent, visible and invisible, tangible and intangible, as well as animate and inanimate members. In promoting this interdependence, the philosophy, as observed by Bernett and Patrick (2011), is non-legal in nature and in that emphasis is on communal responsibility rather than individual rights. *Unhuism/ubuntuism* is, therefore, a cosmological formulation that leads to adaptive attitudes towards the cosmos.

The above traditional African worldviews are strictly different from the platonic shadowy intimation of the real world of ideas, but somehow related to Aristotelian’s view

of reality, which regards the environment not as being good in its own right, but as a result of spiritual forces present in it. Thus, the traditional African ecological consciousness emphasises the pre-eminence of mother earth in both religious and secular life, as well as the sphere where humans and environment share with each other. Nwaigbo (2015, p.251) further remarks: “the earth is a sphere or environment where the Igbo philosophy of *egbe bere ugo bere* (let the eagle perch and let the kite perch) is a prominently living operative. The sacramental power of the Mother-earth and the Igbo sense of maternity in domestic life is all an expression of interdependence between the human and nature.”

Nwaigbo (2015, p. 250) further reiterates that the above views are similar to what Deep ecologist and Ecosophist are advocating, when they asserts that “let the river live, let the fish live, let the bird live” which illustrates the Igbo broader idea given above. *Egbe bere ugo bere* (let eagle perch and let the kite perch) and *ndu miri, ndu azu* (both the fish and the river should co-exist). The whole problems associated with ecological crisis in the contemporary world today can be linked to none adherence to the above principles. Deep ecology and Igbo traditional senses of ecological consciousness advocate a deeper and more spiritual approach to the environment. Both emphasise the issues of relationship, life, interdependence etc. in ecological consciousness. Both recognise that in modern societies the causes of ecological problems are attributed to extreme exploitation of nature through anthropogenic activities.

AN AFRICAN ETHICAL PERSONIFICATION OF THE ENVIRONMENT

Another major contribution of traditional African ethical perspective to environmental challenges can be found in its aesthetic appreciation of nature that is derived from its traditional worldview, which recognises the unique nature of the environment in all its multidimensional and heterogeneous characteristics. This implies “a broad-based understanding of our environment as a person, as a subjective base of our action, as the world in which our being unfolds, as the combination of all the facts and relations that go to shape our consciousness “ (Asouzu *ibid*, p. 291).

By personification of the environment, we mean an individual/community’s perception and appreciation of it as a person and not as an object among others outside there for exploitation. Some of the basic features of our environment which intricately reflect human person are those that deal with its aesthetic and moral nature. This implies viewing the environment as a personified entity with moral and aesthetic personality, independent of human wants. It is when viewed in this context that

the sacredness and relatedness of the environment can be articulated. Thus, the level of aesthetic awareness is uniquely related to the possible level of awareness of our understanding of our environment as a person. One who takes his/her environment seriously as a person would do everything possible to preserve it, love it and keep it clean and this is most fundamental in handling intricate environmental problems.

Traditional African personification of the environment can also be perceived from their languages especially in proverbs, metaphors and symbols they use in relation to forces of nature. For instance, in traditional Igbo culture of Nigeria, earlier mentioned, certain species of animals, birds, fish and even rivers, streams and forests are held so sacred and forbidden that peoples’ attitude towards such and related matters of the environment are kept in constant check and balance. For instance, land *Ani* is considered so sacred to the extent that it is religiously regarded as “Mother Earth”. Sins committed against it need to be expiated through intricate rituals and sacrifices. Although, the land and other ecological objects may be considered so sacred, this does not in any way hinder the Igbo people from using the land for legitimate purposes. It rather augments their respect for the land and imposes natural restrictions towards excessive exploitation or misuse of the land. The above practice can also be found in other African cultures where certain aspects of the ecosystem are held in high esteem on account of their association with specific sacred symbols. For instance, Rusinga and Maposa (2010) aver that “African people’s ecological intelligence and wisdom is aptly captured in their belief structures, particularly, beliefs in omens, taboos, rituals and the sacred. These beliefs help people to interact with nature virtuously, morally, ethically and justly, that is, in a way that shows *unhu/ubuntu*.” This interaction enables them to use natural resources selectively, systematically and sustainably. Similarly, Tatira (2000) observes that among the Shona an act that breaches taboos (*zviera*) may trigger supernatural retaliation. This is anchored on the perception that taboos that forbid activities like hunting and farming on land considered sacred help the grooves to maintain their nature preserve. This unique traditional African preservation of the environment through taboos and symbols is a natural urge in every human being anchored in the fundamental sense of self-preservation. Thus, Asouzu (*ibid*, p. 292) warns: “where society and its members fail to see the need for this preservation of the environment as a vital opportunity towards self-preservation a very critical moment in a human bid for self-actualization is missed.”

He further argues that “the African use of religious symbolism towards an understanding of environment merely goes to awaken the human disposition concerning those things that are necessary for human survival. Every culture has a way of bringing to the fore this human disposition, or towards the use of relevant symbols and

metaphors to portray something unique and important. It could take the form of ecstatic and genuine attempt at trying to understand the exact intimate relationship between animals and human beings in the form of modern scientific research into animal intelligence, feeling, emotions, language, and actions” (ibid 293).

Traditional African environmental consciousness can, therefore, be properly understood within our context of application to imply an initiation into the hidden mysteries of nature and as an attempt at understanding and portraying the other side of the individual of which the environment forms an integral part. So understood, African environmental consciousness is a systematic attempt at initiating the individual in that otherness of himself that is variously portrayed as nature, inanimate objects and other sentient beings etc.

Hence, it can be regarded as the personification of nature itself. Here, nature is seen as the other side of our personality or even an extension of it. When viewed from this perspective, environmental education tends to foster and inculcate special characteristics of the environment. Thus, it is only when viewed as an abstract personalised concept that such aspects of the environment, like its aesthetic and cognitive dimensions become relevant. Within this context, the streams, rivers, beach, forest, the sky and the air, around us, the seas and the animals, land etc. are appreciated for their beauty, serenity and magnificence not because they are useful for one utilitarian purpose or the other. However, where this aesthetic aspect of the environment is neglected, its use can easily revert to exploitation for immediate human needs.

Chibvongodze (2016, p.159) states that “the commitment of African people towards environment conservation and wildlife preservation is further inculcated in the core being of an African and indigenous knowledge system which is transmitted through taboos, proverbs, clan names and folklore.” To achieve the above objective, traditional Africans utilise the cultural beliefs and norms embedded in taboos, totems and proverbs to promote human tolerance towards plants, animals, mountains and rivers. Hence, traditional African ethical perspective on environment encourages a collective sense of responsibility towards environmental conservation, whereas western philosophical orientation, especially as espoused by Kant, promotes an individualistic moral obligation to conservation of the environment, which encourages wanton exploitation of nature for immediate gains.

The foregoing argument is also reflected in the eco-metaphors that dominate the writings of African negritude scholars, particularly the poets among them. For instance, Asante-Darko (1999: para 1) observes that although the theme of negritude poets was “essentially political, racial and economic, its metaphors were largely environmental”. He argues that the preponderance of eco-metaphors in negritude writings portends two issues, namely land in the African worldview is construed simultaneously as a

physical entity and as a spiritual abode that houses the spirits of the departed, as such the respect accorded the departed are due the land; secondly, the centrality of land, as well as the predominance of eco-metaphor signal a “commitment to explicit values as regards the regulation of human interaction with and use of the environment [and] one would logically infer that ecology forms part of the ideological and social action of negritude poetry” (Asante-Darko, 1999: para 2). The metaphors exploits by negritude poets indicate the need to preserve the beautiful and pristine nature of the African environments.

The above is similar to what Deep ecologist are advocating, especially from Aldo Leopold perspective, which he called “land ethic”, where he argues that “there is an individual responsibility for the health of the land, and by implication the future, since land health is about creating a resilient on-going and self-perpetuating community of life” (Leopold A., 1949, p.221). The concept of “Community” in the above quote according to Joan McGregor (2014, p.41), “has different scales and nature, namely, local and global, physical ones, temporal ones, past, current and future, and social and cultural ones.” Leopold land ethic, just like traditional African ecological consciousness, is based on an understanding of ecological interdependence, thinking in different scales, and moral affections of care and love. We need, according to Leopold, to “think like a mountain” recognising the necessity of the various members of the community including humans, and their interdependence on one another and the differences in physical and temporal scales. This requires that we stop seeing the land as an economic resource only, and start to see our relationship with land in moral terms.

Leopold had earlier argued that history demonstrates a steady evolutionary expansion of our sphere of moral concern and respect. For instance, ethical concern started with one’s tribe, then expanded to one’s nation, then to all humanity and extension of ethics will eventually include animals and the land. Land for him means “everything on land, animals, rocks, and soil. Also, it meant all land, developed and undeveloped wilderness.” Thus, ethics has evolved to include more in its domain of consideration, in terms of those entities towards which humans have moral responsibilities. Hence, for Leopold, the central vice according to McGregor (2014, p.40), was to see land and natural resources as property only, something to be use any way we see fit without moral ramifications. Using the story of Odysseus killing nine slave girls, Leopold illustrates how at the time of writing the *Odyssey*, slaves were property only and did not have any moral status. This story exemplifies how our moral sensibilities and what we think is morally relevant can and does change. Hearing that story now Leopold reiterates: “we are horrified by Odysseus callous indifference to the lives of those women, his failure to see them as moral subjects” (Leopold, 1949, p.203). The above example, McGregor

(2014, p.40) avers “is meant to challenge us to interrogate our current views about what we consider as property.” Leopold (1949, p.204) further remarks that “we abuse land because we regard it as a commodity belonging to us. When we see land as a community to which we belong, we may begin to use it with love and respect.”

The changes required in humans’ relationship to the land is detailed in Leopold’s conception of the land ethic where he avers that: “in short, the land ethic changes the role of homo sapiens from conqueror of the land-community to plain member and citizen of it. The land ethic simply enlarges the boundaries of the community to include soils, water, plants, and animals, or collectively the land” (Leopold “Sand County Almanac” 204). For him, “land health is the land’s capacity for self-renewal expressing the cooperation of the interdependent parts, and it implies a collective self-renewal and collective self-maintenance” (Leopold, 1942, pp.249-265). McGregor (2014, p.40) interprets the above passage to mean that “our attention to land health should be viewed in synchronic as well as diachronic terms”. Leopold was well aware, just like the traditional Africans, that we are constantly in a relationship with the past and the future, our lives are shaped, enriched and sometimes impoverished by our past’s behaviour, and the future is dependent on the choices we make now, hence our relationship with the environment should be based on this mutual awareness and respect.

As a caution to the developmental and transformational activities of science and technology on our environment Leopold warns: “we inherit the earth, but within the limits of the soil and the plant succession we also rebuild the earth - without plan, without knowledge of its properties, and without understanding of the increasing coarse and powerful tools which science has placed at our disposal” (Leopold, 1933 as quoted in Susan Flader & Co, 1991, p.185). The above passage implies the power of humans over the future unborn generation who are vulnerable to our present decisions and actions on the environment. Hence, Robert Goodin’s (1985, p.77) comments that “the vulnerability of succeeding generations to our actions and choices seems to be the strongest basis for assigning to present ones strong responsibilities for providing for them.” Leopold further stresses this fact when he asserts that “the privilege of possessing the earth entails the responsibility of passing it on, the better for our use, not only to immediate posterity but to the unknown future, the nature of which is not given to us to know” (Leopold “The Conservation”, p.94). McGregor (2014, p.41) reinforces the above passage when he states that “the spirit of sustainability norm, using up, not abusing the land health for the sake of the future.”

Thus, Leopold’s argument is not about mere preservation of land, but rather that humans should use the land and other environmental resources responsibly. Hence, his land ethic is ethics of responsibility which

focuses on the relationship as opposed to juridical model’s emphasis on duties, rights and abstract principles. He maintains similar to the traditional African conceptual understanding of the environment that given our interdependent relationship with other human beings, animals, land, and the future, being in a community with them generates a web of responsibility to those entities. The land ethic provides that there is an “individual responsibility for the health of the land and by implication the future since land health is creating a resilient on-going and self-perpetuating community of life (Leopold “Sand County Almanac”, p. 221). Leopold further reflects on our moral understanding, whether they are intelligible and coherent about what we can do to the land, animals or what we must do for whom, who is responsible for doing what and who is not responsible. He concludes that our current moral understanding is not intelligible and coherent; hence, we must evolve our moral understanding about our relationship to the land, if humans are to survive into the future. Land ethic requires us to be responsible in our utilisation of our environment for its sake, since its worth goes beyond the present instrumental value to the future generations who will depend on the environment for their well-being and sustenance.

SUMMARY AND CONCLUSION

Current exploitation of African natural resources in the name of development do not adopt an eco-friendly approach, and this among other things is the root cause of present climate change challenges in Africa and elsewhere. Furthermore, we argue that most African countries’ policies on scientific and environmental exploration, as well as industrial revivalism, tend towards apathetic material reductionism, which is rooted in Aristotelian rationalism and Cartesian dualism that encourage the recreation of nature for industrial utility to satisfy human pecuniary ends, with little or no regard to traditional African ethical perspective on environment. To be precise, the European and North American individualistic scientific oriented development that is devoid of African religio-cultural background influenced their policy formulation and implementation, especially on environmental related matters.

We, therefore, recommend as follows:

- The policy direction of African governments and environmentalist should be gear towards traditional African ethical perspective and deep ecology of holism as the cardinal principle of nature, that is, a belief that our well-being is largely dependent on our consciousness of the quality of our relationship with our environment.
- Scientific and technological exploration of the environment should be grounded by the empathetic attitude of trying to understand the environment and to live in harmony with it, instead of the present exploitation of what McGregor (2014, p.35) calls “cosmic arrogance”

that leads us to practice power science of attempting to dominate and control the environment.

- That African governments' policymakers and environmentalists should incorporate the traditional African ethical humanism of treating the environment as a 'person' with rights, bearing in mind that our present actions and inactions on our environment have far-reaching impact on the future sustainability of our ecosystem.

- That the United Nations Decade for Sustainable Development UNESD: 2005-2014 objective which states that current global curricular interventions in EE/ESD should ensure that education does not ignore or inadvertently side-line non-Western views should be strictly adhere to by African governments on environmental matters.

Thus, the following thought-provoking passage from Holmes (2003, p.528) summarises African perspective on the environment: "it is not just what a society does to its slaves, women, blacks minorities, handicapped, children or future generations, but what it does to its fauna, flora, species, ecosystem and landscapes that reveal the character of that society. We, humans, are earthlings and care for the Earth is a developing and ultimate human virtue". Thus, any strategy for sustainable mitigation of the challenges of climate change in Africa which ignores the spiritual and ethical dimensions of African environmental perspectives is bound to fail, because, most traditional African religio-cultural perspectives offer a unique set of moral values and rules that guide human interaction with the environment. However, the above values will remain rhetorical unless African governments take a decisive step in emphasising the role of traditional culture and religion in environmental policymaking, study and education. Hence, curriculum planners in African countries should as matter of urgency synthesise and analyse for better understanding and inclusion the key concepts and precepts of traditional African religio-cultural values regarding environmental conservation as African contribution to global environmental ethic.

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