ETHICAL EVALUATION OF E-WASTE CRISIS IN AFRICA

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Abstract
This study contends that the proliferation in the generation, transmission and disposal of electronic-waste (e-waste) in Africa is a matter of serious concern. This circumstance raises interdisciplinary challenges of environmental sustainability. Yet, the dumping of used electronic and electrical products into Africa from the Global North has raised fundamental ethical question of justice. However, the study confirms that the basis of all environmental justice variations is the consideration of fairness, equity and justice in the environmental processes that resolve environmental problems. Consequently, this study investigates how to mitigate the importation of e-waste through government interventions and effective information mechanism and enforcement of the laws regulating trade on e-waste to ensure a healthy biotic community. By using the analytic method, this research provides a robust analysis of the dominant ideologies underlying international trade in e-waste. This study examines conventions that are designed to regulate the global and regional transactions in e-waste and argues that treaties such as the Basel and Bamako Conventions are fundamental to the quest for environmental justice in Africa. The theoretical framework underpinning this research is "justice as fairness" which gives primacy to equity and the need to protect the least advantaged in the society. This research confirms that ecological considerations must trump economic motives behind e-waste transfers to developing countries of Africa and the global community. Giving consideration to the ecological harm occasioned by the dumping of e-waste is a *sine qua non* for achieving environmental justice in Africa. Rawls' theory of justice is a potent and serviceable philosophical instrument that can be used for ethical evaluation of e-waste crisis in Africa. The research contributes to knowledge by a rigorous application of Rawlsian thought on justice to the problem of e-waste management in ways that advance the realisation of environmental justice without jeopardising the value of sharing technological products, especially used electronic gadgets from the Global North.
Keywords: Basel and Bamako conventions, environment, e-waste, justice.

Introduction
The increasing generation of electronic waste (e-waste) is one of the growing environmental problems in the 21st century. A good way to dispose e-waste in order to guarantee ecologically justifiably best practices is of a fundamental ethical relevance. E-waste represents a huge share of the country import and its

destination site is mainly concentrated in Lagos Nigeria, meaning that the hazardous effect of pollution affects both human and the biotic environment if not managed properly.

Study shows that in order to bridge the digital divide given the voluminous increase in the ICT (Information and Communication Technology) devices adding to alarming growth of e-waste worldwide and for Africa and other developing nations to have a sustainable environment, there is a need for e-waste management as e-waste components may cause severe health risks and environmental damage, when crude, unscientific methods are applied for recovery of useful components. There is a need to encourage recycling of all useful and valuable material from e-wastes to preserve the natural resources. In this research, we confirm that most of the developing countries are suffering with the rapidly growing problems of e-waste and have to have sound e-waste management systems for end of life ICT products to avoid the threat on environment and mankind. Electrical and electronic equipment (EEE) contain valuable as well as hazardous materials and if at end of life of EEE, the hazardous materials are not disposed of scientifically it may cause serious damage to the environment and public health. The presence of heavy metals (like Arsenic, Cadmium, Barium, Lead, Lithium, Mercury, Nickel, Zinc Sulphide) and other toxic substances like PCB (Polychlorinated biphenyls) etc. may cause extreme harm, if not disposed of in an environment friendly manner (Waste Electrical and Electronic Equipment, The EU and India: sharing best practices, Toxics Link).

In Nigeria, agitation for environmental justice in both the extractive and conservative sectors of the economy has a long history. The National Environmental Standard and Regulation Enforcement Agency (NESREA), an agency of the Federal Ministry of Environment is responsible for the enforcement of all the environmental laws in Nigeria. The broader vision of the institution is to ensure cleaner and healthier environment for all Nigerians. NESREA is set up to inspire personal and collective responsibility in building an environmentally conscious society for the achievement of sustainable development in Nigeria. NESREA is empowered among other provisional processes, to stop the use of equipment or technology that undermines environmental quality. Its mandates also include development of new, and review of existing national environmental laws and regulations. Others involve the enforcement of all multilateral environmental agreements, protocols, treaties and conventions to which Nigeria is a signatory. Unfortunately, this Agency has not effectively carried out its responsibilities to the effect that information disseminations both written and oral through media houses, policies and other information mechanisms are inadequate or strictly not in place. The laws regulating trans-border movement in Nigeria is so ineffective that importers and smugglers have no difficulty bringing in this obsolete

electronic product despite the fact that they are aware of the harmful effect of these products. Study confirms that Loopholes in the implementation of the law have, however, ensured that from countries like Germany, the UK and other European nations, some of these waste are still exported, a lot of them to African countries like Nigeria. However, study shows that the illegal business is not masterminded or controlled by cabals but by various individuals who try to make money for themselves that one of the sectors where loopholes exist in Europe is transportation (Freja C, Erikson (2016). E-wastes are usually recovered from homes and offices and are supposed to be moved straight to treatment plants. But some individuals have now seen huge business opportunities in intercepting EEE as they move various stages of the transport chain. So a huge chunk of the waste, instead of arriving treatment plants, is illegal shipped abroad to countries such as Nigeria. Although there are increasingly more stringent laws on inspection and testing of e-products before they are allowed to be shipped from Germany, however, a Nigerian businessman, Ugochukwu Okafor (an importer) revealed that there are ways to work around the regulations. "When you buy them (the non-tested largely e-waste products), we (brokers) can help you properly pack them in your car (to be shipped too)," he said. "The ones that are very exposed will be tested to convince the shipping authorities they all work fine." Despite being illegal and hazardous, there is a craving for both e-waste and used EEE among several Nigerians. The major reason for this, experts and several Nigerian sellers and buyers claimed, is economic. It is a fact that most Nigerians cannot afford new products. Over half of Nigeria's N200 million live in poverty to be able to afford basic electrical and electronic equipment like fridges, TVs, and microwave ovens, most of them buy used ones. Apart from cost, some Nigerians also feel the used products are of better quality than new ones imported from China.

Study confirms that the transnational trade on 'tokunbo' electronics is however not entirely negative, say experts. Apart from thousands of exporters and importers of used Electronics and Electrical Equipment, the industry has also created a lot of jobs in Nigeria's informal sector. About 80,000 people are estimated to work as scavengers, people who pick the electronic waste from homes, dumpsites and other places. Another 52,000 are estimated to work as refurbishers, repairing the 'non-tested', non-functional electronics. The fact that thousands of jobs are created in the industry and that some of the imported waste can be repaired and the life cycle extended has led to calls for review of the international ban on e-wastes. Study shows that the life cycle of the used electronics is extended in Nigeria; it still ends up as waste. About 1.1 million tons of EEE become obsolete each year in the West African country with almost half of that ending up as e-waste. Part of the problem is lack of organized e-waste recycling or dismantling facility in the country. The one located on Lagos Island is not functioning efficiently. Due to this lack of formal recycling, informal scavengers have instead stepped in to make the last money from the

precious metals of e-waste in Nigeria by dismantling them and separate what they consider useful, like, aluminum, copper, lead etc. and sell to the Chinese, Lebanese and Indians who buy the pieces from the scavengers, take it to Europe and make the dollars. That is what is happening right now in Nigeria and other African countries. Currently, Nigeria's informal system is thus leaking hazardous toxins into the ground and valuable materials into foreign pockets. On the contrary, the diagnostic assessment displayed in this article clearly show that e-waste is a significant global environment and health issue, with implications far broader than occupational exposure and involving vulnerable groups and generations to come. In this study, we shall discuss the work in four sections; Section one is dedicated to the definition of e-waste from the philosophical point of view. Section two discusses the rationale for e-waste importation in Africa and how it affects the environment and health of the citizens especially Nigeria. Section three deals with the previous attempts at addressing the problems of e-waste and elaborates how e-waste dumping in Africa can be mitigated if the government and agencies responsible for the control of trans-boundry movement of e-waste from the developed nations to Africa can effectively enforce the laws regulating harmful movement of products such as e-waste. The role of Basel and Bamako convention and other regulatory bodies is fundamental to the quest for e-waste management in Africa. Section four deals with the application of the modified ethical theory of John Rawls as a paradigm for the exposition and explication of the leading theories that explain e-waste practices as it affects both human and the environment in the developing nations such as Africa. While section five which is the conclusion is an attempt to transcend theory into practice by prescribing ideas and policies that can be applied to mitigate the influx of e-waste into Africa by a rigorous application of Rawlsian thought on justice to the problem of e-waste management in Africa.

Electronic Waste (e-waste)

Wastes are complex mixtures of different substances, only some of which are intrinsically hazardous to health (Oxford, Paragraph 2). Hazardous wastes include a wide variety of waste materials that can be a threat to human health and to the environment at large. They are produced by many industries including chemicals, ferrous, metal and electronic industries (Linda, 1988:424). The hazardousness of a substance depends on the chemical concentration level of the substance; hence, it is dependent on a relative toxicity scale (Pedro, 2009:296). Electronic wastes are examples of hazardous wastes; the former is entailed in the latter. “Electronic wastes could be seen as discarded computers, office electronic equipment, entertainment devices, salvage, recycling or disposal” (Smith and Puckett, 2002:5). It is regarded as the waste from electrical and electronic equipment (WEEE). E-waste, as it is usually called, is categorised into three main classes- large household appliances; IT and Telecom; and equipment. Refrigerator and washing machine are large

household appliance; PC Monitor, phones and laptop represents IT and Telecom; while TV represents consumer equipment, (Violet, 2008: 33). It should be noted that today's latest version of television and computers will eventually wear and no longer serve its owner's needs, it then results into a kind of waste-electronic waste (Environmental update, 2004: Paragraph 1). The estimates of these obsolete goods, as recorded varied from place to place but nonetheless, there are records of tens of million tons of obsolete electronic materials. Television and computer wastes are (not) managed like any other solid wastes produced by households. E-waste is generated when an electronic or electrical items has reached the end of its useful life and needs to be disposed of. It can be valuable as a source for secondary raw materials (recycling); and toxic or hazardous if treated and discarded improperly as we do largely in this part of the world (Pedro, 2009: 300).

Although, study has it that China and India have been the dumping ground for obsolete electronic products,. Since 2005, it has been realised that handling of e-wastes from the developed nations has shifted attention to African countries, especially Nigeria, Ghana and South-Africa. Study confirmed that the transnational trade on 'tokunbo' electronics is however not entirely negative, say experts. Apart from thousands of exporters and importers of used Electrical and Electronic Equipment, the industry has also created a lot of jobs in Nigeria's informal sector. About 80,000 people are estimated to work as scavengers, people who pick the electronic waste from homes, dumpsites and other places. Another 52,000 are estimated to work as refurbishers, repairing the 'non-tested', non-functional electronics. The fact that thousands of jobs are created in the industry and that some of the imported waste can be repaired and the life cycle extended has led to calls for review of the international ban on e-wastes. Study shows that the life cycle of the used electronics is extended in Nigeria; it still ends up as waste. About 1.1 million tons of EEE become obsolete each year in the West African country with almost half of that ending up as e-waste.

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Economic Rationale for E-waste Importation into Africa

In the face of serious health and environmental hazards, many people in developing countries earn a living by dismantling; refurbishing, repairing and reselling used electronic devices.

Guiyu in China is often considered the e-waste capital of the world with 75 percent of households involved in the recycling business. But Africa is now taken the lead. In addition, criminals search e-waste for credit card numbers and other financial information. For example, "government contracts and lucrative agreements with the U.S. Defense Intelligence Agency, the Transportation Security Administration and Homeland Security have been found on hard drives in Agbogbloshie, an e-waste center in Ghana" (Index Mundi, 2011: 3). Studies show that economic, financial vulnerability and ignorance of the potential danger compel Africans to receive hazardous electronic waste imported from developed nations for a small financial compensation in the 1980s. For instance, in 1988, an Italian merchant dumped toxic material in Koko in Niger-Delta for a pantry compensation of $100 paid to the local owner of the land (Jennifer, 2001: 11). As a result, the movement against toxic dumping in poor neighborhoods and communities both in the United States and Africa, emerged during the 1980s, just as the movement against the global waste trade was taking shape. Consequently, the Basel Convention was signed in 1989, during the height of environmental justice movements mainly in the United States. It is also probably not coincidental that Greenpeace, which has been involved in struggles against environmental inequality across the United States, has been the principal advocate for a ban on the transnational trade in hazardous waste (ibid).

Shipment of e-waste to Ghana and other developing countries in Africa is an example of a global spatial inequality that is having significant environmental and health impacts. For instance, after the waste arrives at its destination, it is dismantled by workers or scavengers, many of whom are children and teenagers. The workers wear no protective gear and use rudimentary tools such as stones to open up the product in order to salvage scrap metals; the remaining waste materials, including the plastics and cables are either burned or dumped into unprotected sites (Agyeman, 2010: 2). Samples of soil, ash, and sediments from these waste sites reveal the presence of a wide variety of hazardous substances such as lead, cadmium, phthalates and chlorinated dioxins. These substances are known to have neurological impacts as well as to cause cancer (ibid). It is important to note that Nigeria lacks an indigenous industry which implies that the IT sector is basically import oriented. Besides the e-waste which is locally generated by consumers in Nigeria, a large quota of the e-waste is

either unintentionally or intentionally imported as used Electrical and Electronics Equipment (EEE) (Schmidt, 2006). The mounting threat posed by the existing methods of informal recycling and disposal methods has attracted the media (Puckett, Westervelt, & Gutierrez, 2005).

Suffice it to say that this attraction has not gained adequate recognition among policy makers and manufacturers of electronics alike. Studies under the direction of the E-waste Africa project (Wasswa & Schluep, 2008; Magashi & Schluep, 2011; Finlay & Liechti, 2008) revealed that there is a steady increase of EEE in Africa, specifically in Nigeria. This invariably, increases the amount of e-waste generated in the future (Schluep, et al., 2009: 4). Nigeria houses one of the largest IT market in West Africa- Ikeja Computer Village. Ikeja Computer village was once a residential area until the early year 2000 when Internet technology became a household name in corporate Nigeria. Eager to cash in on the birth of a major industry, savvy businessmen acquired properties in the most lucrative part of Ikeja (a street known as Otigba) to commence trade in IT equipment and electronic devices. By 2003, two years after Global System for Mobile communications (GSM) services was launched in Nigeria, Ikeja computer village became a household name among telecommunication users, within and outside the shores of Nigeria.

African countries have a huge appetite for technology, but due to limited financial resources, infrastructure and indigenous IT industry, much of this growth is facilitated by import of 'second hand' or 'hand me down' equipment from rich developed countries whose consumers are all too happy to find buyers for them. As a result, this sector has become a thriving terrain for middle men and brokers who channel this used equipment from the industrialized North to the under developed South. Unlike Guiyu in China, Dandora in Kenya and Karachi in Pakistan, refurbishing of used electronic devices and unlocking mobile devices is a more lucrative practice in Ikeja. Where such devices are beyond repair, they are taken apart and used as spare parts for other serviceable devices. Scraps and non-reusable parts are either discarded in the main waste dumpster, burnt in major trash cans or just left to lie around in the environment. The above problem poses serious concerns to a philosophical puzzling mind. Yet, a curious observation reveals a dearth of scholarly works, especially from a philosophical perspective, on the impact of e-waste in Africa. Ultimately, while some international manufacturers now run their own take-back schemes and have pledged to produce "greener PCs" with fewer harmful ingredients, the UN has now called for an end to Western countries using Africa as a landfill for useless electronic (Liz, 2006: 2).

Legal and International Frameworks for Managing E-Waste in Africa

Different regulatory mechanisms have been recommended for Waste generation, segregation, disposal, and monitoring some of such

recommendations have been vetted and enacted by the government of different nations. However, before implementing these laws, we need to ask the question, is electronic waste hazardous? Clearly the answer is in the affirmative. Toxicologists affirm that electronic wastes consist of toxic elements which are dangerous to the ecosystem when exposed or handled carelessly. Legally, however, it depends on the government of a state on how serious it chooses to deal with electronic wastes. Governments of various nations have setup all-embracing electronic waste policy framework for their countries. Such policy includes recognising the roles and responsibilities of all those who are involved in the production of electronic wastes. It should be noted that everyone is involved in electronic waste generation in so far as we have one electronic material or the other in our various homes (Pedro, 2009: 302). Besides the Bamako Convention, which is a treaty of African nations prohibiting the importation of any hazardous waste (including radioactive waste), there is an international convention that formulates the principles guiding electronic wastes, with the responsibility to regulate the shipment of obsolete electronic materials from one country to another, known as Basel Convention.

The Basel Convention

The Basel Convention on the Control of Trans-boundary Movements of Hazardous Wastes and their Disposal (hereinafter referred to as "the Basel Convention") came into being in 1989 as a result of toxic deposits in Africa and other parts of the developing countries. This action, occasioned by the increased awareness on the long term effects of improper disposal of hazardous waste by the industrialized countries resulted in strident regulations on disposal of hazardous waste thus, leading to a corresponding increase in disposal costs. Seeking alternative avenues for the increasing E-waste accumulation, industries and operators alike sought cheap disposal options in Eastern Europe and the developing nations where environmental awareness was low and strident regulations and its enforcement was lacking (Basel Convention, 2011). This quest to avoid strict laws in the home countries, lead to a seemingly free trade of e-waste across international borders; especially to the developing nations.

Against this back drop, the Basel convention came into full action in 1992 (ibid). The Basel Convention aims to ensure environmental responsibility of waste by the country of origin as well as encourage reduced volume of waste generation and toxicity by countries who are signatories to the treaty. It also ensures that management of hazardous waste or its trans-boundary movement is consistent with the protection of human health and the environment where it is disposed of. The convention further promotes sound environmental waste management amongst developing nations (Basel Convention, 2011: 2). Essentially, countries who are signatories to the BanAN convention are obliged to ensure that e-waste generation and other hazardous waste is reduced to the barest minimum. The convention also ensures that signatory countries possess

sufficient disposal facilities to ensure proper management of E-waste and other hazardous waste generated. It lays specific emphasis on ensuring that waste management is extended to the point or place of disposal. It would seem likely that a country such as the United States would be able and willing to fulfill and implement this call for national self-sufficiency in waste management. To date, the United States is the only developed country that has not ratified the Basel Convention. U.S. officials, according to Puckett (2002), have actively worked to defeat, and then weaken, the Basel waste export ban.

The Bamako Convention

The Bamako Convention on the Ban and the Control of Trans-boundary Movement and Management of Hazardous Wastes within Africa is a treaty of African nations prohibiting the importation of any hazardous waste (including radioactive waste). The Convention was negotiated at the Organization of African Unity at Bamako, Mali in January, 1991 by twelve African nations. It came into force in 1998 (Organization of African Unity (OAU), 1991). The Bamako Convention came into being from the realisation that the affluent nations were exporting toxic wastes to Africa and from the failure of the Basel Convention to effectively prohibit the trade of hazardous waste to less developed countries. The Bamako Convention shares some similarities in format and use of language as the Basel Convention but it is more resolute in prohibiting all imports containing hazardous waste with no exceptions (such as radioactive materials) excused by the Basel Convention. Nigeria ratified the Basel Convention in May 24, 2004; prohibiting the movement of hazardous waste into its shores but has not ratified the Bamako Convention (ibid).

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Towards A Rawlsian Approach to an Ethically Conscious Management of E-Waste

A philosophical interrogation of the problem of e-waste dumping in Africa requires a focus on the ethical implications of the practice. Also involved is the question of environmental justice. This is because in our view, e-waste dumping, which is a deliberate act whose consequences are known to the perpetrators, carries very grave consequences for the affected African states. Furthermore, the study shows how Rawls's theory of justice can be used to interrogate the issue of e-waste management as it affects Africa. Rawls did not mention the issue of e-waste either as an environmental concern or as a health hazard in his work. However, this is not unconnected with the fact that the debate on environmental pollution and e-waste management emerged after the seminal work of Rawls which is "Justice as Fairness". His aim is to present a conception of justice which generalizes and carries to a higher level of abstraction the familiar theory of the social contract as found, say, in Locke, Rousseau, and Kant. In order to do this we are not to think of the original contract as one to enter a particular society or to set up a particular form of government. (Rawls, 2005: 3) Rawls conceives the world as a hypothetical society in which everyone is equal and must submit himself to the rules as earlier agreed. Rawls has this to say;

> Thus if men take a certain pleasure in discriminating against one another, in subjecting others to a lesser liberty as a means of enhancing their self- respect, then the satisfaction of these desires must be weighed in our deliberations according to their intensity, or whatever, along with other desires. (ibid: 30).

It is no doubt that any informed person would be aware of the fact that our globe is harrying on ecological disintegrating precipice. The dumping of e-waste on African soil is without regard to the health hazards it causes is a moral problem which runs against the principle of justice as fairness as proposed by Rawls. He further argues that reasonable regulations to maintain public order and security, or efficient measures for public health and safety, promote the common interest in this sense (Ibid: 97). Due to income disparity, the West now decided to shift

their environmental burdens to African countries contrary to difference principle as adduced by Rawls.

> This he says; it seems likely that this will be true even when the social injustices which now exist are removed. What, then, can possibly justify this kind of initial inequality in life prospects? According to the difference principle, it is justifiable only if the difference in expectation is to the advantage of the representative man who is worse off (Rawls, 1971:78).

Rawls conceived the society as a form of cooperation whereby those who are well-off like the developed nations should use their resources to better the life of the worse-off which Africa represents, rather than continue impoverishing these African countries by exporting e-waste to Africa countries. According to him, taken together these features of a well-ordered regime diminish the number of occasions when the less favored are likely to experience their situation as impoverished and humiliating (Rawls, 2005: 537). Giving the precepts of justice as fairness to liberty, every society has right to decide what is good for them. Now the question of domination by the developed nations over Africa because, the poor Africans are in need of technology should not warrant the dumping of e-waste in African due to the health risk associated with it. The denial of equal liberty can be accepted only if it is necessary to enhance the quality of civilization so that in due course the equal freedoms can be enjoyed by all, (Rawls, 2005: 542).

In what seems to be the failure of the government to regulate the movement of e-waste into Africa, Rawls has this to say in his work the "Law of Peoples,"

> that an important role of government, however arbitrary a society's boundaries may appear from a historical point of view, is to be the effective agent of a people as they take responsibility for their territory and the size of their population, as well as for maintaining the land's environmental integrity. Unless a definite agent is given responsibility for maintaining an asset and bears the responsibility and loss for not doing so, that asset tends to deteriorate (Rawls, 1999: 15).

For Rawls, citizens of a society are by right of justice supposed to decide the choice of goods they need and not for another nation for any reason to determine the kind of goods and services they are to enjoy. Rawls has this to say: "political view is a view about political justice and the common good, and about what institutions and policies best promote them. Citizens must somehow acquire and understand these ideas if they are to be capable of making judgments about basic rights and liberties (Rawls, 2008: 5)." In working out the conception of justice as fairness, it could be said that Rawls was faced with the task of determining which principles of justice would be chosen in the original agreement in a situation of equality. The question then arises whether the principle of utility would be acknowledged? For it would be hard for people to view themselves as equal, and entitle to press their claims upon each other to agree to a principle which may require lesser life prospects for some advantages enjoyed by others. In view of this, Rawls admits that one can try to deal with this question by viewing political society in a certain way, namely, as a fair system of cooperation over time from one generation to the next, where those engaged in cooperation are viewed as free and equal citizens and normal cooperating members of society over a complete life. We then try to formulate principles of political justice such that if the basic structure of society—the main political and social institutions and the way they fit together as one scheme of cooperation—satisfies those principles, then we can say without pretense and fakery that citizens are indeed free and equal (Rawls, 2001: 4).

Why must the developed nations, prefer to worsen their continued existence by endangering their health through the importation of e-waste into Africa? In the view of Rawls, justice as fairness is an egalitarian view, but there are many kinds of equality and many reasons for being concerned with it. So let us review several of the reasons for regulating economic and social inequalities. According to Rawls, in the absence of special circumstances, it seems wrong that some or much of society should be amply provided for, while many, or even a few, suffer hardship, not to mention hunger and treatable illness. Urgent needs and wants go unfulfilled, while the less urgent ones of others are satisfied. But here it may not be inequality of income and wealth as such that bothers us; instead we may think that, unless there is real scarcity, all should have at least enough to meet their basic needs. Another reason for controlling economic and social inequalities is to prevent one part of society from dominating the rest (Rawls, 2001: 130).

The quest for technology compels poor African societies to patronize harmful products like e-waste thereby degrading our environment and putting human life at risk of the toxic effect of the materials. For this reason call on the government of Africans become imperative in order to institute regulations that will mitigate this anomaly. Rawls has this to say: And, of course, there are the striking cases of public harms, as when industries sully and erode the natural

environment. These costs are not normally reckoned with by the market, so that the commodities produced are sold at much less than their marginal social costs. There is a divergence between private and social accounting that the market fails to register. One essential task of law and government is to institute the necessary corrections (Rawls, 2005: 268). The effort of human beings to sustain the environment remains a serious ontological concern. Their success at it concurrently enriches the quality of life and its duration on earth. If the present altitude of people to the environment and its sanctity is one of abuse, then a cause for action and urgent remedial is needed. Joel Kassiola is of the view that humanity will not be able to save the world from environmental catastrophe unless and until the normative nature of the environmental problem is recognized. Many environmental ethicists hold that radical social changes must occur if environmental disaster is to be averted and our world saved, but how are the citizens to be environmentally informed so that they will properly prioritize and adopt environmental values? (Fadahunsi, 2007: 157).

Although, the concept of theory of justice attracted much criticism, Stanislav Mysicka….in his work *Environmental Justice and Rawlsian Social Contract Theory*, argues that Rawls anthropological position is unacceptable hence there are other natural environmental concerns that need urgent attention. That human being which is the central concern of Rawls's justice as fairness cannot survive within the natural environment if other natural properties are put into extinction. Mysicka further argues, there would be only a few of those who would consider human beings radically separate from their natural environment, except for adherents of some version of strict mind-body dualism, like Descartes. Natural environment and more generally the world ecosystem is indispensable for one simple reason: we cannot live without it. He continues we need natural resources; we need air, water and food. Moreover, nature plays an important role in human psychology because of its aesthetic and other functions. Natural environment is essentially important.

Conclusion

It is confirmed that there is no unique or ideal model for e-waste management in developing countries, each of which is characterized by its own specific environmental, social, technological, economic and cultural conditions. With a view to bridge the digital divide, there is exponential growth in the use of Electrical and electronic equipment (EEE) and so there is alarming effect on environment and human health when the ICT wastes are not disposed of scientifically. There is an emergent need to implement the existing policies and guidelines in line with the international standards and practices for a healthy e-waste management system. Government policies should encourage the reuse of EEE aiming to minimize and recycle Waste Electrical and Electronic Equipment (WEEE). The Extended Producer Responsibility (EPR) does need to have clear regulations to mandate the 'take back' activity of companies

strictly. In Nigeria, especially, Lagos, Abuja, Onitsha and Kano, the government should establish recycling plants where e-waste can be recycled instead of allow the public and scavengers to dispose it improperly and unscientifically in order to have a positive impact in reducing the rate of WEEE generation, facilitating the management of e- waste and recovery of materials, achieving cost reduction.

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